

May 2025 Environmental Quality Board meeting

Wednesday, May 21 from 1 – 4:00 p.m.

Join in person or online

- In person: [520 Lafayette Road, St. Paul, MN 55155](#), lower level conference rooms
 - Online: For the meeting link and more information, visit the [board meeting webpage](#)
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Participating in board meetings

Attending in person

The Environmental Quality Board (EQB) will convene its meeting in person at the Minnesota Pollution Control Agency St. Paul office building. All visitors must sign in at the front desk.

Transportation options:

- Bicycle: Visit the [Saint Paul Bike Map](#) webpage for route information. Outdoor bicycle parking is available to the left of the front doors near the loading dock.
- Transit: Use [Metro Transit's Trip Planner](#) to determine the best routes and times.
- Car: You may park in a Visitor Parking space in the parking lot just outside the front door, or park in one of the visitor lots. The visitor lots are the Blue Lot (Olive St. and University Ave.) and the Jupiter Lot (on Grove St. across from the Ramsey County Law Enforcement Center); please see the [parking map](#). Parking in these lots is free of charge. You must register your vehicle at the front desk upon arrival.

Attending virtually

Members of the public may join the meeting virtually using the Teams link at the board meeting webpage link above. Please review the [Guide to Teams Participation](#) for additional information.

Accessibility

Please contact Environmental Quality Board (EQB) staff at least one week prior to the event at info.EQB@state.mn.us to arrange an accommodation. Meeting materials can be provided in different forms, such as large print, braille, or on a recording.

Public engagement opportunities at EQB meetings

EQB encourages public input and appreciates the opportunity to build shared understanding with members of the public. The opportunities for public engagement for this meeting are below.

Public comment opportunities at EQB meetings

EQB encourages public engagement and appreciates the opportunity to build shared understanding with members of the public. There are multiple ways to engage with staff and board members. One important way is to provide public comment at a board meeting.

The public comment period(s) at a board meeting provide an opportunity for members of the public to inform the board about their views related to the specific item under discussion or something related to the board's purview or authority. Tips for providing comments:

- Ensure that your comments are relevant and specific to the topic you are addressing.
- Say what you want the board to know or consider in moving forward with a piece of work.
- Identify a specific action that you want the Board to take.

If you have a question for the board or EQB staff, it will be noted by staff who will get back to you at a later time. This ensures that we have enough time at a meeting for all commenters to provide input to the board and that your questions can be fully considered.

Oral public comment



At each meeting, the agenda will show when the board will accept oral public comment. The chair will use their discretion to direct public comment and ensure the board's ability to effectively conduct business.

Procedure for giving oral public comment:

- **Virtual:** when prompted, use the "raise hand" feature in Teams, located at the top of your screen.
- **In person:** sign up at the welcome table before the meeting starts.
- When the chairperson calls on you to speak:
 - Introduce yourself before beginning your comment.
 - Please keep your remarks to the agenda item at hand.
 - Please be respectful of board members, staff, and other meeting participants. The chair, vice-chair, or other presiding officer will not tolerate personal attacks.
- The chairperson may limit commenters' time for remarks to ensure there is equal opportunity for the public to comment. Generally, your remarks will be limited to two (2) minutes.
- The chairperson may discontinue a commenter's time to speak if the comments are not reasonably related to the agenda item at hand.

Written public comment



You may submit written comment to EQB by emailing your letter to info.EQB@state.mn.us or mailing to: Environmental Quality Board, 520 Lafayette Road, Saint Paul, MN 55155. Comments must be received by EQB staff **by noon the day before the meeting**.

Staff will compile letters, make them available to members and the public, and attach them to the public record. Any written comments received after this deadline will be included in the next meeting packet.

Please only submit information that you wish to make available publicly. EQB does not edit or delete submissions that include personal information. We reserve the right to not publish any comments we deem offensive, intimidating, belligerent, harassing, bullying, or that contain any other inappropriate or aggressive behavior.

Agenda

Note that all listed times are estimates and are advisory only.

1. Welcome and roll call (1:00 pm)

Nancy Daubenberger – Chair, EQB; Commissioner, Department of Transportation

2. Approval of consent agenda (1:10 pm)

- Meeting minutes from the April 16/2025, Environmental Quality Board meeting on packet page 5
- Preliminary agenda for the May 21, 2024, Environmental Quality Board meeting

3. Executive Director’s report (1:15 pm)

Catherine Neuschler – Executive Director, EQB

4. Final Climate Calculator update (1:25 pm)

Type of item: Informational

Summary: The climate calculator project is near completion and the final version, plus other key deliverables, will soon be publicly available to facilitate answering the climate questions on an EAW. EQB staff will give an update on the progress toward the final tool including a review of objectives and a brief demonstration. Staff will also provide an overview of the report and training that are still to come. A Climate Calculator fact sheet is on packet page 12.

Outcome: The Board understands the timeline, functionality, and content of the three project deliverables: calculator, report, and training. The Board provides feedback on the entire project to EQB staff.

Presenter: Stephanie Aho – Greenhouse Gas Data Analyst, EQB

Public comment: EQB will take public comment specifically on this item.

5. 2025 Groundwater Policy Report update (1:55 pm)

Type of item: Informational

Summary: EQB staff are working with an interagency workgroup to draft the required 2025 groundwater policy report. The Board reviewed the preliminary outline in February. Public input on the purpose of the report and the overall outline was gathered in March. A summary of the public input process and the feedback received is provided on packet page 16.

Outcome: The Board hears about the public input received on this report and understands the next steps to finalize the report.

Presenter: Catherine Neuschler – Executive Director, EQB

Public comment: EQB will take public comment specifically on this item.

Break (2:15 pm)

6. Engagement planning to meet strategic plan outcomes (2:20 pm)

Type of item: Informational, discussion-based

Summary: The board will take part in a facilitated discussion on EQB's current engagement strategies. The board will review the current engagement strategies and areas of work EQB staff are currently working on and will be asked to identify missing opportunities and prioritize actions EQB staff can take in the coming year to further progress engagement strategies in EQB's five-year strategic plan. The board will be using the worksheet on packet page 28 to help populate ideas.

Outcome: The board will identify missing areas of work that can be done to advance the engagement outcome in the strategic plan and help prioritize activities the EQB staff should consider including in the FY 2026 workplan.

Presenter: Priscilla Villa-Watt – Communications and Engagement Coordinator, EQB

7. By-laws (3:25 pm)

Type of item: Decision

Summary: Initial draft by-laws were presented to the Board in January, and a revised version in April. The draft was laid on the table at the April meeting.

Outcome: The Board approves the by-laws by adopting the resolution on page 40 of the packet or directs additional needed changes.

Presenter: Catherine Neuschler – Executive Director, EQB

Public comment: EQB will take public comment specifically on this item.

8. Public comment (3:45 pm)

The board welcomes any additional oral public comment. Please see guidance and procedures on packet page 2.

9. Closing and adjournment

April 2025 Environmental Quality Board meeting

Wednesday, April 16, 2025 | 1:00-4:00 p.m. | 520 Lafayette Road, St. Paul, MN 55155, lower level conference rooms and online via Teams.

Minutes

1. Welcome and roll call

Chair Nancy Daubenberger called to order the regular meeting of the Environmental Quality Board.

Members present: Peter Bakken, Joseph Bauerkemper, Ed Brands, Nancy Daubenberger, Tamar Gronvall, Rylee Hince, Todd Holman, Daniel Katzenberger, Katrina Kessler, Nicholas Martin, Paul Nelson, Thom Petersen, Angie Smith, Sarah Strommen

Members excused: Grace Arnold, Brooke Cunningham, Matt Varilek, Charles Zelle

Proxies present: Jenna Ness (for Arnold), Myra Kunas (for Cunningham), Kevin McKinnon (for Varilek), Peter Lindstrom (for Zelle)

EQB staff present: Catherine Neuschler, Stephanie Aho, Rebeca Gutierrez-Moreno, Colleen Hetzel, Hazel Houle, Jesse Krzenski, Sarah Lerohl, Priscilla Villa-Watt, Kayla Walsh

Approval of consent agenda

- Meeting minutes from February 19, 2025, Environmental Quality Board meeting
- Proposed agenda for April 16, 2025, Environmental Quality Board meeting

Motion: Board Member Daubenberger moved to amend the agenda to include public comment for Item 6. Bylaws; Board Member Katzenberger seconded.

In favor: Bakken, Bauerkemper, Brands, Daubenberger, Hince, Holman, Katzenberger, Kessler, Martin, Nelson, Petersen, Smith, Strommen,

Opposed: none

Excused: Arnold, Cunningham, Gronvall, Varilek

Motion: Board Member Strommen moved to approve the new preliminary agenda and the February meeting minutes, Board Member Kessler seconded.

In favor: Bakken, Bauerkemper, Brands, Daubenberger, Hince, Holman, Katzenberger, Kessler, Martin, Nelson, Petersen, Smith, Strommen,

Opposed: none

Excused: Arnold, Cunningham, Gronvall, Varilek

2. Executive Director's report

Catherine Neuschler – Executive Director, EQB

- Climate Action Framework revisions: The MPCA has been following up with February's meeting commenter on greenhouse gas emissions and nitrate and water quality. Working with MPCA to find a good time for the board to get an update on the state's revisions to the Climate Action Framework, including climate modeling. The modeling, being done by the University of Maryland Center for Global Sustainability, is intended to assess the impacts of different policies and actions on future greenhouse gas emissions in Minnesota as part of the 2025 Climate Action Framework
 - It covers modelling for transportation, electricity, buildings, and the industrial sector
 - It does not include the land use, land use change and forestry sector
- Legislative updates
 - All the internal legislative deadlines have passed for session and we're starting to see the creation of "omnibus" bills that contain both budget and policy items.
 - The senate environment omnibus bill contains EQB funding at the governor's recommended levels and includes all three policy provisions that EQB staff put forward through the governor's executive branch process. The house environment omnibus bill does not include any of the policy provisions and recommends a slightly lesser amount of funding than the governor's recommendations.
 - Conversations around data centers and appropriate environmental review are ongoing. The gas production temporary framework is still alive in the Senate. None of these bills are likely in their final form yet.
- Project updates
 - GHG Calculator – Have had some public interest in looking at the draft calculator and will be available for comments through April 25.
 - Youth Engagement – EQB is working to partner with Roots for the Future, a program being re-launched by Environmental Initiative. It is designed as a multi-year paid STEM education and workforce development internship program for a cohort of Twin Cities high school youth. The program is designed to address the intersectional barriers faced by BIPOC youth who are interested in environmental careers. It will likely be a smaller summer program this year and hopefully be longer/larger in future.
 - Environmental Review Training – The EQB environmental review (ER) team is planning for training as part of EQB's technical assistance program. We are starting with an ER101 webinar on April 17 and looking for opportunities to support people in learning about ER. Much of this summer's training will be about the GHG calculator.

3. Spring 2025 Pollinator Report update

Presenter: Rebeca Gutierrez-Moreno, PhD – State Pollinator Coordinator, EQB

Type of item: Informational

Summary: The interagency pollinator protection team (IPPT) is implementing the pollinator action framework developed in 2023. EQB staff covered initial plans for reporting progress in the annual pollinator report, which will be brought to the board during the fall of 2025.

Discussion:

- Interagency collaboration example: EQB has approximately 44,000 native seed packets and is sharing them with IPPT agencies to distribute. The QR code on the packet leads to a plant guide on the EQB website.
- IPPT working with GreenStep Cities.
- IPPT considering an update on how Minnesota is doing with connecting pollinator habitats that may be patchy or scattered around the state. IPPT is aware that there is a need there for strategizing, for example, grant programs that help people install pollinator habitat or that help organizations install pollinator habitat to make sure that those resources are strategically located in places where there may be a need for connectivity.
- The federal layoffs and program cutbacks are concerning, as many farmers work with the Natural Resources Conservation Service (NRCS) to help them with their pollinator plantings and partnership with the Soil and Water District.
- 2025 North American Monarch Summit will be held in June in Minneapolis.

Outcome: The board was informed about the potential contents of the 2025 Pollinator Annual Report and had an opportunity to provide feedback to the IPPT.

4. Gas production rulemaking

Presenter: Jesse Krzenski – Environmental Review Program Administrator, EQB

Type of item: Decision

Summary: In 2024, the Minnesota Legislature directed the DNR to convene a Gas and Oil Resources Technical Advisory Committee (GTAC) to make recommendations to the commissioner of natural resources on the creation of a temporary regulatory framework for gas exploration and production. The commissioner then made recommendations to the Legislature on laws to implement the temporary framework.

In addition, the Legislature gave the agencies that made up GTAC permissive authority to adopt rules governing gas and oil exploration or production, as applicable. The language related to EQB stated that “the Environmental Quality Board may adopt or amend rules to establish mandatory categories for environmental review as they pertain to gas and oil production.”

The legislative language also stated that “an agency adopting rules under this section must use the expedited process...[t]he agency must publish notice of intent to adopted expedited rules within 24 months of the effective date” of the law.

The staff recommended that EQB should move forward and develop environmental review mandatory categories for gas production.

Discussion:

- Environmental review rulemaking would be limited to hydrocarbon and non-hydrocarbon gases located in the sub-surface.
- Possible for the rulemaking process to define different categories of environmental review based on the type of gas.
- EQB staff do not want to be in a situation where we were overly specific which limits the scope of the rule, then something else comes up in the future and there’s a gap in the rule that we wouldn’t want to have there. Will need to balance the rule.
- There was a wide array of input given to the Gas Resources Technical Advisory Committee (GTAC), but two main takeaways regarding environmental review were the need for an EIS threshold for gas production and that the Minnesota Pollution Control Agency should be the RGU for gas projects. Also, that an EIS would lead to Tribal coordination or consultation.

Public Comment: There were no comments.

Motion: Board Member Katzenberger moved to approve the resolution to move forward and make the gas rules as permitted by legislation in 2024; Board Member Nelson seconded.

In favor: Bauerkemper, Brands, Daubenberger, Hince, Holman, Katzenberger, Kessler, Martin, Nelson, Petersen, Smith, Strommen

Opposed: none

Excused: Arnold, Bakken, Cunningham, Gronvall, Varilek

Outcome: Staff will move forward on developing the rules and bring forward a notice of intent to adopt expedited rules for board approval to meet the timeline laid out in Minn. Stat. 93.514.

5. By-laws

Presenter: Catherine Neuschler – Executive Director, EQB

Type of item: Decision

Summary: Initial draft by-laws were presented to the Board in January. Changes were made based on Board discussion at that time, including:

- Article II, membership and officers, Board duties
 - Added references to Minn. Stat. § 13.02, which contains definitions about not public and nonpublic data

- Added the non-delegation requirement of Minn. Stat. § 116C.03 for clarity
- o Article IV, meetings
 - Clarified parliamentary procedure
- o Article V, staff
 - Added language clarifying the overall role and duties of staff, both generally and with more information on non-environmental review staff roles
 - Added information on the technical representatives – a role laid out in rule for staff of member agencies
- o Article VI, adoption and amendments
 - Changed the threshold for amendments to majority vote

Motion: Board Member Kessler moved to approve the by-laws; Board Member Strommen seconded.

Motion: Board Member Bauerkemper moved to amend Article 4, Section 6 and add to the end of it the following language: “No one shall act to indicate that the board has taken a position unless the board has indeed taken such a position”; Board Member Katzenberger seconded, and suggested that the language begin with “no one subject to these by-laws”. Board Member Bauerkemper agreed.

Discussion:

- Section 6 is about the mechanics of how a vote is determined, not what happens after the vote, how people talk about the vote.
 - o Response: the idea is that this would apply to anyone that the bylaws apply to, not just the board members, but the verbiage could be in Article 2, Section 5, Subsection B.
- The distinction between what is already in the draft regarding board Members – suggestion that be broadened out so that it would include the scope of the bylaws, so it so it would include staff, tech reps, task forces that might be appointed.
- Question: how would this amendment be policed?
 - o Response: the intent of the amendment is not really to police, but rather to provide some emphasis, reminders, and some expectations for how EQB operates.
- The amendment verbiage could be misinterpreted to mean the EQB generally, so it should be under Article 5, staff, and make it specific to actions of the board and then it parallels the way that it's represented for board members themselves.

Board Member Bauerkemper withdrew the motion.

Motion: Board Member Bauerkemper moved the amendment to Article 4, Section 9, adding the clause, “...and the Chair shall advise the board of all submitted matters not placed on the agenda.” Board member Katzenberger seconded.

Discussion:

- The rules that govern the EQB already have this in there as a provision. So the idea is that the bylaws should reflect the existing rules that are in place. Also, it would be a useful procedure to keep EQB members apprised of things that might be bubbling up.

Public comment:

- Willis Mattison: Proposed that there be an article in the bylaws that deals with public participation; some possible language that would reflect the EQB's willingness and openness to full and robust public participation.

Board Member Bauerkemper withdrew the motion.

Motion: Board Member Katzenberger moved to table approval of the EQB bylaws to a future meeting; Board Member Kessler seconded.

In favor: Bakken, Bauerkemper, Brands, Daubenberger, Gronvall, Hince, Katzenberger, Kessler, Martin, Nelson, Petersen, Smith, Strommen

Opposed: none

Excused: Arnold, Cunningham, Holman, Varilek

Outcome: The by-laws vote was tabled to a future board meeting. EQB staff will consider the suggestions put forth during the by-laws discussion and comment.

6. Public Comment

- Verlynn Schmale:
 - o Supported Commissioner Arnold's recent testimony that MN Senate File 2393 is prematurely cutting back on solar energy production through changes to net metering and sunseting of community solar gardens, and that the Department of Commerce finds the proposed changes will have an adverse effect on both the economy and the environment in the state of Minnesota.
 - o Believes that the primary thesis of the 2025 Greenhouse Gas Emissions Report, attributed to Commissioner Kessler on January 30th, is not true. He called on Commissioner Kessler to reissue the 2025 Greenhouse Gas Emissions Report with the following changes: Updated data for 2023, so trends since the pandemic can be better understood, and include the GCAM modeling of current policies, 2023 based at least through 2028, consistent with the state biannual budget, in order to prevent changes to laws around distributed solar generation .
 - o Called on citizen members of the EQB to request a vote to reject the greenhouse gas emissions report and request that the MPCA reissue the report with the recommended changes by April 30th.
- Hudson Kingston - Legal Director, CURE: CURE has been inquiring about the status of the Mesabi Metallics project permits and environmental review. The response from DNR was included in CURE's written comments. There is limited information on this major mining project. CURE believes that the DNR's Environmental Review need decision for the Mesabi Metallics project is demonstrably incomplete and inadequate.

Would like information presented for the public, particularly concerned about mercury pollution. Asked that the EQB and the MPCA work together and perform an efficient environmental review that gives the public unbiased information about the Mesabi Metallics project and especially its cumulative impacts on low income, Tribal members, and all the people who live in the area.

7. Closing and adjournment

Having reached the end of the agenda, the Chair asked if there was any further business.

Adjournment:

With no further business, the Chair adjourned the meeting.

DRAFT

ENVIRONMENTAL REVIEW PROGRAM CLIMATE CALCULATOR

Background

Minnesota's Environmental Review Program provides decision makers and the public with an understanding of the impact a proposed project will have on the environment. Recognizing that climate change is an important environmental issue, the Environmental Quality Board (EQB) added two climate-related questions to the environmental assessment worksheet (EAW) form in 2022.

Local governments, businesses, and the public are seeking reliable tools to evaluate how climate change affects their communities, economies, and ways of life. In 2023, the EQB received legislative funding to develop a climate calculator tool to support implementation of the climate-focused revisions to the EAW form. That work is now being completed, and the climate calculator will be available July 1, 2025.

Goal

The goal of developing a climate calculator was to make climate assessment consistent, effective, and efficient. The tool is designed to ensure accuracy and consistency of the climate information provided on the EAW form while reducing the time and cost for project proposers to provide information and state and local government agencies to assess applicable climate information.

A reliable method for estimating a project's potential greenhouse gas (GHG) emissions is key to successfully filling out an EAW. EQB received broad input that responsible governmental units (RGUs) want a well-vetted tool that uses Minnesota- and sector-specific data for completing EAWs.

The climate calculator tool is now available to facilitate the gathering of climate information within the EAW. The calculator provides additional accuracy, transparency, and consistency in answering EAW items 7 and 18 while reducing the time, cost, and uncertainty for government units and project proposers.

What does it do?

- ✓ Estimates the GHG emissions for a project's lifetime. Actual emissions will vary.
- ✓ Helps users answer the EAW climate questions (items 7 and 18).
- ✓ Uses Minnesota-focused data.
- ✓ Estimates GHG mitigation and climate adaptation.
- ✓ Allows users to adjust to fit their individual project needs.

Using the calculator is **not** a requirement when filling out an EAW and is **not** a change for EAW expectations.

Who can use it?

Government decision makers	Project proposers	Members of the public
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ENVIRONMENTAL REVIEW PROGRAM

CLIMATE CALCULATOR

FAQs

What is the calculator's scope?

- Accounts for the construction and operation for the project's life
- Includes direct and indirect emissions.
- Includes adjustable project inputs for project specific results.
- Provides qualitative mitigation options.
- Provides information for qualitative climate resiliency.



Does the calculator change the current EAW climate guidance?

No, the calculator has not changed the process for answering Item 7 and 18. The calculator is an optional tool to support those filling out an EAW and is designed to be an inclusive of Minnesota-based data for most project types.

What tools can I use when filling out the EAW climate questions?

The EQB offers guidance on frequently used tools, but no specific tool is required. The RGU has discretion in the methods used to fill out the EAW. The RGU and project proposer should be comfortable with the reliability of the estimates and information provided in their EAW.

Can I still use the calculator if I don't have all the project information?

Yes! Many questions have default values and Minnesota-based averages that can be used in place of project-specific information. For inputs without defaults, a best estimate is a reasonable choice.

Where can I find information about using the calculator?

We'll have a step-by-step user guide on EQB's website, recorded trainings, and ongoing support provided by EQB staff. Please reach out to Stephanie Aho (stephanie.aho@state.mn.us) or the EQB environmental review inbox (env.review@state.mn.us) if help is needed.

Climate calculator = consistent, efficient, and effective EAWs

Memo

Date: May 9, 2025

To: Environmental Quality Board members

From: Catherine Neuschler, Executive Director

RE: Groundwater policy report engagement

EQB is currently convening an interagency working group to develop Minnesota's 2025 Groundwater Policy Report, a required legislative report on the state's groundwater protection programs due in September.

After presentation of the purpose, audience, and a preliminary outline for the report at the February meeting, EQB staff implemented an engagement plan to get feedback on those items.

Outreach

The purpose of the outreach and engagement was primarily to get input on what should be included in the report so that it is useful and informative for the identified audiences. The engagement was designed to gather:

1. Input on whether the purpose(s) of the report (supporting informed decision-making; providing foundational information; describing the collaborative approach; describing important threats; identifying gaps and opportunities) will meet the needs of the audience
2. Input on whether the preliminary overall direction and outline will fulfill the purpose(s) of the report
3. Ideas for information that should be provided – including stories about the importance of groundwater; the audience's concerns about groundwater quality and quantity; and the audience's ideas of gaps to be filled and opportunities to be pursued

EQB staff sent emails to our "EQB Water Programs" GovDelivery email list and some direct emails to parties that had previously expressed interest in our water work. The email described our goals for the report, provided a link to the outline as provided in the February board meeting, and invited recipients to provide input. They could provide input via our Engagement HQ page or at a webinar held in mid-March. We also provided information on these opportunities for feedback in the EQB Monitor and through social media.

Our tribal point of contact also sent the report outline to the Minnesota Tribal Environmental Committee (MNTEC) members prior to the February board meeting. We let them know the outline would be part of the February Board meeting, and asked what kind of collaboration they would like to have, identifying the staff's interested in hearing the answer to questions like:

- What would you like included in the report as gaps or opportunities for groundwater management and sustainability?
- Is there an opportunity to talk about the importance of Tribal Ecological Knowledge and how to incorporate TEK in this area of work? For instance, if it is appropriate, how can this report showcase the importance of groundwater sustainability practices through a TEK lens?
- Are there any concerns about groundwater that you would like us to highlight (perhaps something about places where groundwater is important to the exercise of treaty rights?)

- What can the state do to encourage and support others to contact Tribes and understand Tribal permits and policies?

That email was shared with member agencies' tribal liaisons and the information was also shared at the MNTEC March meeting.

Through the Engagement HQ tool and in our webinar, we asked the following questions about the report, grouped into five topic areas:

Goal and outline

The state's groundwater protection programs ensure that Minnesota has safe and sustainable groundwater to equitably meet the state's needs.

1. Are there things you would add or change in that goal, or other ways we should express it?
2. Based on the outline, what else might be needed to understand how the state is working towards our goal of groundwater protection?

Narrative

We want to tell the story of why groundwater is important in our geography, both in the big picture and in specific areas or circumstances that are important to Tribal, local, or other communities. Please let us know:

1. How is groundwater important in your community? Is there a story about how it is used or what it means that you can share?
2. What are the concerns about groundwater in your community?
3. What local or indigenous knowledge about groundwater should we include?

Data and information

We want to provide some foundational background information about groundwater in Minnesota. Please answer any or all of the questions below.

1. What overview information would you like to see in the report?
2. Is there specific data you would like to see or that would be useful to you?
3. How can we make this report more accessible and useful to you or the work you do?

Key threats or concerns to groundwater

1. Are there any key threats to groundwater we didn't include that should be covered?
2. Are there additional equity impacts or concerns that are missing?

State programs, actions, and tools

1. Are there specific tools, actions, and programs that are missing?
2. What important success stories should we include?
3. We plan to include gaps and opportunities – what gaps or opportunities do you see in the way state programs address the key threats to Minnesota's groundwater?
4. What might help make state tools, actions, programs more useful to you?

Feedback received

Feedback was received online in Engagement HQ, orally during the webinar, and via emails. Feedback was grouped into themes and similar comments were combined. Overall, the comments were generally supportive of the direction and goal of the report.

2025 Groundwater Policy Report: Compiled Feedback

1. Sections: Introduction, Goal, and Importance

Topic Area	Comment	Response
Suggested additions		
Report title	Consider adding “quantity” and “quality” to groundwater.	<i>We are working to be clear throughout the report that both are included.</i>
Overall vision	Go beyond Minn. Stat., chap. 103H to include the state groundwater sustainability standard, outlined in 103G.287, as well as all the relevant provisions for water diversion and appropriation in Minn. Stat., chap. 103G (103G.255 through 103G.2991).	<i>We will be sure to take a broad look at all statutes in the background portion. Some of this information is already planned to be included in water quantity discussions.</i>
Suggested revisions		
Goal statement	Consider the word “ensure” - could be misconstrued as “guaranteed.”	<i>The team will consider this as we refine the language for the goal.</i>
Goal statement	Minnesota has safe and sustainable groundwater to equitably meet the <u>long-term needs of communities and ecosystems</u> .	<i>The team will consider this as we refine the language for the goal.</i>
Timelines	Consider putting specific time frames to clarify when the state will achieve the goals.	<i>The team has been discussing a period of the next 10 – 50 years in looking at threats; we will consider what additional timelines can be included.</i>
Timelines and future use	Include future generations when talking about impacts.	<i>We will include some discussion.</i>
Non-state agency roles	Please add the roles of others besides state agencies: local units of government, utilities, regional planners, watershed organizations (they have statutory authority to protect groundwater).	<i>We will include some discussion.</i>

2. Narrative

Topic Area	Comment	Response
Suggested additions		
Ecosystems	To highlight the importance of groundwater supported ecosystems, recommend a focused section on the water quality and climate benefits of peatlands. The Nature Conservancy, Playbook for Minnesota Peatlands, is a useful resource to consult.	<i>Thank you for the comment and the suggested resource; we will include a brief discussion of peatlands along with other wetland ecosystems.</i>

Economic development	Thank you for mentioning groundwater as important to economic development. We see this as a key use and source of conflict.	<i>Thank you for the comment.</i>
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3. Data and information

Topic Area	Comment	Response
Suggested additions		
Groundwater age	Recognize and highlight that we have different ages of groundwater. Not all groundwater is the same; the impact of water quality is a function of how long that water's been in the ground.	<i>We will include some of this information in the report.</i>
Aquifer recharge	To underscore the long-term consequences of groundwater impacts, we recommend that you include accessible data on recharge rates for groundwater aquifers in Minnesota. This will help readers understand how long it takes to replenish and clean up groundwater.	<i>We know that there is a lot of interest in improving data and information about groundwater recharge and availability.</i> <i>This report and the water availability assessment appendix will include some new maps and information and likely also highlight some places where information is already available, such as the watershed health assessment framework (WHAF).</i> <i>The state also often relies on USGS modeling and research in these areas.</i>
Groundwater availability map	We would like to see a map showing relative groundwater age, rates of recharge vs. abstraction, and potential climate change projections.	<i>See prior response.</i>
Groundwater map	Considering creating a map similar to MPCA's IWAV for groundwater impairments.	<i>We appreciate the desire for more accessible information about groundwater quality. MPCA has a groundwater contamination atlas.</i> <i>To date, the concept of groundwater "impairment" hasn't been implemented, but it is being considered and is mentioned in MDH's draft Minnesota Drinking Water Action Plan.</i>

4. Threats to Minnesota's groundwater

A. Groundwater quality concerns

Topic Area	Comment	Response
Suggested additions		
Coordination	Please add the fact that multiple state agencies (MPCA and MDH and MDA) oversee groundwater quality concerns, making coordination difficult. Minnesota's 10-agency multi-centric water management is not effective for protecting drinking water in the karst.	<i>Discussing the multiple agencies involved and the benefits and drawbacks is a planned section of the report.</i>
Vulnerable groundwater areas	Emphasize the sensitivity of the statewide Vulnerable Groundwater Areas. Specific attention should be given to how vulnerabilities differ between regions such as the karst geology of Southeastern Minnesota and the converted pinelands of the Central Sands.	<i>This is a planned section of the report.</i>
Land use/land cover change	Consider land use impacts on water quality. Some examples: managed forests overlying the vulnerable and overexploited central sands aquifer have become potato fields.	<i>We will consider how to include this information. For example, MPCA's ambient groundwater monitoring network is specifically designed around key (non-agricultural) land-use settings.</i>
Agricultural drainage	Unregulated tile drainage concerns.	<i>This is a planned section of the report.</i>
Pollutant: sediment	Information on sediment, because sediment is coming from tiled fields. Per MPCAs "take action" solutions on their sediment pollution website, agriculture solutions are displayed in 4 of the 6 bullets. Highlight the issue for transparency.	<i>Sediment is primarily a surface water concern; however, the report will discuss many of the solutions (such as soil health) as they also support groundwater goals.</i>
Pollutants	Coal ash storage and landfill leachate infiltration into groundwater	<i>We understand the importance of these pollutants and concerns. However, they tend to be more site-specific and handled by specific permits and remediation. We will consider mentioning some of these issues but likely not cover them extensively.</i>
Pollutants: industrial	With decommissioning of industrial facilities, like old gas stations and waste management sites people are really concerned about impacts to their water quality and different aquifers.	<i>We understand the importance of these pollutants and concerns. However, they tend to be more site-specific and handled by specific permits and remediation. We will consider mentioning some of these issues but likely not cover them extensively.</i>

Topic Area	Comment	Response
Pollutants: Nitrate	Minnesota spends millions subsidizing and promoting the production of ethanol from corn. Now the state is proposing to spend millions to clean and remediate nitrate pollution in our surface and ground water. Repeal executive order 19-35 (establishing the Governor's Council on Biofuels). The lack of regulation and the unchecked promotion of ethanol from corn has resulted in devastating consequences to our surface and ground water. Sunset all tax credits and subsidies for ethanol from corn.	<i>Tax policy and the Governor's Council on Biofuels are beyond the scope of this report.</i>
Suggested revisions		
Agricultural drainage	Expand the section on tile drainage to include all agricultural drainage. There is no requirement to report tiling or to map it in any organized way, and the pace of pattern tiling installation has been more than rapid over the past several decades. Tile drainage reduces infiltration/recharge of aquifers, which I assume is going to be noted in the report.	<i>This planned section of the report will discuss many of the issues raised in the Minnesota Ground Water Association report on tile drainage, including the issues noted.</i>
Tribes	Please add tribal nations under environmental justice.	<i>Including the tribal role and recognizing the potential impact of issues and actions on Tribal nations is important. We will consider how to do this while recognizing the distinction between sovereign nations and EJ communities.</i>

B. Groundwater quantity concerns

Topic Area	Comment	Response
Suggested additions		
Coordination	Please add the fact that multiple state agencies (DNR and MDH) oversee quantity concerns, making coordination difficult.	<i>Discussing the multiple agencies involved and the benefits and drawbacks is a planned section of the report.</i>
Reuse and conservation: Gray water	Various comments suggested standards and systems for graywater.	<i>We will be reframing the discussion on water reuse to be a broader water circularity section and will consider addressing gray water in that section.</i>

Topic Area	Comment	Response
Reuse, recharge, conservation and funding	Discuss behavioral solutions; reports have always said we will address water use and reuse before expensive engineering solutions, but we don't talk about funding and support for the behavioral changes for better conservation.	<i>Thank you for the comment. We agree that behavioral change is important and will work to integrate some discussion of this barrier in the relevant section of the report.</i>
Water circularity	Please add low adoption of water circularity practices including water conservation, reuse or recharge across the state as a concern.	<i>We will be reframing the discussion on water reuse to be a broader water circularity section.</i>
Land use/land cover change	Consider land use impacts on water quantity. Some examples: draining 90%+ of the wetlands (important for aquifer recharge) in the Minnesota River basin and also, looking into the future, the decimation of ash trees statewide including large swaths of black ash in Northern MN wetlands that often have an intimate relationship with groundwater.	<i>Land use does impact groundwater quantity due to reduced infiltration and increased surface water runoff. We will consider how to bring forward this issue in the report, at least at a high level.</i>
Source water protection	Please add source water protection areas under consumer use. They are not only important for quality but also for ensuring sufficient quantity for municipal water supply.	<i>Source water protection will be included in the report. Source water protection does consider quantity in addition to quality issues, although the program is structured around water quality. We will work to make sure we talk about the program broadly.</i>
Large users: intensity	Discuss groundwater usage intensity within the context of what is available in local aquifers; examples such as mega dairies in Western Minnesota often being the largest users of groundwater in relatively groundwater-scarce areas, and the slow marching disaster of over withdrawals in the greater Twin Cities metropolitan area.	<i>Thank you for this comment; we will think about how to contextualize larger water users and local availability.</i>
Large users: groundwater availability and siting	Groundwater availability varies considerably throughout the state, making it important to responsibly site water-intensive industries. Data and information is needed to help the public and state agencies, local governments and businesses when planning new economic development projects. Surface water is the only truly sustainable source of water for concentrated populations and large water users. Groundwater should be viewed as a temporary alternative source to supplement surface water.	<i>Thank you for this comment; we will think about how to contextualize larger water users while also documenting some specifics of likely future industries.</i>
Large users: carbon capture	This is a water intensive add-on to the ethanol industry and potential to add on to fertilizer and mining industries.	<i>We will add some discussion of the potential water use of carbon capture, utilization, and storage technology.</i>

Topic Area	Comment	Response
Price and value of water	Water pricing should reflect the value of old groundwater, and local governments should be able to understand the benefits (\$/gal) for water withdrawals.	<i>The 2015 report noted that “current water pricing may not cover the current and future cost of infrastructure for drinking water and wastewater”. In addition to that need, we recognize there are ongoing questions about whether the fees being charged for the use of water adequately recognize the value of water in a way that appropriately incentivizes water use or conservation. The legislature in 2023 authorized an increase in the water use permit fees charged by DNR. A full discussion on the issue of how water is priced and whether that should recognize the overall value of water is likely beyond the scope of this report.</i>
Prioritizing water use	Why does General Mills need to import oats from Canada to make Cheerios and pay a 25% Trump tariff? We should prioritize food over fuel and provide incentives to grow cover crops instead of corn to make ethanol.	<i>Tax policy is beyond the scope of this report.</i>
Suggested revisions		
Regulations	Be more specific on how current regulatory frameworks align or conflict with the values/vision outlined. • How effectively has the groundwater sustainability standard been operationalized? • How do municipal permit amendments to incorporate water-intensive industries complicate enforcement of water allocation priorities (Minn. Stat. chap. 103G.261), elide liability for potential well interference costs, and impact environmental review? • How does the lack of flow meters on high-capacity irrigation wells shape the DNR’s ability to make effective use of its expanded APO authority? • How does the lack of a public comment period on water appropriation permits shape the goal of equity and transparency in groundwater governance?	<i>Thank you for this comment. We intend for the section on gaps and opportunities to provide information on ways in which the state’s programs and framework can be accelerated, adapted, or revised in order to meet the overall sustainability goal.</i> <i>There is a planned section that will include discussion of water appropriation permitting, well interference, and DNR’s expanded APO authority.</i>

Topic Area	Comment	Response
Large users	Rather than list specific industries, can you instead describe a threshold for defining large water users as “consumptive use of more than 100 MGY or 250,000 gallons per day, including industries such as data centers, food and beverage industries, sustainable aviation fuel, etc.”	<i>Thank you for this comment; we will think about how to contextualize larger water users while also documenting some specifics of likely future industries.</i>
Large users: data centers	Discuss water usage from aquifers for data centers, especially in areas where other industries are already using a significant amount of water. Emphasize data centers given the current efforts to facilitate hyperscale data center construction across the state. Data centers represent the potential stress of one-time groundwater use that is then exported to surface waters through wastewater facilities.	<i>A discussion of data centers and water usage is planned for the report.</i>

c. Infrastructure

Topic Area	Comment	Response
Suggested additions		
Infrastructure type	Is this only for public infrastructure? What about private wells or private systems, or tribal nation systems?	<i>This section was planned to focus mainly on public infrastructure, with private wells discussed separately, but we will consider these comments.</i>
Infrastructure score	Please note that the 2022 ASCE report card for Minnesota, Drinking Water has a C- grade.	<i>Thank you for this comment. This will likely be a good resource to discuss and cite.</i>
Responsibility for water infrastructure	This would be a good section to describe who has responsibility of water infrastructure in terms of local municipalities as the owner, regional or watershed groups for planning, state agency as the regulator, PFA as a funder, etc.	<i>Yes, we plan to speak to at least some of these issues about responsibility. Some of this information is included in the draft Minnesota Drinking Water Action Plan.</i>
Infrastructure replacement	A key concern for water infrastructure is the high need for replacement of aging infrastructure, the lack of funding, and affordability to residents.	<i>Yes, we plan to highlight these concerns.</i>

d. Equity

Topic Area	Comment	Response
Suggested additions		
Tribal nations	Please add tribal nations under environmental justice.	<i>Including the tribal role and recognizing the potential impact of issues and actions on Tribal nations is important. We will consider how to do this while recognizing the distinction between sovereign nations and EJ communities.</i>
Private well users	Private well users are ignored or neglected in agency budgets, capacity, and programming. There should be more emphasis on broad aquifer protection (aquifers are shared by community systems and public well users).	<i>This disparity is part of why we plan to highlight private wells in the report.</i>
Private well users – information	The state has a duty to inform well owners of local risks to groundwater and contaminated groundwater, no matter the contaminant.	<i>The report will include a discussion of current communication strategies about groundwater contamination for private well users, including opportunities and gaps.</i>
Private well users - costs of drinking water	In Southeast Minnesota for the wells that have high of nitrate and water is not drinkable people need support to afford the cost of purchasing drinking water.	<i>We plan to discuss the costs placed on private well users and the limited financial support that is currently available.</i>
Private well users - testing	Highlight the MDH’s ambition to create a statewide program to test and provide income-based mitigation for private wells for the top five most common contaminants (nitrate, lead, E. coliform bacteria, arsenic, and manganese). What is the status of progress towards that goal, and what are the key barriers? How does the state’s approach differ for other pollutants of concern in well water, like PFAS?	<i>The disparities in protections faced by private well users and potential program and policy changes to address these disparities will be discussed in the report.</i>
Private well users - renters	Expand private well users to include renters as well as homeowners.	<i>We use the term “private well users” to include renters and others who may not own the property the well is on. We will be sure to define the term and use private well users as appropriate.</i>
Private wells – pre-code	We also think you should include the issue of pre-code wells that aren’t currently on county or state well indexes but are at a higher risk of contamination. What is the status of progress to inventory these pre-code wells?	<i>This will be included in the section about private wells and equity and throughout as appropriate.</i>

5. State actions and programs

Topic Area	Comment	Response
Suggested additions		
Agency roles	Can you also describe who else collects monitoring data besides state agencies? Watershed districts, regional planning teams, SWCDs, cities, etc.	<i>Thank you for this comment, we will look to provide this information. It is somewhat more common for others to collect surface water data than groundwater data.</i>
Review and risk management assessment	Review past actions for failures to avoid repeating ineffective policies or actions. There is a pattern of repeated mistakes. • Inability of multiple agencies to adopt a unified message about groundwater risk, groundwater protection and public health. • Trying, over 50 years, to achieve groundwater protection and water quality improvement with voluntary action with ag-producers. • Disparity between water quality testing and consumer notification where community water system are served but households with private wells are on their own even when they share contaminated aquifers with communities.	<i>We appreciate this comment, and hope that this report is a step in the direction of providing unified information about groundwater.</i> <i>As noted previously, the disparity between private wells and community systems will be noted and discussed.</i>
Public awareness	Most people have very little awareness of the source of their water other than that it comes from the tap. This has been borne out by a lot of public engagement with Water Bar.	<i>Thank you for this comment. We hope this report helps provide some additional awareness.</i>

6. Gaps and opportunities

Topic Area	Comment	Response
Suggested additions		
Resources	Include and discuss whether the state will have sufficient resources.	<i>This is the kind of information we plan to include in the gaps and opportunities discussion.</i>
Data and Information: manure and fertilizer	Track, document, and make publicly available specific information about application of manure and other fertilizers, whose components are prominent contaminants of both surface and groundwater.	<i>Thank you for the suggestion. New online tools could make this more feasible and MPCA is also currently considering updates to its feedlot rules.</i>
Data and Information: Communication	State should improve communication of data and information, including goals and reporting on whether they are met.	<i>We agree this is a need. EQB staff have heard many comments that reporting is important.</i>

Topic Area	Comment	Response
	Make sure it is available for local governments and water conservation groups to use in their work. Help improve Minnesotans understanding, and lead to better groundwater protection.	<i>We hope this document moves that forward and we will continue to consider opportunities.</i>
Data and Information: Private wells	None of the agencies know how many private wells are in service; current estimates range from 740,000 to over 1.5 million. This lack of reliable numbers and demographic information creates uncertainty and is a barrier to effective policy and funding.	<i>The report will highlight the lack of data on private wells (including number of wells) and the need for better data to support program development and measure progress in protecting private well users.</i>
Data and Information: Minnesota Well Index	The MWI is more than a decade behind in software upgrades or robust data maintenance.	<i>The report will discuss the need for modern data systems, including MWI, and public access to data.</i>
Shared water	Recognize that aquifers are shared by households, farms, cities, and businesses. Multi-agency policies do not current articulate these shared concerns.	<i>We will work to provide some of this context.</i>
Private well users	There is a gap in programs and funding between public well users and community water systems; the state excludes well users outside of drinking water supply management areas (DWSMAs) from testing, treatment, information, and alternative water supplies. This gap should be filled.	<i>The report will include some lessons learned from agency grants to local government partners that can be used in the development of a statewide, sustainable system of support for private well users, including testing and income-based financial resources.</i>
Measuring progress	Identify specific other tools and strategies that could be used to protect groundwater, as there are currently serious pollution hazards and threats to groundwater sustainability that are not being adequately addressed by agency actions.	<i>We intend for the sections on gaps and opportunities to provide information on ways in which the state's programs can be accelerated, adapted, or revised in order to meet the overall goal.</i>

Topic Area	Comment	Response
Measuring progress	Identify specific benchmarks of progress for multiple key items (groundwater sustainability, private well protection, nitrate, PFAS)	<i>Many of the issues raised in these comments are large policy issues in specific areas. For many of these concerns, the state is already moving towards addressing them in various ways. We do intend for the sections on gaps and opportunities to provide information on ways in which the state's programs can be accelerated, adapted, or revised in order to meet the goals.</i> <i>We agree that it is important to identify what we want to accomplish and be able to clearly report back on progress in a way that is useful for the public and decision makers.</i>
Measuring progress: groundwater quantity sustainability	Specific benchmarks of progress for groundwater sustainability/governance • Do we have public transparency in the permit process? • How effectively can the state enforce water allocation priorities? • What would it look like to operationalize the groundwater sustainability standard through sustainable limits as DNR developed for surface water impacts? • Minn. Stat. 103G.287, subd. 3 gives the DNR authority to set water appropriation limits to protect groundwater supplies that can include cumulative withdrawal rates on a monthly or annual basis -- is there any work currently underway or planned to set these kinds of cumulative withdrawal limits?	<i>For 103G.287, there are places where work is underway – particularly where a water use conflict exists or may currently be evaluated. We will consider what examples might be included.</i>
Measuring progress: private well protection	Benchmarks of progress for private well users • Status of well code inventories for vulnerable pre-code wells • How many homeowners/well users reached through free testing and income-based mitigation programs.	<i>Progress on many areas is reported on MDH's website for southeast Minnesota response and more indicators of progress in protecting private well user are in development.</i>

Topic Area	Comment	Response
Measuring progress: nitrate	Benchmarks of progress for nitrate contamination • Look beyond feedlot permits to include the state feedlot rules, which apply to all registered feedlots (50 animal units and above). • Compare state actions to date against the key threats/equity issues raised: how well do the state rules for commercial fertilizer and feedlots respond to the threat of nitrate and pesticide contamination, equity issues for private well owners, etc. What gaps remain?	<i>MPCA is currently beginning the process of updating the state feedlot rules and has established a website for comments and information.</i>
Measuring progress: PFAS	Benchmarks of progress for PFAS • How many industrial and/or municipal wastewater permits include PFAS effluent limits? • How effectively the state has addressed nonpoint sources of PFAS contamination such as the land application of biosolids • Is there a program in place to test private wells in vulnerable areas for PFAS contamination due to the land application of biosolids?	<i>There are multiple plans for PFAS, including the Minnesota PFAS Blueprint, and MPCA's PFAS Monitoring Plan and a PFAS in biosolids strategy.</i>

2025 EQB Engagement Planning Worksheet

Instructions

We'll be going over the four strategies in our strategic plan that help us achieve the engagement outcome, *"The EQB fosters meaningful conversations around environmental issues."* Please use this worksheet to review planned activities and brainstorm activities you think are missing.

STRATEGY 1: EQB has built and maintained meaningful relationships

ACTIVITY	CONSIDER	WHAT'S MISSING?
➤ Better understand and track who is interested in EQB's work ➤ Help partners and the public better understand who we are and what we do ➤ Support relationship building with our board members	<i>What kind of work needs to happen for us to accomplish this strategy?</i> <i>What else do we need to do to build and maintain meaningful relationships?</i>	

STRATEGY 2: EQB brought Minnesotans together to talk about environmental issues.

ACTIVITIES	CONSIDER	WHAT'S MISSING?
➤ Increase participation at events and board meetings ➤ Understands what issues are important to our stakeholders and partners	<i>What kinds of opportunities/events do we need to consider that bring people together?</i> <i>Do we want more opportunities for open dialogue and conversational interactions?</i>	

STRATEGY 3: EQB created opportunities for partners and people interested and affected by environmental issues to bring forward key environmental issues for discussion.

ACTIVITIES	CONSIDER	WHAT'S MISSING?
➤ Identify ways to reach people interested or affected by environmental issues ➤ Connect and determine what issues are important to Minnesotans and partners	<i>What are those opportunities?</i> <i>Board meetings or other kinds of events?</i> <i>Who do you want to hear from?</i>	

STRATEGY 4: EQB implemented policies and processes that improved relations with Tribal nations and their members

ACTIVITIES	CONSIDER	WHAT'S MISSING?
➤ Regularly attend MNTEC and provide updates on EQB projects	<i>What's needed to make sure we're implementing the policy?</i>	

BYLAWS OF THE MINNESOTA ENVIRONMENTAL QUALITY BOARD

ARTICLE I. INTRODUCTION

1. Purpose. The Environmental Quality Board (EQB or Board) desires to conduct its business and perform its responsibilities and duties in an orderly, efficient, transparent, fair, and lawful manner. These bylaws are established for that purpose.
2. Application. Unless otherwise specifically indicated, these bylaws apply to the transaction of all EQB business and the conduct of all EQB meetings.
3. Compliance with applicable law. It is the specific intent of the EQB to perform its responsibilities and conduct its hearings and meetings in accordance with all applicable federal law and state statutes and regulations. In the case of a discrepancy between these bylaws and applicable law, the provisions of all such applicable law control.

ARTICLE II. MEMBERSHIP AND OFFICERS

1. Membership. The Environmental Quality Board is composed of members named by statute or appointed by the governor in accordance with Minn. Stat. § 116C.03.
2. Officers. The officers of the EQB are the Chair and Vice-Chair.
 - a. The Chair is appointed by the governor from the members of the Board.
 - b. The Vice-Chair is elected by the members of the Board. The Vice-Chair is elected annually at the regularly scheduled meeting held in February.
3. Duties of the Chair. The Chair has the following responsibilities:
 - a. Supervise the affairs of the Board and communicate such affairs to all Board members.
 - b. Preside at all Board meetings.
 - c. Schedule regular meetings.
 - d. Call special meetings when deemed necessary and desirable.
 - e. Propose Board meeting agendas.
 - f. Sign on behalf of the Board any actions or documents necessary to record the Board's decisions after the Board's consideration of the same.
 - g. Work with the EQB Executive Director and the Minnesota Pollution Control Agency to acquire appropriate staff and consultant support (per Minn. Stat. § 116C.03, subd 4).
 - h. Work with the Minnesota Pollution Control Agency to ensure completion of an annual performance evaluation for the EQB Executive Director.
 - i. Carry out duties assigned to the Chair for operation of the EQB's environmental review program under Minn. Stat. ch. 116D and Minn. R. ch. 4410.

- j. Carry out duties assigned to the Chair under Minn. Stat. ch. 116C and any other rules promulgated by EQB.
- 4. Duties of the Vice-Chair. The Vice-Chair has the following responsibilities:
 - a. To perform those duties delegated by the Chair.
 - b. To act as Chair in the event of the Chair's illness, disability, absence from a meeting or not being readily able to function as Chair.
 - c. To call special meetings when deemed necessary and desirable.
- 5. Duties of all Board members. All Board members have the following responsibilities:
 - a. To regularly attend Board meetings and carry out the Board's powers and duties provided in law and executive order.
 - b. Individual members shall not act or speak to represent the Board on any subject unless the Board's position has been officially determined.
 - c. Individual members of the Board shall not disclose any not public data as defined by Minn. Stat. § 13.02 and § 13.37, except as required by law.
 - d. Individual members of the Board (i) may not discuss attorney-client privileged information outside of the Board and the Board's legal counsel, and (ii) may not waive attorney-client privilege on behalf of the Board.
 - e. Board members may not delegate their powers and responsibilities to any other person, per Minn. Stat. 116C.03, subd. 2.

ARTICLE III. COMMITTEES

- 1. As required to carry out the Board's responsibilities, duties, and initiatives, the Board may establish subcommittees and task forces and appoint members and chairpersons to the same.
- 2. Unless otherwise prescribed by statute or rule, subcommittees shall consist of more than three members but fewer than a quorum of the Board for the purpose of gathering information, making findings, and bringing recommendations to the Board.
- 3. The membership of all committees shall be posted on the EQB website and made available in alternate formats upon request.

ARTICLE IV. MEETINGS

- 1. Notice. Notices of all EQB meetings shall be made in a manner in accordance with Minn. Stat. ch. 13D (Open Meeting Law) and Minn. R. ch. 4405.
- 2. Open Meetings and Records. All meetings of the Board shall be open to the public as provided by law. The votes of the members shall be recorded by voice vote or by roll call if so called. The minutes shall be available to the public upon request made to the Executive Director. Minutes of Board meetings and other records, including recordings, shall be preserved in compliance with EQB's record retention schedule.
- 3. Closed Meetings. The Chair may call a closed meeting or close a meeting if the closure is authorized by statute or permitted by attorney-client privilege. In all cases where a meeting is closed, the Board shall abide by the requirements for closed meetings in Minn. Stat. ch. 13D. Closed meeting minutes and recordings may not be available to the public upon request.

4. Presiding Officer. The Chair or, in the absence of the Chair, the Vice-Chair, presides at all meetings. If at a Board meeting, neither the Chair nor Vice-Chair are present but a quorum exists, the members shall elect from within the membership an acting Chair to run the meeting.
5. Quorum. A quorum of the full Board means a majority of the permanent members of the Board as established under Minn. Stat. § 116C.03, subd. 2, excluding vacancies. A majority of an established subcommittee is a quorum.
6. Voting. Each member shall have one (1) vote in the transaction of business of the Board. An affirmative vote of a majority of all members of the board is necessary to take action. When computing a majority of all members of the board, absences or abstentions must be included and vacancies must be excluded. All members present, including the chairperson, shall vote or abstain on every matter presented for board action. A vote will be recorded by voice vote unless a roll call vote is requested. A roll call vote may be requested by any member and a roll call vote will be used for meetings where any Board member is participating virtually via teleconference or interactive technology, per Minn. Stat. ch. 13D.
7. Meeting Arrangements. The Board shall normally meet at a regularly scheduled time and place designated by the chair from 1:00 pm until 4:00 pm, or as the agenda dictates. The Chair may call for recess for appropriate breaks or for purposes of furthering the agenda. The chair of the Board shall select a meeting location that is convenient and suitable for the members, staff, and general public. Meetings may be in-person, virtual, or hybrid.
8. Parliamentary Procedure. The most current version of Robert's Rules of Order, Revised, shall govern the conduct of the meeting except when state statute, policies, and these bylaws state otherwise. The Chair shall make all parliamentary rulings. The Board's assigned Assistant Attorney General or the Attorney General, the Executive Director, or a designee of the Executive Director shall serve as the parliamentarian advisor.
9. Board Meeting Agenda Development. All matters for preliminary agenda consideration with pertinent information included shall be submitted to the Executive Director. The Executive Director shall develop an agenda to be reviewed and proposed by the Chair prior to the Board meeting. Placement of items on the proposed agenda will be at the discretion of the Chair.
10. Conflicts of Interest. Each Board member is obligated to determine whether they have a perceived, potential, or actual conflict of interest with respect to any matter before the EQB and to comply with all requirements of law regarding any potential conflict.

ARTICLE V. STAFF

1. Staff. As described in Minn. Stat. § 116C.03, staff and consultant support for EQB activities is provided by the Minnesota Pollution Control Agency (MPCA); the MPCA also provides administrative services (personnel, budget, payroll, and contract administration).
2. Executive Director. The EQB shall employ an Executive Director. The Executive Director shall be responsible to the Board and communicate and report regularly to the Chair. The Executive Director or designee shall attend all Board meetings but shall not vote. All staff report to the Executive Director.
3. Duties of Staff. The staff are responsible for the day-to-day operations of the Environmental Quality Board as an administrative agency of state government, making administrative decisions based on the Board's adopted policies, resolutions, and direction.
 - a. The Executive Director shall have authority to conduct the administrative and general operations of the Environmental Quality Board, including the following responsibilities:

- i. Managing staff resources, including hiring, discipline, performance evaluation, work-planning, other human resource-related transactions, and making requests for staff support from other agencies of state government.
 - ii. Managing budget resources, including preparing and submitting EQB budgets through the processes established by the Governor's office or Minnesota Management and Budget (MMB), and keeping the Board fully advised as to its financial condition.
 - iii. Entering into contracts and interagency agreements for regular operational services and the implementation of the approved annual workplan.
 - iv. Recommending an annual workplan for Board approval, overseeing implementation of the Board-approved workplan, and ensuring the staff work aligns with the broad powers and authorities of the Board's mission, vision and plan direction.
 - v. Representing and implementing the Board's orders, resolutions, and policies.
 - vi. Presenting to the Board program plans, studies and reports prepared for Board purposes and action and recommending to the Board for adoption those measures deemed necessary and prudent to carry out the programs and duties of the Board or for the efficient administration of the affairs of the Board.
 - vii. Ensuring that all resolutions, rules, regulations, and orders of the Board are carried out.
 - viii. Implementing legislative appropriations, policy, and statute.
 - ix. Communicating and interacting with the Governor's office, state and federal agencies, local governments, special districts, joint powers authorities, and the legislature; and participating in relevant meetings.
 - x. Ensuring appropriate implementation of the Board meeting procedures under Minn. R., ch. 4405.
 - xi. Recording and maintaining a record and minutes of the meetings and process and information relating to Board business.
 - xii. Participating in an annual performance evaluation as determined by the Chair and the Minnesota Pollution Control Agency.
 - xiii. Making regular reports to the Board regarding operations and other relevant information necessary for the Board to properly oversee the activities of the organization.
- b. EQB staff, under the direction of the Executive Director, bring policy, technical, and program area expertise and carry out responsibilities related to implementation of Board decisions, the EQB's strategic plan, workplan, and appropriate Minnesota Statutes, Rules, and Executive Orders. These include, but are not limited to:
- i. Implementing approaches to protecting pollinators and other critical areas of Minnesota's biodiversity, including implementation of Executive Order 19-28, *Restoring Healthy, Diverse Pollinator Populations that Sustain and Enhance Minnesota's Environment, Economy, and Way of Life*.
 - ii. Coordination and reporting related to water programs.
 - iii. Implementing public engagement and communications approaches in alignment with the strategic goals.
 - iv. Serving as the board meeting administrator and providing administrative and organizational support.

- c. The Environmental Review program staff, under the direction of the Executive Director, provide technical expertise on the environmental review program upon request to the legislature, other state agencies, local governments, and others. They shall have authority to conduct certain administrative and general responsibilities of the environmental review program, including:
 - i. Providing technical assistance to project proposers, government units, and the public.
 - ii. Providing guidance and information to support and enhance Minnesota's environmental review program, including the provision of climate information.
 - iii. Collecting and evaluating data to monitor statewide environmental review activities and measure the effectiveness of the program.
 - iv. Producing the *EQB Monitor*.
 - v. Receiving and reviewing information and taking actions related to the administration of the environmental review program as described in Minn. Stat. ch. 116D and Minn. R. ch. 4410, and as designated by the Board or the Chair.
- 4. Technical Representative. As defined in Minn. R. 4405.0100, these are staff of member agencies that serve as a designated representative of that agency member of the Board. The technical representatives support their agency's participation on the Board, serve as a conduit of information between EQB and agency staff, and support special projects as needed.

ARTICLE VI. ADOPTION AND AMENDMENT

- 1. Effective Date. These bylaws shall be effective as of the date of approval and adoption by the Board.
- 2. Amendments. These Bylaws may be amended by a majority vote of all Board members. All proposed amendments shall be presented in writing. The Board shall review the proposed changes at least one meeting prior to adoption.

The Board approved and adopted these bylaws on [month] [day], [year].

 Nancy Daubenberger, Chair
 Minnesota Environmental Quality Board

Date: _____

BYLAWS OF THE MINNESOTA ENVIRONMENTAL QUALITY BOARD

ARTICLE I. INTRODUCTION

1. Purpose. The Environmental Quality Board (EQB or Board) desires to conduct its business and perform its responsibilities and duties in an orderly, efficient, transparent, fair, and lawful manner. These bylaws are established for that purpose.
2. Application. Unless otherwise specifically indicated, these bylaws apply to the transaction of all EQB business and the conduct of all EQB meetings.
3. Compliance with applicable law. It is the specific intent of the EQB to perform its responsibilities and conduct its hearings and meetings in accordance with all applicable federal law and state statutes and regulations. In the case of a discrepancy between these bylaws and applicable law, the provisions of all such applicable law control.

ARTICLE II. MEMBERSHIP AND OFFICERS

1. Membership. The Environmental Quality Board is composed of members named by statute or appointed by the governor in accordance with Minn. Stat. § 116C.03.
2. Officers. The officers of the EQB are the Chair and Vice-Chair.
 - a. The Chair is appointed by the governor from the members of the Board.
 - b. The Vice-Chair is elected by the members of the Board. The Vice-Chair is elected annually at the regularly scheduled meeting held in February.
3. Duties of the Chair. The Chair has the following responsibilities:
 - a. Supervise the affairs of the Board and communicate such affairs to all Board members.
 - b. Preside at all Board meetings.
 - c. Schedule regular meetings.
 - d. Call special meetings when deemed necessary and desirable.
 - e. Propose Board meeting agendas.
 - f. Sign on behalf of the Board any actions or documents necessary to record the Board's decisions after the Board's consideration of the same.
 - g. Work with the EQB Executive Director and the Minnesota Pollution Control Agency to acquire appropriate staff and consultant support (per Minn. Stat. § 116C.03, subd 4).
 - h. Work with the Minnesota Pollution Control Agency to ensure completion of an annual performance evaluation for the EQB Executive Director.

- i. Carry out duties assigned to the Chair for operation of the EQB's environmental review program under Minn. Stat. ch. 116D and Minn. R. ch. 4410.
 - j. Carry out duties assigned to the Chair under Minn. Stat. ch. 116C and any other rules promulgated by EQB.
4. Duties of the Vice-Chair. The Vice-Chair has the following responsibilities:
- a. To perform those duties delegated by the Chair.
 - b. To act as Chair in the event of the Chair's illness, disability, absence from a meeting or not being readily able to function as Chair.
 - c. To call special meetings when deemed necessary and desirable.
5. Duties of all Board members. All Board members have the following responsibilities:
- a. To regularly attend Board meetings and carry out the Board's powers and duties provided in law and executive order.
 - b. Individual members shall not act or speak to represent the Board on any subject unless the Board's position has been officially determined.
 - c. Individual members of the Board shall not disclose any not public data as defined by Minn. Stat. § 13.02 and § 13.37, except as required by law.
 - d. Individual members of the Board (i) may not discuss attorney-client privileged information outside of the Board and the Board's legal counsel, and (ii) may not waive attorney-client privilege on behalf of the Board.
 - e. Board members may not delegate their powers and responsibilities to any other person, per Minn. Stat. 116C.03, subd. 2.

ARTICLE III. COMMITTEES

- 1. As required to carry out the Board's responsibilities, duties, and initiatives, the Board may establish subcommittees and task forces and appoint members and chairpersons to the same.
- 2. Unless otherwise prescribed by statute or rule, subcommittees shall consist of more than three members but fewer than a quorum of the Board for the purpose of gathering information, making findings, and bringing recommendations to the Board.
- 3. The membership of all committees shall be posted on the EQB website and made available in alternate formats upon request.

ARTICLE IV. MEETINGS

- 1. Notice. Notices of all EQB meetings shall be made in a manner in accordance with Minn. Stat. ch. 13D (Open Meeting Law) and Minn. R. ch. 4405.
- 2. Open Meetings and Records. All meetings of the Board shall be open to the public as provided by law. The votes of the members shall be recorded by voice vote or by roll call if so called. The minutes shall be available to the public upon request made to the Executive Director. Minutes of Board meetings and other records, including recordings, shall be preserved in compliance with EQB's record retention schedule.
- 3. Closed Meetings. The Chair may call a closed meeting or close a meeting if the closure is authorized by statute or permitted by attorney-client privilege. In all cases where a meeting is closed, the Board shall abide by the requirements for closed meetings in Minn. Stat. ch. 13D. Closed meeting minutes and recordings may not be available to the public upon request.

4. Presiding Officer. The Chair or, in the absence of the Chair, the Vice-Chair, presides at all meetings. If at a Board meeting, neither the Chair nor Vice-Chair are present but a quorum exists, the members shall elect from within the membership an acting Chair to run the meeting.
5. Quorum. A quorum of the full Board means a majority of the permanent members of the Board as established under Minn. Stat. § 116C.03, subd. 2, excluding vacancies. A majority of an established subcommittee is a quorum.
6. Voting. Each member shall have one (1) vote in the transaction of business of the Board. An affirmative vote of a majority of all members of the board is necessary to take action. When computing a majority of all members of the board, absences or abstentions must be included and vacancies must be excluded. All members present, including the chairperson, shall vote or abstain on every matter presented for board action. A vote will be recorded by voice vote unless a roll call vote is requested. A roll call vote may be requested by any member and a roll call vote will be used for meetings where any Board member is participating virtually via teleconference or interactive technology, per Minn. Stat. ch. 13D.
7. Meeting Arrangements. The Board shall normally meet at a regularly scheduled time and place designated by the chair from 1:00 pm until 4:00 pm, or as the agenda dictates. The Chair may call for recess for appropriate breaks or for purposes of furthering the agenda. The chair of the Board shall select a meeting location that is convenient and suitable for the members, staff, and general public. Meetings may be in-person, virtual, or hybrid.
8. Parliamentary Procedure. The most current version of Robert's Rules of Order, Revised, shall govern the conduct of the meeting except when state statute, policies, and these bylaws state otherwise. Board meetings follow the Robert's Rules of Order Procedure in Small Boards, with the exception that motions do require a second. The Chair shall make all parliamentary rulings. The Board's assigned Assistant Attorney General or the Attorney General, the Executive Director, or a designee of the Executive Director shall serve as the parliamentarian advisor.
9. Board Meeting Agenda Development. All matters for preliminary agenda consideration with pertinent information included shall be submitted to the Executive Director. The Executive Director shall develop an agenda to be reviewed and proposed by the Chair prior to the Board meeting. Placement of items on the proposed agenda will be at the discretion of the Chair, and the Chair shall advise the board of all submitted matters not placed on the agenda.
10. Conflicts of Interest. Each Board member is obligated to determine whether they have a perceived, potential, or actual conflict of interest with respect to any matter before the EQB and to comply with all requirements of law regarding any potential conflict.

ARTICLE V. STAFF

1. Staff. As described in Minn. Stat. § 116C.03, staff and consultant support for EQB activities is provided by the Minnesota Pollution Control Agency (MPCA); the MPCA also provides administrative services (personnel, budget, payroll, and contract administration).
2. Executive Director. The EQB shall employ an Executive Director. The Executive Director shall be responsible to the Board and communicate and report regularly to the Chair. The Executive Director or designee shall attend all Board meetings but shall not vote. All staff report to the Executive Director.
3. Duties of Staff. The staff are responsible for the day-to-day operations of the Environmental Quality Board as an administrative agency of state government, making administrative decisions based on the Board's adopted policies, resolutions, and direction. When communicating about the EQB's actions, the staff shall not indicate that the Board has taken a formal position on a matter unless the Board has indeed taken such a position.

- a. The Executive Director shall have authority to conduct the administrative and general operations of the Environmental Quality Board, including the following responsibilities:
 - i. Managing staff resources, including hiring, discipline, performance evaluation, work-planning, other human resource-related transactions, and making requests for staff support from other agencies of state government.
 - ii. Managing budget resources, including preparing and submitting EQB budgets through the processes established by the Governor's office or Minnesota Management and Budget (MMB), and keeping the Board fully advised as to its financial condition.
 - iii. Entering into contracts and interagency agreements for regular operational services and the implementation of the approved annual workplan.
 - iv. Recommending an annual workplan for Board approval, overseeing implementation of the Board-approved workplan, and ensuring the staff work aligns with the broad powers and authorities of the Board's mission, vision and plan direction.
 - v. Representing and implementing the Board's orders, resolutions, and policies.
 - vi. Presenting to the Board program plans, studies and reports prepared for Board purposes and action and recommending to the Board for adoption those measures deemed necessary and prudent to carry out the programs and duties of the Board or for the efficient administration of the affairs of the Board.
 - vii. Ensuring that all resolutions, rules, regulations, and orders of the Board are carried out.
 - viii. Implementing legislative appropriations, policy, and statute.
 - ix. Communicating and interacting with the Governor's office, state and federal agencies, local governments, special districts, joint powers authorities, and the legislature; and participating in relevant meetings.
 - x. Ensuring appropriate implementation of the Board meeting procedures under Minn. R., ch. 4405.
 - xi. Recording and maintaining a record and minutes of the meetings and process and information relating to Board business.
 - xii. Participating in an annual performance evaluation as determined by the Chair and the Minnesota Pollution Control Agency.
 - xiii. Making regular reports to the Board regarding operations and other relevant information necessary for the Board to properly oversee the activities of the organization.
- b. EQB staff, under the direction of the Executive Director, bring policy, technical, and program area expertise and carry out responsibilities related to implementation of Board decisions, the EQB's strategic plan, workplan, and appropriate Minnesota Statutes, Rules, and Executive Orders. These include, but are not limited to:
 - i. Implementing approaches to protecting pollinators and other critical areas of Minnesota's biodiversity, including implementation of Executive Order 19-28, *Restoring Healthy, Diverse Pollinator Populations that Sustain and Enhance Minnesota's Environment, Economy, and Way of Life*.
 - ii. Coordination and reporting related to water programs.
 - iii. Implementing public engagement and communications approaches in alignment with the strategic goals.

- iv. Serving as the board meeting administrator and providing administrative and organizational support.
- c. The Environmental Review program staff, under the direction of the Executive Director, provide technical expertise on the environmental review program upon request to the legislature, other state agencies, local governments, and others. They shall have authority to conduct certain administrative and general responsibilities of the environmental review program, including:
 - i. Providing technical assistance to project proposers, government units, and the public.
 - ii. Providing guidance and information to support and enhance Minnesota's environmental review program, including the provision of climate information.
 - iii. Collecting and evaluating data to monitor statewide environmental review activities and measure the effectiveness of the program.
 - iv. Producing the *EQB Monitor*.
 - v. Receiving and reviewing information and taking actions related to the administration of the environmental review program as described in Minn. Stat. ch. 116D and Minn. R. ch. 4410, and as designated by the Board or the Chair.
- 4. Technical Representative. As defined in Minn. R. 4405.0100, these are staff of member agencies that serve as a designated representative of that agency member of the Board. The technical representatives support their agency's participation on the Board, serve as a conduit of information between EQB and agency staff, and support special projects as needed.

ARTICLE VI. ADOPTION AND AMENDMENT

- 1. Effective Date. These bylaws shall be effective as of the date of approval and adoption by the Board.
- 2. Amendments. These Bylaws may be amended by a majority vote of all Board members. All proposed amendments shall be presented in writing. The Board shall review the proposed changes at least one meeting prior to adoption.

The Board approved and adopted these bylaws on [month] [day], [year].

 Nancy Daubenberger, Chair
 Minnesota Environmental Quality Board

Date: _____

RESOLUTION OF THE MINNESOTA ENVIRONMENTAL QUALITY BOARD

Adoption of board bylaws

The Environmental Quality Board (EQB or board) desires to conduct its business and perform its responsibilities and duties in an orderly, efficient, transparent, fair, and lawful manner.

To meet this purpose, board members and staff have proposed bylaws that state and direct how the board operates.

Proposed bylaws were reviewed by the board on January 15, 2025 and April 16, 2025.

The board resolves to adopt the Bylaws of the Minnesota Environmental Quality Board as proposed in the April 16, 2025 meeting packet.

The board further resolves to direct the Chair and Executive Director to implement this resolution by producing a final version of the adopted bylaws to be signed by the Chair.

The board approved and adopted this resolution on May 21, 2025.

Nancy Daubenberger, Chair
Minnesota Environmental Quality Board

Date: _____

MPCA/ Verlynn Schmalle correspondence and attachments

From: [Verlynn Schmale](#)
To: [MnDOT Commissioner](#); [Kessler, Katrina \(She/Her/Hers\) \(MPCA\)](#); [Neuschler, Catherine \(She/Her/Hers\) \(EQB\)](#)
Subject: GHG Emissions Report, February EQB meeting follow-up
Date: Monday, March 17, 2025 1:37:51 PM
Attachments: [Frank Kohlasch linkin.png](#)
[Screenshot 2025-02-18 231840.png](#)

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Chair Daubenberger, Commissioner Kessler, and Director Neuschler:

In late 2022, Frank Kohlasch instructed the team that was preparing the 2023 GHG emission report to selectively include forest sequestration, wood in new home construction, and carbon sequestered in landfills without including the negative impacts on GHG emissions resulting from urban sprawl. In addition, the team inappropriately modified data streams with inconsistent data history like peat lands and control burns to exaggerate the cumulative GHG reductions in 2020. The 2023 report falsely claimed that Minnesota had reduced its GHG emissions by 23% and was on track to meet its GHG emissions of a 30% reduction in 2025 for the first time.

With challenges to the data integrity submitted by citizens and the greater involvement of the Center for Global Sustainability to provide a base level of peer review, the 2025 report shows that the primary thesis of the 2023 GHG emissions report was false. Minnesota had only reduced GHG emissions by 19% by 2020 and was not and had never been on track to meet our GHG reduction goals.

The 2023 report was a demonstration in propaganda and self-promotion (see attached).

The inaccuracies in the 2025 GHG emissions report were predictable. MPCA issued the report to the public in late January. Upon the release, MPCA quoted Commissioner Kessler stating, "Investments Minnesota has made over the last three years will get us back on track to meet our greenhouse gas reduction goals."

This statement is false and confirms the MPCA's preference for propaganda over science.

There are serious threats to free and open governments by those that choose disinformation and autocracy. The way to stand up to these forces is not by telling better lies than they do, but by telling the truth.

I call on Commissioner Kessler to apologize to the Governor, the State Legislature, and the people of Minnesota in the March EQB meeting and commit to re-issue the 2025 GHG Emissions report with the following changes:

- 1) Update the data through 2023 so trends since the pandemic can be better evaluated (all data inputs in current model structure for 2023 are available by April 2025)
- 2) Create a Met Council and Greater Minnesota geographic subtotal so that the greenhouse gas emissions impact of the State's large investments in transportation and housing can be better understood.
- 3) Include the GCAM modeling of current policies from the 2023 base through 2028 consistent with the Minnesota State biennial budget.

Sincerely and respectfully,

Verlynn Schmalle



520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

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March 18, 2025

Verlynn Schmalle
VIA EMAIL
Vs53589@gmail.com

RE: Greenhouse Gas Emissions

Dear: Verlynn Schmalle

Dear Mr. Schmalle:

I am responding to your comments related to the Greenhouse gas emissions in Minnesota 2005-2022: Biennial inventory report tracking the state's greenhouse gas emissions contributing to climate change provided at the February meeting of the Environmental Quality Board and your March 17, 2025, email to Commissioner Kessler, Commissioner Daubenberger, and Executive Director Neuschler.

Your assertion that I *"instructed the team preparing the 2023 GHG Emission Report to selectively include forest sequestration, wood in new home construction, and carbon sequestered in landfills without including the negative impacts on GHG emissions resulting from urban sprawl"* is incorrect and unsubstantiated.

The carbon stored in Minnesota's forests, wood in new and existing homes, and in landfills was included in the Minnesota 2005-2022: Biennial inventory report tracking the state's greenhouse gas emissions contributing to climate change (2025 GHG Emissions Report), published in January 2025, and all previous versions of the GHG emissions report submitted under the Next Generation Energy Act. These carbon stores are included because data was, and is, available to make the emission estimates and the methods used follow Intergovernmental Panel on Climate Change (IPCC) and U.S. Environmental Protection Agency (EPA) guidelines. A summary of the methodologies used for each the reports is available at the end of each report.

There is no methodology available via the IPCC or EPA, or any other state to estimate emissions from urban sprawl. The MPCA coordinates with other states and EPA to understand and incorporate the most current methodologies for GHG emission estimates and we are unaware of any state or EPA creating a methodology for urban sprawl.

Many of the conditions that could define urban sprawl are incorporated into the current inventory, such as vehicle emissions based on vehicle miles traveled and type of vehicle, residential and commercial natural gas use for new and existing buildings, electricity generation, emissions from buses and transit, and emissions from solid waste generation and management. Additionally, the MPCA added emissions from settlement in the Land Use, Land Use Changes, and Forestry Sector for the years 1990-2022 in the 2025 GHG Emissions Report.

Your March 17, 2025, email states that *"the team inappropriately modified data streams with inconsistent data history like peat lands and control burns to exaggerate the cumulative GHG reductions*

Name: Verlynn Schmale

Page 2

Date: March 18, 2025

in 2020. The 2023 report falsely claimed that Minnesota had reduced its GHG emissions by 23% and was on track to meet its GHG emissions of a 30% reduction in 2025 for the first time."

The assertion is also false and unverifiable as you provide no data or analysis to support your assertion. The MPCA uses standard GHG emissions methods and applies new methods retrospectively, when the historical data allows, so that the past and current emissions are comparable. This technique is used by EPA and other states and maintains consistency in data sources and methodologies to the greatest extent possible.

Contrary to your claim, peatlands and other organic-rich soils used in agricultural production are a significant source of carbon emissions in Minnesota. The MPCA includes these emissions in the GHG inventory because Minnesota is one of a few states in the US with significant acres of peatlands and other organic-rich soils. We work closely with the Minnesota Department of Agriculture (MDA), Department of Natural Resources (DNR), and Board of Water and Soil Resources (BWSR) to understand the use of peatlands or other organic-rich soils and mineral soils in agriculture. The 2025 GHG Emissions Report also included the GHG emissions and storage expected from mineral soils used in the agricultural sector. Climate Subcabinet agencies are working on methods to include peatland restoration in future inventories, as the restoration work is completed, and reliable carbon storage estimations are developed.

The MPCA uses the best data available to include emissions from prescribed burns and wildfires within the state. These emissions are difficult to calculate due to the variability of prescribed burns and wildfires over given years. There is no evidence that data was manipulated from this emission source to show emission reductions.

You also assert that *"the 2023 report falsely claimed that Minnesota had reduced its GHG emissions by 23% and was on track to meet its GHG emissions of a 30% reduction in 2025 for the first time."*

This assertion is incorrect. The 2023 Emission Report showed emissions data through 2020. Due to the economic slowdown from COVID-19 restrictions, the emissions for 2020 were in line with the linear trajectory of emissions to meet the 2025 and 2030 goals. The MPCA noted at the time that there was a likelihood of an emissions rebound as the state and country exited from COVID-19 restrictions. I testified as such to the House Climate and Energy Committee on February 20, 2024.

Your March 17, 2025, email states that *"with challenges to the data integrity submitted by citizens and the greater involvement of the Center for Global Sustainability to provide a base level of peer review, the 2025 report shows that the primary thesis of the 2023 GHG emissions report was false. Minnesota had only reduced GHG emissions by 19% by 2020 and was not and had never been on track to meet our GHG reduction goals."*

Please provide the report referenced from the University of Maryland's Center for Global Sustainability, as we cannot verify any assertion you make.

The MPCA has contracted with the University of Maryland's Center for Global Sustainability to conduct Global Change Analysis Model (GCAM) evaluation for the Climate Subcabinet's Climate Action Framework 2025 update. Peer review or verification of the MCA's historical GHG inventory was not included in the scope of work with the Center for Global Sustainability.

Name: Verlynn Schmalle

Page 3

Date: March 18, 2025

It is my understanding that you have participated in the modeling input stakeholder group formed in the Summer of 2024 to help the Climate Subcabinet and the MPCA in 2024 and 2025 to ensure the GHG emissions forecasting will meet the needs of the Climate Action Framework update.

The work with the Center for Global Sustainability will continue, with additional public input, as the GHG forecasting is critical to identifying the scale and scope of future policies need to meet the 2050 Net Zero goal.

Your March 17, 2025, email states, *"The inaccuracies in the 2025 GHG emissions report were predictable. MPCA issued the report to the public in late January. Upon the release, MPCA quoted Commissioner Kessler stating, 'Investments Minnesota has made over the last three years will get us back on track to meet our greenhouse gas reduction goals.' This statement is false and confirms the MPCA's preference for propaganda over science."*

This is a serious accusation without any substantiating facts. The 2023 GHG Emissions Report shows that 2020 emissions were on track with the linear pathway to achieve the near-term emission reduction goals in the Next Generation Energy Act. The MPCA was transparent at the time that we expected emissions to increase as COVID-19 restrictions were relaxed in 2021 and 2022, consistent with national estimates. For the 2025 GHG Emissions Report, the MPCA clearly noted the emissions increase. Since the emission estimates added were for 2021 and 2022, Commissioner Kessler expressed optimism that the over \$1 billion state investment in climate action in 2023 and the multiple billions of dollars committed to Minnesota by the federal government in 2024 would yield future emission reductions.

The MPCA relies upon the best science available to estimate past emissions, forecast future emissions, and evaluate future policy scenarios with Climate Subcabinet partners. The work is conducted with transparency and integrity and includes work with external stakeholders. The MPCA also works closely with other states that conduct GHG emission inventories to share learning and data sources to construct statewide GHG emission inventories. The MPCA relies heavily upon IPCC, EPA methodologies and tools, and federal data sets to construct our GHG emission inventory in the most accurate manner possible.

We encourage you to continue to engage with the MPCA in the public facing process to develop robust GHG modeling methodologies and the public working sessions supporting the update to Minnesota's Climate Action Framework. Both efforts represent open, transparent, public facing opportunities to constructively help shape the climate change work of the state.

Sincerely,

Frank L Kohlasch

Frank Kohlasch
Assistant Commissioner

Cc:

MPCA Commissioner Katrina Kessler
MnDOT Commissioner Nancy Daubenberger
EQB Executive Director Catherine Neuschler

From: [Verlynn Schmale](#)
To: [MnDOT Commissioner](#); [Kessler, Katrina \(She/Her/Hers\) \(MPCA\)](#); [Neuschler, Catherine \(She/Her/Hers\) \(EQB\)](#); [Kohlasch, Frank \(He/Him/His\) \(MPCA\)](#)
Subject: Frank's letter
Date: Wednesday, March 19, 2025 11:30:29 AM
Attachments: [Screenshot 2025-02-18 231840.png](#)
[FrankControlBurnAdj.xlsx](#)
[Claflin072822.pdf](#)

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Chair Daubenberger, Commissioner Kessler, Director Neuschler:

I offer this quick response to Frank's letter.

Frank wrote:

Your assertion that I “instructed the team preparing the 2023 GHG Emission Report to selectively include forest sequestration, wood in new home construction, and carbon sequestered in landfills without including the negative impacts on GHG emissions resulting from urban sprawl” is incorrect and unsubstantiated.

Verlynn responds:

In Anne Claflin's response to me on follow-up questions on the 2023 GHG emissions report, she noted the decision was made to include the forest sequestration data following a 11/28/22 letter from the DNR. Anne's response also notes that MPCA was aware of remaining elements to the EPA Land Use and Land Use Change but chose to exclude those elements until the 2025 report. (attached)

The data in the 2023 report was “cherry picked” and was not the best available science. When the complete land use and land use change data was included in the 2025 report, the data showed that Minnesota was not and had never been on track to meet the Next Generation Energy Act goals.

Assessment: **Frank lied.** The data in the 2023 GHG emissions report was cherry picked to exaggerate the decline in GHG emissions from 2005 to 2020.

Frank wrote:

The MPCA uses the best data available to include emissions from prescribed burns and wildfires within the state. These emissions are difficult to calculate due to the variability of prescribed burns and wildfires over given years. There is no evidence that data was manipulated from this emission source to show emission reductions.

Verlynn responds:

The DNR stopped reporting prescribed burn acres in 2018. Prescribed burns conducted by the DNR continued to occur, but rather than use an average of the historical data or hold the most recent year constant, Frank had the data zeroed out to show a decline which exaggerates the decline from 2005. (File attached)

Assessment: **Frank lied.** The prescribed burn data in the 2023 GHG report was manipulated to exaggerate the decline in GHG emissions from 2005 to 2020.

Frank wrote:

Your March 17, 2025, email states, “The inaccuracies in the 2025 GHG emissions report were predictable. MPCA issued the report to the public in late January. Upon the release, MPCA quoted Commissioner Kessler stating, ‘Investments Minnesota has made over the last three years will get us back on track to meet our greenhouse gas reduction goals.’ This statement is false and confirms the MPCA’s preference for propaganda over science.”

This is a serious accusation without any substantiating facts. The 2023 GHG Emissions Report shows that 2020 emissions were on track with the linear pathway to achieve the near-term emission reduction goals in the Next Generation Energy Act. The MPCA was transparent at the time that we expected emissions to increase as COVID-19 restrictions were relaxed in 2021 and 2022, consistent with national estimates. For the 2025 GHG Emissions Report, the MPCA clearly noted the emissions increase. Since the emission estimates added were for 2021 and 2022, Commissioner Kessler expressed optimism that the over \$1 billion state investment in climate action in 2023 and the multiple billions of dollars committed to Minnesota by the federal government in 2024 would yield future emission reductions.

Verlynn Responds:

First, please view the December 18, 2024 public webinar. In that meeting, Anne Claflin of the MPCA stated, “So then moving over to compare these emissions from our current policies, which are clearly not getting us to our greenhouse gas reduction goals.” It is not me that is saying that the current policies are not achieving the goals, it was a highly credible member of the MPCA staff. Perhaps Frank should interact with the MPCA staff a little more.

A screen shot was attached to the original email. To say there were no substantiating facts demonstrates Frank's willingness to fabricate a narrative. I will again attach the screenshot for your review.

Second, to claim that Commissioner Kessler was simply expressing optimism in the statement, 'Investments Minnesota has made over the last three years will get us back on track to meet our greenhouse gas reduction goals,' is not true. The word "will" is used to indicate certainty. The Commissioner, from a position of authority, expressed a view that the investments made were sufficient to meet the objective. She did not say may or hope. For Frank to state otherwise is revisionist history. (Documentation attached)

Assessment: **Frank lied ... again.** The claim that existing programs were sufficient to get Minnesota to the Next Generation Energy Act GHG goals is false.

Conclusion:

I am done on this topic for now. I have done what I can to get the MPCA to present a realistic view of Minnesota's status in achieving the Next Generation Act Goals. I again ask the Commissioner to re-issue the report to include final 2023 data and present the GCAM model data at least through 2028 consistent with the biennial budget.

On environmental issues, one must be prepared for the long game. If the report is not re-issued, I will be back in 22 months to ask why MPCA got it so wrong.

Thank you for listening.

Verlynn Schmalle

From: "Claflin, Anne (She/They) (MPCA)" [EX:/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D3B3FDE35A7B4EA1B1612339BEE30ECB-ACLAFLI]

Subject: Draft response RE: GHG emission follow-up, second attempt

Date: Jul 28, 2023 at 1:12:00 PM

To: Bowser, Kary (MPCA) kary.bowser@state.mn.us, anne.claflin@gmail.com

Cc: Rhees, Suzanne (BWSR) suzanne.rhees@state.mn.us, McCann, Henry (DNR) Henry.McCann@state.mn.us, Krogstad, Faith (MPCA) faith.krogstad@state.mn.us, Coleman, Nicholas (MPCA) nicholas.coleman@state.mn.us, Smith, Amanda (She/Her/Hers) (MPCA) amanda.smith@state.mn.us, Smith, Michael D (MPCA) michael.smith@state.mn.us, Courneya, Celeste (MPCA) celeste.courneya@state.mn.us, Holdsworth, Andrew (He/Him/His) (MPCA) Andy.Holdsworth@state.mn.us, Palmer, Kari (MPCA) kari.palmer@state.mn.us

Below is my draft response. I have cited the sources of data rather than attaching spreadsheets (very large files). There is likely more I could add, this was a fast turnaround. Please let me know if you have any comments, especially on the last question about being on track.

I will be out of town until August 8th and can send the response then.

Anne

Verlynn,

Thanks for sending your message again. My answers to your questions are bulleted below.

An interagency team is working on improving accounting and designing policies around many of these issues as part of the Climate Pollution Reduction Grant process and the ongoing work from the Climate Action Framework. Suzanne Rhees at BWSR is a good contact for that work and will likely have information about the policies the group is working on. There will also be additional public input and engagement opportunities in the coming months.

There were many challenges in accounting with the data available, despite the clear science, but many of those obstacles are being reduced. Much of the data is aggregated statewide, and it isn't easy to disaggregate to show the impacts of the many climate-friendly practices being implemented. Also, we are in the final steps of hiring a research scientist to focus on these emissions and sequestration issues on natural and working lands and collaborate with our partner agencies to improve our accounting and policy.

Topic 1 - Forests

Question/Data Request

Please provide the model inputs and GHG store coefficients for Minnesota forests used in MPCA GHG report. Also, please explain the scientific

evidence that supports the 49.6% increase in the carbon stored by Minnesota forests despite the USDA measured forestland increasing just 5.7% since 1990.

- We are using carbon sequestration data recommended by the DNR from the EPA State inventory, which is based on USDA Forest Inventory and Analysis (FIA) data. Previously, we had estimated carbon storage based on acres and stand age using USDA FIA data, following a recommendation from the DNR. I have attached the memo with the current DNR recommendation.
- We are also planning to include the carbon sequestration and emissions data from land use and land use change as reported by the EPA in their state inventory in our next edition of the MN GHG inventory.
- If you have further questions about the forest carbon accounting, I recommend speaking with Henry McCann at the DNR.

Topic 2 – Cover crops and grasslands

Question/Data Request

Please provide the model inputs and GHG emission coefficients for traditional cover crops, CRP, dedicated pasturelands, and preserved grasslands and explain the science to support either the specific inclusion or exclusion in MPCA GHG emission report.

- Grasslands remaining grasslands are a category we have not been able to include in the inventory because of a lack of data, but we are planning on including them in the next inventory using the EPA state inventory data. <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals>. The current inventory does look at nitrogen cycling in grasslands, but not carbon. The grassland data is from the USDA NRI (<https://www.nrcs.usda.gov/nri>)
- Cover crops and CRP, along with other activities, are practices that we

have previously not been able to identify and quantify. For example, the impacts of these practices may show up in changes in fertilizer purchases, which are a data source for N₂O emissions. However, the fertilizer data is highly aggregated to sales within the state, and we don't know anything about application practices or other drivers of change. Statistics like acres of crops similarly also don't provide information about the agricultural practices on the ground. Correlating any signals there to activities is not possible.

- We are working on using the data available and finding additional data that will help us show the impact of these activities. We must carefully integrate the land use data and other information into the inventory to ensure that we are not double-counting emissions.
- We follow the EPA national inventory protocols where there is data available for MN, but combine some pieces of the land use chapter into the agriculture, forestry, and land use sector. The field agriculture methods follow the EPA protocol closely, and portions of land use are used for fires, cultivated histosols, peatlands, reservoirs and surface water.
 - The land use chapter is here: <https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Chapter-6-Land-Use-Land-Use-Change-and-Forestry.pdf>
 - The agriculture chapter is here: <https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Chapter-5-Agriculture.pdf>
 - Nick Coleman and the new research scientist will be working on developing data and methods for MN

Topic 3 – Agricultural Oil Usage

Question/Data Request

Please provide the data inputs and the coefficients for the GHG emissions from oil for agriculture and provide a brief explanation of the science to

support the estimate.

- Petroleum products are used in many parts of agriculture besides as a source of energy to move field equipment. The chemical industry creates pesticides and herbicides with petrochemicals, and the production of fertilizers and other products takes energy as well. Drying and processing also require energy. However, these activities are classified in the MN inventory as industrial sector activities, to the extent they occur in MN.
- Within the agricultural sector, we track the combustion fuel from the EIA Fuel Oil and Kerosene Sales Report, EIA State Energy Data Report, and the FHA Highway Statistics Report.
- The combustion of a quantity of fuel is converted to MMBtu and GHG emissions using standard EIA and EPA conversion factors.

Topic 4 – Cultivated Histosols

Question/Data Request

Please provide the data inputs and the coefficients for GHG emissions that support the cultivated histosols presented in the report and explain the status of the science supporting the estimated GHG emissions. If the Nature Conservancy has advanced better data, why wasn't it used for the 2023 report? Will the impact of the Glenwood fire be included in the 2025 report?

- The drained acres of cropland and grassland are from the 2017 version of DAYCENT, provided by the EPA.
- We are aware of the inventory of histosols prepared by the Nature Conservancy and discussed using the data with their researcher, but have not received it to update the inventory. It is to be shared with other staff at other state agencies working on this issue, and we may be able to incorporate it into the inventory. For the inventory, it is important to maintain a consistent time series through 2005 in order to measure progress against a baseline, so we will need to evaluate the

data and methods to meet this need.

- I don't recall the Glenwood fire, but acres of forestland and grassland burned are obtained from reports through the Minnesota Interagency Fire Center.
 - Though it is a landfill fire, the Rice County landfill fire will also be important to include in the inventory because it changes the potential methane generation curve.

Topic 5 – On Track

Frame of Reference

The headline for the 2023 greenhouse gas emissions report to the legislature was an unqualified “Minnesota is on track to meet greenhouse gas emissions goal for the first time.” While there were qualifications on future trends related to the reductions that occurred related to the pandemic, there was no qualification in the level of precision of the data presented through 2020. The linear trend for a Next Generation Energy Act target of 30% reduction over the 2005 to 2025 is 22.5%. This means that MPCA is confident that the emissions data presented is accurate to 0.5% of the total. Given the state of GHG emissions measurement, it does not seem that MPCA would have a level of precision and that future restatements will not result in an alternate conclusion as of 2020.

Question/Data Request

What is the level of precision on a percent basis for each of the economic sectors presented in the report? Is it possible that future restatements would show that Minnesota was not on track in 2020?

- That headline was written based on the linear trajectory between the 2015 and 2025 goals. The 2020 estimate did fall on that line. We were also transparent that emissions will likely rise from the 2020 endpoint.
- We acknowledged the impact of the pandemic on 2020, but also noted that not all reductions were due to the pandemic and are very likely to

persist. Some patterns that changed because of the pandemic are also persisting, and we will see the impact as more data is released.

- We are not able to compare statistical certainty in the inventory. We have done a qualitative analysis of uncertainty, and are confident in the comparisons we make within the inventory. Within some areas of the inventory we have high confidence in our results. The data on emissions from electricity generation and other permitted facilities is reviewed for quality control and often also reported to federal programs where we can crosscheck our results. There are other areas where we have less certainty, like the assignment of fuel consumed to non-permitted facilities and residential use, but we have high confidence in the overall fuel consumption data based on federal sales reports. And then there are areas like agriculture, forestry and land use, where we know we are unable to capture some details and are working from state level statistics, but consistency across years and an effort to be as complete as possible and incorporate new sources gives us some confidence in what is included.
- The past trend shows slow change, but generally shows changes in the right direction. It also shows the significant reductions made in electricity generation and that it is now time to work on the harder sources of emissions.

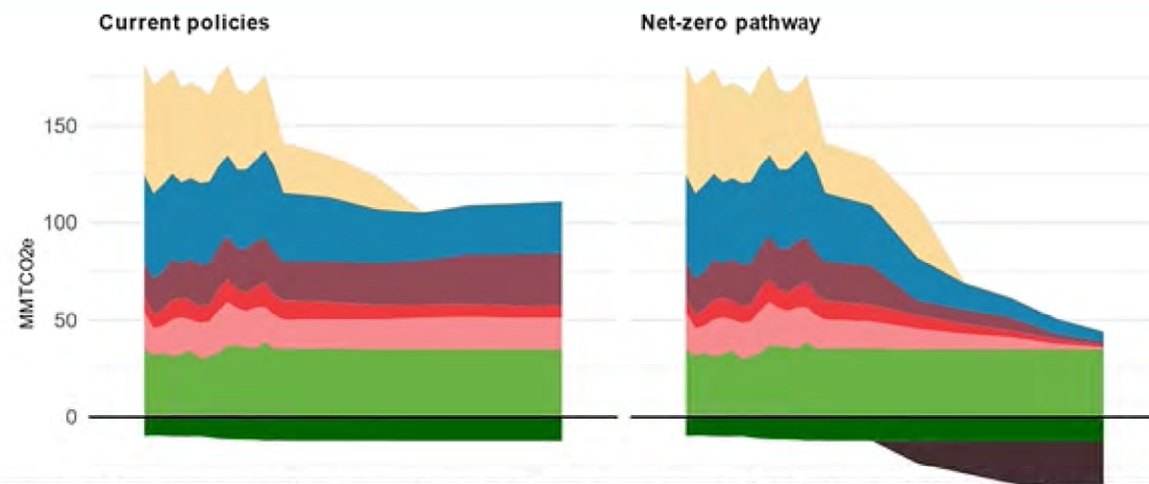
From: Verlynn Schmale <vs53589@gmail.com>

Sent: Tuesday, July 25, 2023 9:54 AM

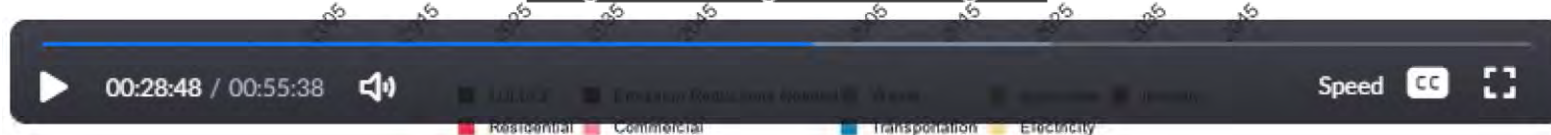
To: Bowser, Kary (MPCA) <kary.bowser@state.mn.us>; Claflin, Anne (She/They) (MPCA) <anne.claflin@state.mn.us>; anne.claflin@gmail.com

Subject: GHG emission follow-up, second attempt

Comparison of current policy and net-zero pathway emissions



So then moving over to compare these emissions from our current policies, which are clearly not getting us to our greenhouse gas reduction goals.



	GHG								
	Sum of Emissions (CO ₂ -e tons)								
	Row Labels	2005	2010	2015	2016	2017	2018	2019	2020
	Agriculture, Forestry & Land use	28,816,372.01	29,340,479.75	28,506,797.33	29,029,545.34	28,656,482.60	28,852,766.34	28,376,539.47	28,682,487.65
		28,816,372.01	29,340,479.75	28,506,797.33	29,029,545.34	28,656,482.60	28,852,766.34	28,376,539.47	28,682,487.65
	Animals	9,803,177.17	10,421,373.29	10,477,663.21	10,831,383.16	10,664,610.65	10,903,489.28	10,738,468.08	10,863,939.34
	Coal	-	-	-	-	-	-	-	-
	Crops	24,872,243.08	25,573,757.04	26,516,218.44	26,831,235.72	26,661,686.16	26,761,097.67	26,147,650.81	26,463,851.02
	Forest regrowth	(15,360,270.97)	(16,359,195.32)	(17,714,738.99)	(17,994,174.58)	(18,077,884.00)	(18,144,022.60)	(18,180,420.88)	(18,237,487.46)
	Lake carbon burial	-	-	-	-	-	-	-	-
	Lakes	3,334,317.56	3,338,549.37	3,340,108.46	3,340,108.46	3,340,108.46	3,340,108.46	3,340,108.46	3,340,108.46
	Natural gas	-	-	-	-	-	-	-	-
	Oil	2,505,780.05	2,628,350.08	2,289,901.18	2,370,428.01	2,502,377.18	2,573,821.22	2,924,498.10	2,844,782.37
	Other fossil fuel	266.73	1,150.13	1,415.26	1,533.07	1,615.79	2,595.33	2,915.67	2,924.45
	Prescribed burn	241,126.71	301,891.31	165,587.16	238,245.01	161,241.98	-	-	-
	Reservoirs	1,263,846.63	1,263,846.63	1,263,846.63	1,263,846.63	1,263,846.63	1,263,846.63	1,263,846.63	1,263,846.63
	Rivers and streams	2,132,964.54	2,132,964.54	2,132,964.54	2,132,964.54	2,132,964.54	2,132,964.54	2,132,964.54	2,132,964.54
	Wildfire	22,920.51	37,792.67	33,831.44	13,975.33	5,915.20	18,865.80	6,508.05	7,558.31

This is a conditional grant Contract between Verlynn Schmalle and the Minnesota Pollution Control Agency, 520 Lafayette Road North, Saint Paul, Minnesota 55155 (MPCA).

Recitals

Whereas Verlynn Schmalle seeks to advocate for effective Greenhouse gas (GHG) reduction strategies.

Whereas the MPCA has the duty to report to the legislature the most recent and best available evidence identifying the level of GHG reductions already achieved and the level of GHG reductions necessary to achieve the goals identified by the State of Minnesota.

Whereas the most current forward-looking goals for GHG reduction for the State of Minnesota are:

- 30% below 2005 levels by 2025
- 50% below 2005 levels by 2030
- Net zero by 2050

Whereas Commissioner Kessler asserted in the January 30 press release that "Investments Minnesota has made over the last three years will get us back on track to meet our greenhouse gas reduction goals."

Whereas MPCA estimates that it cost \$42,458 to produce the Greenhouse gas emissions in Minnesota 2005-2022 report.

Verlynn Schmalle will grant MPCA the sum of \$42,458 if the MPCA can demonstrate that the statement by Commissioner Kessler is true.

Terms of Agreement.

The effective date is the day that Commissioner Kessler signs the Agreement (must be on or before April 23, 2025)

"True" is defined for the purpose of this contract as meeting at least two of the three forward-looking GHG reduction goals as defined above for the State of Minnesota.

"On track" for the purposes of this contract means MPCA documents the business-as-usual scenario in final scenario (v3) as defined in the Joint Powers Agreement with the University of Maryland, College Park for the Global Change Analysis Model (GCAM-USA) results in GHG reduction sufficient to achieve or exceed the GHG reduction target for the year 2025, 2030, and 2050.

The business-as-usual v3 scenario is presented separately for each target reduction year in the format consistent with the technical support document page 10 (attached Exhibit A)

MPCA completes the work and amends the Greenhouse gas emissions in Minnesota 2005-2022 report to the legislature with an Exhibit A page identifying reductions by sector for each target year (2025, 2030, and 2050) by 12:30 pm on April 30.

This contract expires with either MPCA not meeting the terms (12:30 April 30, 2025) or upon payment to the MPCA (on or before May 9, 2025).

Consideration and Payment.

Verlynn Schmalle will deliver a personal check for the amount \$42,458 by May 9, 2025, to the MPCA office if the terms of the agreement are met.

Authorized Representatives

Verlynn Schmalle is representing himself.

Commissioner Kessler for the purpose of this contract is the sole authorized representative for the MPCA.

Assignment, Change Order, Amendments or Waivers.

MPCA may not assign, transfer, or change the terms of this agreement.

Liability

Each party shall be responsible for their own acts and behaviors and the results thereof.

Intellectual Property

This agreement does not modify the intellectual property relationship between MPCA and the University of Maryland under the Joint Powers agreement.

MPCA retains ownership of all pre-existing intellectual property that it owned prior to this contract.

State Audits

This agreement is subject to examination by the State of Minnesota, the State Auditor, or Legislative Auditor, as appropriate, for a minimum of six years from the expiration date (May 9, 2031).

Termination

This contract is invalid if not signed by both parties by 5 pm April 23, 2025


Verlynn Schmale

Date

April 18, 2025

Commissioner Kessler

Date

Table 4: Results by sector. Agricultural sector emissions will be forecast in a separate model and incorporated in future versions of the scenarios. (Note positive percent changes in the land use, land use change, and forestry sector indicate increased carbon sequestration.)

Sector	2005 emissions (MMTCO ₂ e)	2050 emissions (MMTCO ₂ e)		Change from 2005 to 2050 (MMTCO ₂ e)		Change from 2005 to 2050 (%)	
		Current Policies Scenario	Net-Zero Pathway Scenario	Current Policies Scenario	Net-Zero Pathway Scenario	Current Policies Scenario	Net-Zero Pathway Scenario
Electricity	57.3	0.33	0.29	-57.0	-57.0	-100%	-99%
Transportation	43.8	23.3	4.96	-20.5	-38.8	-47%	-89%
Commercial	18.9	16.1	0.70	-2.81	-18.2	-15%	-96%
Residential	8.79	6.64	1.12	-2.15	-7.67	-25%	-87%
Industry	17.7	27.1	2.04	+9.37	-15.7	+19%	-89%
Waste	2.11	1.05	1.05	-1.06	-1.06	-50%	-50%
Agriculture	33.0	34.1	34.1	+1.15	+1.15	+4%	+4%
LULUCF	-9.63	-12.0	-12.0	-2.37	-2.37	+25%	+25%
Additional reductions needed to meet net-zero goal			-32.3		-32.3		
Net GHG total	172	96.6	0	-75.3	-172	-44%	-100%

Electricity

Historically, changes in our mix of fuels used to generate electricity have reduced emissions from electric utilities by over 50%, and planned changes will continue to reduce emissions further (Figure 3). The Clean Electricity Standard requires our electricity to reach net-zero emissions by 2040. To achieve this goal, existing facilities can continue to operate and purchase RECs as offsets, new renewable capacity can be built in Minnesota, and electricity can be purchased from the grid that meets CES requirements (Figure 4 and Figure 5). Electricity demand is expected to rise under the current policies scenario and increase more under the net-zero pathway because of additional electrification in all sectors (Figure 6).

From: [Verlynn Schmalle](#)
To: [Kessler, Katrina \(She/Her/Hers\) \(MPCA\)](#); [Neuschler, Catherine \(She/Her/Hers\) \(EQB\)](#)
Subject: Fwd: Communication to EQB
Date: Wednesday, April 23, 2025 5:26:29 PM
Attachments: [MPCA grant.pdf](#)
[GCAM emissions data v1.xlsx](#)

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Sadly, as it is after 5 on April 23, the termination clause is invoked. The offer is withdrawn. The contract has been cancelled. Commissioner Kessler lied to the people of Minnesota. The proof is attached in the GCAM emissions data file. Please share this with the EQB as well.

Director Neuschler, as witness, please be so kind as to acknowledge this email.

Respectfully,

Verlynn Schmalle

----- Forwarded message -----

From: **Verlynn Schmalle** <vs53589@gmail.com>
Date: Fri, Apr 18, 2025 at 4:59 PM
Subject: Communication to EQB
To: Kessler, Katrina (She/Her/Hers) (MPCA) <katrina.kessler@state.mn.us>, Neuschler, Catherine (She/Her/Hers) (EQB) <catherine.neuschler@state.mn.us>

Commissioner Kessler said she would forward communications from me to the EQB members. Please add this to those communications.

Sincerely,

Verlynn Schmalle

scenario	Current policies
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Sum of MMTCO2E	Column Labels							
Row Labels	2005	2020	2025	2030	2035	2040	2045	2050
Agriculture	32.97	34.30	34.30	34.10	34.12	34.12	34.12	34.12
Commercial	18.94	14.68	14.94	15.09	15.95	16.56	15.92	16.13
Electricity	57.31	26.10	29.29	18.50	4.50	0.71	0.49	0.33
Industry	17.75	20.22	20.96	21.55	22.69	25.64	26.52	27.12
LULUCF	(9.63)	(11.92)	(11.92)	(11.96)	(12.03)	(12.03)	(12.03)	(12.03)
Residential	8.79	10.04	9.10	7.80	7.00	6.73	6.63	6.64
Transportation	43.78	34.93	34.84	30.52	25.77	24.05	23.40	23.28
Waste	2.11	1.27	1.27	1.08	1.07	1.06	1.06	1.05
Grand Total	172.03	129.63	132.78	116.66	99.07	96.85	96.11	96.65
		-24.7%	-22.8%	-32.2%				-43.8%

scenario	region	Sector	Source	GHG	Year	MMTCO2E
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2005	0.189029
Current policies	MN	Agriculture	American Bison	CH4	2005	0.020249
Current policies	MN	Agriculture	Beef Cattle	CH4	2005	2.177922
Current policies	MN	Agriculture	Beef Cattle	N2O	2005	0.124834
Current policies	MN	Agriculture	Belowground Biomass	CO2	2005	0.031399
Current policies	MN	Agriculture	Biofuel	CH4	2005	0.000086
Current policies	MN	Agriculture	Biofuel	N2O	2005	0.000181
Current policies	MN	Agriculture	Cereals	CH4	2005	0.008594
Current policies	MN	Agriculture	Cereals	N2O	2005	0.002853
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2005	0
Current policies	MN	Agriculture	Cropland	N2O	2005	14.134697
Current policies	MN	Agriculture	Dairy Cattle	CH4	2005	2.751781
Current policies	MN	Agriculture	Dairy Cattle	N2O	2005	0.183744
Current policies	MN	Agriculture	Dairy Heifers	N2O	2005	0.149242
Current policies	MN	Agriculture	Dead Wood	CO2	2005	0.064406
Current policies	MN	Agriculture	Goats	CH4	2005	0.007663
Current policies	MN	Agriculture	Goats	N2O	2005	0.000236
Current policies	MN	Agriculture	Grassland	N2O	2005	1.902979
Current policies	MN	Agriculture	Horses	CH4	2005	0.049376
Current policies	MN	Agriculture	Horses	N2O	2005	0.002912
Current policies	MN	Agriculture	Liming	CO2	2005	0.022468
Current policies	MN	Agriculture	Litter	CO2	2005	0.100335
Current policies	MN	Agriculture	Mineral Soil	CO2	2005	-0.610171
Current policies	MN	Agriculture	Mules and Asses	CH4	2005	0.000794
Current policies	MN	Agriculture	Mules and Asses	N2O	2005	0.000029
Current policies	MN	Agriculture	Oil	CH4	2005	0.007262
Current policies	MN	Agriculture	Oil	CO2	2005	2.486513
Current policies	MN	Agriculture	Oil	N2O	2005	0.012005
Current policies	MN	Agriculture	Organic Soil	CO2	2005	6.481263
Current policies	MN	Agriculture	Other	CH4	2005	0.000176
Current policies	MN	Agriculture	Other	N2O	2005	0.000131
Current policies	MN	Agriculture	Poultry	CH4	2005	0.048092
Current policies	MN	Agriculture	Poultry	N2O	2005	0.057207
Current policies	MN	Agriculture	Pulses	CH4	2005	0.002325
Current policies	MN	Agriculture	Pulses	N2O	2005	0.000769
Current policies	MN	Agriculture	Rice Cultivation	CH4	2005	0.047181
Current policies	MN	Agriculture	Sheep	CH4	2005	0.038327
Current policies	MN	Agriculture	Sheep	N2O	2005	0.012353
Current policies	MN	Agriculture	Swine	CH4	2005	1.957162
Current policies	MN	Agriculture	Swine	N2O	2005	0.147741
Current policies	MN	Agriculture	Tubers and Roots	CH4	2005	0.00006
Current policies	MN	Agriculture	Tubers and Roots	N2O	2005	0.00004
Current policies	MN	Agriculture	Urea Fertilization	CO2	2005	0.3536
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2005	0.553562
Current policies	MN	Commercial	Biofuel	CO2	2005	0
Current policies	MN	Commercial	Coal	CH4	2005	0.000469
Current policies	MN	Commercial	Coal	CO2	2005	0.182452
Current policies	MN	Commercial	Coal	N2O	2005	0.000838
Current policies	MN	Commercial	Limestone use	CO2	2005	0.001488
Current policies	MN	Commercial	Medical use	N2O	2005	0.079456
Current policies	MN	Commercial	Natural gas	CH4	2005	0.0121
Current policies	MN	Commercial	Natural gas	CO2	2005	5.390088
Current policies	MN	Commercial	Natural gas	N2O	2005	0.002885
Current policies	MN	Commercial	Refined Liquids	CH4	2005	0.05423
Current policies	MN	Commercial	Refined Liquids	CO2	2005	12.557756

Current policies	MN	Commercial	Refined Liquids	N2O	2005	0.03198
Current policies	MN	Commercial	Solvent use	CO2	2005	0.073233
Current policies	MN	Electricity	Coal	CH4	2005	0.00691
Current policies	MN	Electricity	Coal	CO2	2005	39.129639
Current policies	MN	Electricity	Coal	N2O	2005	0.097745
Current policies	MN	Electricity	Coal storage	CH4	2005	0.063078
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2005	0.006211
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2005	0.005426
Current policies	MN	Electricity	Natural gas	CH4	2005	0.002579
Current policies	MN	Electricity	Natural gas	CO2	2005	1.783519
Current policies	MN	Electricity	Natural gas	N2O	2005	0.017116
Current policies	MN	Electricity	Net electricity imports	CH4	2005	0.028582
Current policies	MN	Electricity	Net electricity imports	CO2	2005	14.212003
Current policies	MN	Electricity	Net electricity imports	N2O	2005	0.071466
Current policies	MN	Electricity	Refined Liquids	CH4	2005	0.007359
Current policies	MN	Electricity	Refined Liquids	CO2	2005	1.520301
Current policies	MN	Electricity	Refined Liquids	N2O	2005	0.09855
Current policies	MN	Electricity	Transmission	SF6	2005	0.261139
Current policies	MN	Industry	Ammonia manufacture	CO2	2005	0
Current policies	MN	Industry	Coal	CH4	2005	0.038201
Current policies	MN	Industry	Coal	CO2	2005	2.697908
Current policies	MN	Industry	Coal	N2O	2005	0.011753
Current policies	MN	Industry	Industrial solvent release	CO2	2005	0.024696
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2005	0.17862
Current policies	MN	Industry	Insulating foam manufacture	HFC	2005	0
Current policies	MN	Industry	Magnesium casting	SF6	2005	0.240522
Current policies	MN	Industry	Natural gas	CH4	2005	0.002516
Current policies	MN	Industry	Natural gas	CO2	2005	5.604193
Current policies	MN	Industry	Natural gas	N2O	2005	0.002999
Current policies	MN	Industry	Oil refining	CH4	2005	0.040677
Current policies	MN	Industry	Oil refining	CO2	2005	0.011243
Current policies	MN	Industry	Other industrial process	CO2	2005	0.013174
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2005	0.027375
Current policies	MN	Industry	Refined Liquids	CH4	2005	0.013169
Current policies	MN	Industry	Refined Liquids	CO2	2005	6.611806
Current policies	MN	Industry	Refined Liquids	N2O	2005	0.025862
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2005	0.246706
Current policies	MN	Industry	Solvent	HFC	2005	0.03055
Current policies	MN	Industry	Taconite induration	CO2	2005	1.820624
Current policies	MN	Industry	VOC and toxics release	CO2	2005	0.107165
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2005	-12.72405
Current policies	MN	LULUCF	Belowground Biomass	CO2	2005	-2.142786
Current policies	MN	LULUCF	Canals and ditches	CH4	2005	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2005	-1.988154
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2005	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2005	1.726417
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2005	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2005	0.038366
Current policies	MN	LULUCF	Forest Fires	N2O	2005	0.026047
Current policies	MN	LULUCF	Grass Fires	CH4	2005	0.000203
Current policies	MN	LULUCF	Grass Fires	N2O	2005	0.000175
Current policies	MN	LULUCF	Lakes and ponds	CH4	2005	3.282227
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2005	-0.182948
Current policies	MN	LULUCF	Litter	CO2	2005	-0.917907
Current policies	MN	LULUCF	Mineral Soil	CO2	2005	-1.018683
Current policies	MN	LULUCF	Organic Soil	CO2	2005	1.928403

Current policies	MN	LULUCF	Peat harvesting	CH4	2005	0.000397
Current policies	MN	LULUCF	Peat harvesting	CO2	2005	0.022166
Current policies	MN	LULUCF	Peat harvesting	N2O	2005	0.000052
Current policies	MN	LULUCF	Peatland restoration	CO2	2005	0
Current policies	MN	LULUCF	Reservoirs	CH4	2005	0.650134
Current policies	MN	LULUCF	Reservoirs	CO2	2005	0.023968
Current policies	MN	LULUCF	Rivers and streams	CH4	2005	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2005	0.185049
Current policies	MN	LULUCF	Urban Trees	CO2	2005	-0.799798
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2005	0.156201
Current policies	MN	Residential	Air conditioning	HFC125	2005	0.035963
Current policies	MN	Residential	Air conditioning	HFC143a	2005	0.000007
Current policies	MN	Residential	Air conditioning	HFC32	2005	0.006936
Current policies	MN	Residential	Coal	CH4	2005	0.000177
Current policies	MN	Residential	Coal	CO2	2005	0.002093
Current policies	MN	Residential	Coal	N2O	2005	0.000011
Current policies	MN	Residential	Food additives	CO2	2005	0.015278
Current policies	MN	Residential	Lawn fertilizer	N2O	2005	0.016185
Current policies	MN	Residential	Natural gas	CH4	2005	0.017066
Current policies	MN	Residential	Natural gas	CO2	2005	7.606584
Current policies	MN	Residential	Natural gas	N2O	2005	0.004068
Current policies	MN	Residential	Refined Liquids	CH4	2005	0.005672
Current policies	MN	Residential	Refined Liquids	CO2	2005	2.231346
Current policies	MN	Residential	Refined Liquids	N2O	2005	0.002872
Current policies	MN	Residential	Refrigeration	HFC134a	2005	0.001658
Current policies	MN	Residential	Sequestration in housing	CO2	2005	-1.562197
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2005	0.127955
Current policies	MN	Residential	Wood	CH4	2005	0.109577
Current policies	MN	Residential	Wood	N2O	2005	0.017415
Current policies	MN	Transportation	Aviation	CH4	2005	0.004388
Current policies	MN	Transportation	Aviation	CO2	2005	5.016158
Current policies	MN	Transportation	Aviation	N2O	2005	0.047305
Current policies	MN	Transportation	Bus	CH4	2005	0.002328
Current policies	MN	Transportation	Bus	CO2	2005	0.394887
Current policies	MN	Transportation	Bus	N2O	2005	0.000728
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2005	0.001895
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2005	7.06588
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2005	0.014307
Current policies	MN	Transportation	Light-duty trucks	CH4	2005	0.030428
Current policies	MN	Transportation	Light-duty trucks	CO2	2005	14.336532
Current policies	MN	Transportation	Light-duty trucks	N2O	2005	0.284797
Current policies	MN	Transportation	Military and other off-highway	CH4	2005	0.068476
Current policies	MN	Transportation	Military and other off-highway	CO2	2005	0.1574
Current policies	MN	Transportation	Military and other off-highway	N2O	2005	0.339942
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2005	1.074028
Current policies	MN	Transportation	Motorcycle	CH4	2005	0.000619
Current policies	MN	Transportation	Motorcycle	CO2	2005	0.223389
Current policies	MN	Transportation	Motorcycle	N2O	2005	0.000744
Current policies	MN	Transportation	Natural gas transmission	CH4	2005	1.118021
Current policies	MN	Transportation	Natural gas transmission	CO2	2005	1.327185
Current policies	MN	Transportation	Natural gas transmission	N2O	2005	0.007767
Current policies	MN	Transportation	Passenger cars	CH4	2005	0.019725
Current policies	MN	Transportation	Passenger cars	CO2	2005	10.529569
Current policies	MN	Transportation	Passenger cars	N2O	2005	0.1864
Current policies	MN	Transportation	Railroad	CH4	2005	0.005193
Current policies	MN	Transportation	Railroad	CO2	2005	0.904348

Current policies	MN	Transportation	Railroad	N2O	2005	0.019808
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2005	0.000136
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2005	0.597862
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2005	0.003254
Current policies	MN	Waste	Biosolids land application	N2O	2005	0.025685
Current policies	MN	Waste	Coal	CH4	2005	0
Current policies	MN	Waste	Coal	CO2	2005	0
Current policies	MN	Waste	Coal	N2O	2005	0
Current policies	MN	Waste	Food waste prevention	CO2	2005	0
Current policies	MN	Waste	Hazardous waste	CO2	2005	0.104143
Current policies	MN	Waste	Hazardous waste	N2O	2005	0.003202
Current policies	MN	Waste	Incinerator ash disposal	CH4	2005	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2005	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2005	0
Current policies	MN	Waste	Industrial landfills	CH4	2005	0.136946
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2005	0.01274
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2005	0.001016
Current policies	MN	Waste	Landfill operations	CH4	2005	0.000025
Current policies	MN	Waste	Landfill operations	CO2	2005	0.017546
Current policies	MN	Waste	Landfill operations	N2O	2005	0.000131
Current policies	MN	Waste	Limestone use	CO2	2005	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2005	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2005	0.000151
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2005	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2005	0.002447
Current policies	MN	Waste	MMSW composting	N2O	2005	0.00276
Current policies	MN	Waste	MMSW landfills	CH4	2005	2.197234
Current policies	MN	Waste	Mass burn	CH4	2005	0
Current policies	MN	Waste	Mass burn	CO2	2005	0
Current policies	MN	Waste	Mass burn	N2O	2005	0
Current policies	MN	Waste	Materials recovery facility	CH4	2005	0.000014
Current policies	MN	Waste	Materials recovery facility	CO2	2005	0.009677
Current policies	MN	Waste	Materials recovery facility	N2O	2005	0.000072
Current policies	MN	Waste	Medical	CO2	2005	0.004652
Current policies	MN	Waste	Medical	N2O	2005	0.000184
Current policies	MN	Waste	Miscellaneous	CO2	2005	0
Current policies	MN	Waste	Miscellaneous	N2O	2005	0
Current policies	MN	Waste	Natural gas	CH4	2005	0.000006
Current policies	MN	Waste	Natural gas	CO2	2005	0.01453
Current policies	MN	Waste	Natural gas	N2O	2005	0.000074
Current policies	MN	Waste	Oil	CH4	2005	0.000001
Current policies	MN	Waste	Oil	CO2	2005	0.002572
Current policies	MN	Waste	Oil	N2O	2005	0.000006
Current policies	MN	Waste	Propane	CH4	2005	0
Current policies	MN	Waste	Propane	CO2	2005	0.000004
Current policies	MN	Waste	Propane	N2O	2005	0
Current policies	MN	Waste	RDF	CH4	2005	0
Current policies	MN	Waste	RDF	CO2	2005	0
Current policies	MN	Waste	RDF	N2O	2005	0
Current policies	MN	Waste	RDF processing	CH4	2005	0.000004
Current policies	MN	Waste	RDF processing	CO2	2005	0.002519
Current policies	MN	Waste	RDF processing	N2O	2005	0.000019
Current policies	MN	Waste	Rural open burning	CH4	2005	0.010262
Current policies	MN	Waste	Rural open burning	CO2	2005	0.035638
Current policies	MN	Waste	Rural open burning	N2O	2005	0.002823
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2005	-0.993673

Current policies	MN	Waste	Sludge	CH4	2005	0.004073
Current policies	MN	Waste	Sludge	N2O	2005	0.001579
Current policies	MN	Waste	Waste solvent	CO2	2005	0.018474
Current policies	MN	Waste	Wastewater treatment	CH4	2005	0.349627
Current policies	MN	Waste	Wastewater treatment	N2O	2005	0.102005
Current policies	MN	Waste	Wood	CH4	2005	0
Current policies	MN	Waste	Wood	N2O	2005	0
Current policies	MN	Waste	Yard waste composting	CH4	2005	0.04
Current policies	MN	Waste	Yard waste preprocessing	CH4	2005	0.000004
Current policies	MN	Waste	Yard waste preprocessing	CO2	2005	0.002923
Current policies	MN	Waste	Yard waste preprocessing	N2O	2005	0.000022
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2005	0.189029
Net-zero pathway	MN	Agriculture	American Bison	CH4	2005	0.020249
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2005	2.177922
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2005	0.124834
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2005	0.031399
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2005	0.000086
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2005	0.000181
Net-zero pathway	MN	Agriculture	Cereals	CH4	2005	0.008594
Net-zero pathway	MN	Agriculture	Cereals	N2O	2005	0.002853
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2005	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2005	14.134697
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2005	2.751781
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2005	0.183744
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2005	0.149242
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2005	0.064406
Net-zero pathway	MN	Agriculture	Goats	CH4	2005	0.007663
Net-zero pathway	MN	Agriculture	Goats	N2O	2005	0.000236
Net-zero pathway	MN	Agriculture	Grassland	N2O	2005	1.902979
Net-zero pathway	MN	Agriculture	Horses	CH4	2005	0.049376
Net-zero pathway	MN	Agriculture	Horses	N2O	2005	0.002912
Net-zero pathway	MN	Agriculture	Liming	CO2	2005	0.022468
Net-zero pathway	MN	Agriculture	Litter	CO2	2005	0.100335
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2005	-0.610171
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2005	0.000794
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2005	0.000029
Net-zero pathway	MN	Agriculture	Oil	CH4	2005	0.007262
Net-zero pathway	MN	Agriculture	Oil	CO2	2005	2.486513
Net-zero pathway	MN	Agriculture	Oil	N2O	2005	0.012005
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2005	6.481263
Net-zero pathway	MN	Agriculture	Other	CH4	2005	0.000176
Net-zero pathway	MN	Agriculture	Other	N2O	2005	0.000131
Net-zero pathway	MN	Agriculture	Poultry	CH4	2005	0.048092
Net-zero pathway	MN	Agriculture	Poultry	N2O	2005	0.057207
Net-zero pathway	MN	Agriculture	Pulses	CH4	2005	0.002325
Net-zero pathway	MN	Agriculture	Pulses	N2O	2005	0.000769
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2005	0.047181
Net-zero pathway	MN	Agriculture	Sheep	CH4	2005	0.038327
Net-zero pathway	MN	Agriculture	Sheep	N2O	2005	0.012353
Net-zero pathway	MN	Agriculture	Swine	CH4	2005	1.957162
Net-zero pathway	MN	Agriculture	Swine	N2O	2005	0.147741
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2005	0.00006
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2005	0.00004
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2005	0.3536
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2005	0.553562
Net-zero pathway	MN	Commercial	Biofuel	CO2	2005	0

Net-zero pathway	MN	Commercial	Coal	CH4	2005	0.000469
Net-zero pathway	MN	Commercial	Coal	CO2	2005	0.182452
Net-zero pathway	MN	Commercial	Coal	N2O	2005	0.000838
Net-zero pathway	MN	Commercial	Limestone use	CO2	2005	0.001488
Net-zero pathway	MN	Commercial	Medical use	N2O	2005	0.079456
Net-zero pathway	MN	Commercial	Natural gas	CH4	2005	0.0121
Net-zero pathway	MN	Commercial	Natural gas	CO2	2005	5.390088
Net-zero pathway	MN	Commercial	Natural gas	N2O	2005	0.002885
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2005	0.05423
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2005	12.557756
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2005	0.03198
Net-zero pathway	MN	Commercial	Solvent use	CO2	2005	0.073233
Net-zero pathway	MN	Electricity	Coal	CH4	2005	0.00691
Net-zero pathway	MN	Electricity	Coal	CO2	2005	39.129639
Net-zero pathway	MN	Electricity	Coal	N2O	2005	0.097745
Net-zero pathway	MN	Electricity	Coal storage	CH4	2005	0.063078
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2005	0.006211
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2005	0.005426
Net-zero pathway	MN	Electricity	Natural gas	CH4	2005	0.002579
Net-zero pathway	MN	Electricity	Natural gas	CO2	2005	1.783519
Net-zero pathway	MN	Electricity	Natural gas	N2O	2005	0.017116
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2005	0.028582
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2005	14.212003
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2005	0.071466
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2005	0.007359
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2005	1.520301
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2005	0.09855
Net-zero pathway	MN	Electricity	Transmission	SF6	2005	0.261139
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2005	0
Net-zero pathway	MN	Industry	Coal	CH4	2005	0.038201
Net-zero pathway	MN	Industry	Coal	CO2	2005	2.697908
Net-zero pathway	MN	Industry	Coal	N2O	2005	0.011753
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2005	0.024696
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2005	0.17862
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2005	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2005	0.240522
Net-zero pathway	MN	Industry	Natural gas	CH4	2005	0.002516
Net-zero pathway	MN	Industry	Natural gas	CO2	2005	5.604193
Net-zero pathway	MN	Industry	Natural gas	N2O	2005	0.002999
Net-zero pathway	MN	Industry	Oil refining	CH4	2005	0.040677
Net-zero pathway	MN	Industry	Oil refining	CO2	2005	0.011243
Net-zero pathway	MN	Industry	Other industrial process	CO2	2005	0.013174
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2005	0.027375
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2005	0.013169
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2005	6.611806
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2005	0.025862
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2005	0.246706
Net-zero pathway	MN	Industry	Solvent	HFC	2005	0.03055
Net-zero pathway	MN	Industry	Taconite induration	CO2	2005	1.820624
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2005	0.107165
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2005	-12.72405
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2005	-2.142786
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2005	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2005	-1.988154
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2005	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2005	1.726417

Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2005	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2005	0.038366
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2005	0.026047
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2005	0.000203
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2005	0.000175
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2005	3.282227
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2005	-0.182948
Net-zero pathway	MN	LULUCF	Litter	CO2	2005	-0.917907
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2005	-1.018683
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2005	1.928403
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2005	0.000397
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2005	0.022166
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2005	0.000052
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2005	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2005	0.650134
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2005	0.023968
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2005	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2005	0.185049
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2005	-0.799798
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2005	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2005	0.156201
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2005	0.035963
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2005	0.000007
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2005	0.006936
Net-zero pathway	MN	Residential	Coal	CH4	2005	0.000177
Net-zero pathway	MN	Residential	Coal	CO2	2005	0.002093
Net-zero pathway	MN	Residential	Coal	N2O	2005	0.000011
Net-zero pathway	MN	Residential	Food additives	CO2	2005	0.015278
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2005	0.016185
Net-zero pathway	MN	Residential	Natural gas	CH4	2005	0.017066
Net-zero pathway	MN	Residential	Natural gas	CO2	2005	7.606584
Net-zero pathway	MN	Residential	Natural gas	N2O	2005	0.004068
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2005	0.005672
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2005	2.231346
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2005	0.002872
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2005	0.001658
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2005	-1.562197
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2005	0.127955
Net-zero pathway	MN	Residential	Wood	CH4	2005	0.109577
Net-zero pathway	MN	Residential	Wood	N2O	2005	0.017415
Net-zero pathway	MN	Transportation	Aviation	CH4	2005	0.004388
Net-zero pathway	MN	Transportation	Aviation	CO2	2005	5.016158
Net-zero pathway	MN	Transportation	Aviation	N2O	2005	0.047305
Net-zero pathway	MN	Transportation	Bus	CH4	2005	0.002328
Net-zero pathway	MN	Transportation	Bus	CO2	2005	0.394887
Net-zero pathway	MN	Transportation	Bus	N2O	2005	0.000728
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2005	0.001895
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2005	7.06588
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2005	0.014307
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2005	0.030428
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2005	14.336532
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2005	0.284797
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2005	0.068476
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2005	0.1574
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2005	0.339942
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2005	1.074028

Net-zero pathway	MN	Transportation	Motorcycle	CH4	2005	0.000619
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2005	0.223389
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2005	0.000744
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2005	1.118021
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2005	1.327185
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2005	0.007767
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2005	0.019725
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2005	10.529569
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2005	0.1864
Net-zero pathway	MN	Transportation	Railroad	CH4	2005	0.005193
Net-zero pathway	MN	Transportation	Railroad	CO2	2005	0.904348
Net-zero pathway	MN	Transportation	Railroad	N2O	2005	0.019808
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2005	0.000136
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2005	0.597862
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2005	0.003254
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2005	0.025685
Net-zero pathway	MN	Waste	Coal	CH4	2005	0
Net-zero pathway	MN	Waste	Coal	CO2	2005	0
Net-zero pathway	MN	Waste	Coal	N2O	2005	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2005	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2005	0.104143
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2005	0.003202
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2005	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2005	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2005	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2005	0.136946
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2005	0.01274
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2005	0.001016
Net-zero pathway	MN	Waste	Landfill operations	CH4	2005	0.000025
Net-zero pathway	MN	Waste	Landfill operations	CO2	2005	0.017546
Net-zero pathway	MN	Waste	Landfill operations	N2O	2005	0.000131
Net-zero pathway	MN	Waste	Limestone use	CO2	2005	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2005	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2005	0.000151
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2005	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2005	0.002447
Net-zero pathway	MN	Waste	MMSW composting	N2O	2005	0.00276
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2005	2.197234
Net-zero pathway	MN	Waste	Mass burn	CH4	2005	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2005	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2005	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2005	0.000014
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2005	0.009677
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2005	0.000072
Net-zero pathway	MN	Waste	Medical	CO2	2005	0.004652
Net-zero pathway	MN	Waste	Medical	N2O	2005	0.000184
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2005	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2005	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2005	0.000006
Net-zero pathway	MN	Waste	Natural gas	CO2	2005	0.01453
Net-zero pathway	MN	Waste	Natural gas	N2O	2005	0.000074
Net-zero pathway	MN	Waste	Oil	CH4	2005	0.000001
Net-zero pathway	MN	Waste	Oil	CO2	2005	0.002572
Net-zero pathway	MN	Waste	Oil	N2O	2005	0.000006
Net-zero pathway	MN	Waste	Propane	CH4	2005	0
Net-zero pathway	MN	Waste	Propane	CO2	2005	0.000004

Net-zero pathway	MN	Waste	Propane	N2O	2005	0
Net-zero pathway	MN	Waste	RDF	CH4	2005	0
Net-zero pathway	MN	Waste	RDF	CO2	2005	0
Net-zero pathway	MN	Waste	RDF	N2O	2005	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2005	0.000004
Net-zero pathway	MN	Waste	RDF processing	CO2	2005	0.002519
Net-zero pathway	MN	Waste	RDF processing	N2O	2005	0.000019
Net-zero pathway	MN	Waste	Rural open burning	CH4	2005	0.010262
Net-zero pathway	MN	Waste	Rural open burning	CO2	2005	0.035638
Net-zero pathway	MN	Waste	Rural open burning	N2O	2005	0.002823
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2005	-0.993673
Net-zero pathway	MN	Waste	Sludge	CH4	2005	0.004073
Net-zero pathway	MN	Waste	Sludge	N2O	2005	0.001579
Net-zero pathway	MN	Waste	Waste solvent	CO2	2005	0.018474
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2005	0.349627
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2005	0.102005
Net-zero pathway	MN	Waste	Wood	CH4	2005	0
Net-zero pathway	MN	Waste	Wood	N2O	2005	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2005	0.04
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2005	0.000004
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2005	0.002923
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2005	0.000022
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2006	0.188614
Current policies	MN	Agriculture	American Bison	CH4	2006	0.017433
Current policies	MN	Agriculture	Beef Cattle	CH4	2006	2.174411
Current policies	MN	Agriculture	Beef Cattle	N2O	2006	0.125617
Current policies	MN	Agriculture	Belowground Biomass	CO2	2006	0.03133
Current policies	MN	Agriculture	Biofuel	CH4	2006	0.000134
Current policies	MN	Agriculture	Biofuel	N2O	2006	0.000284
Current policies	MN	Agriculture	Cereals	CH4	2006	0.007844
Current policies	MN	Agriculture	Cereals	N2O	2006	0.002603
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2006	0
Current policies	MN	Agriculture	Cropland	N2O	2006	12.667803
Current policies	MN	Agriculture	Dairy Cattle	CH4	2006	2.757918
Current policies	MN	Agriculture	Dairy Cattle	N2O	2006	0.179683
Current policies	MN	Agriculture	Dairy Heifers	N2O	2006	0.147879
Current policies	MN	Agriculture	Dead Wood	CO2	2006	0.064265
Current policies	MN	Agriculture	Goats	CH4	2006	0.008533
Current policies	MN	Agriculture	Goats	N2O	2006	0.000263
Current policies	MN	Agriculture	Grassland	N2O	2006	1.82539
Current policies	MN	Agriculture	Horses	CH4	2006	0.048909
Current policies	MN	Agriculture	Horses	N2O	2006	0.002834
Current policies	MN	Agriculture	Liming	CO2	2006	0.053192
Current policies	MN	Agriculture	Litter	CO2	2006	0.100115
Current policies	MN	Agriculture	Mineral Soil	CO2	2006	-1.723985
Current policies	MN	Agriculture	Mules and Asses	CH4	2006	0.000935
Current policies	MN	Agriculture	Mules and Asses	N2O	2006	0.000034
Current policies	MN	Agriculture	Oil	CH4	2006	0.00704
Current policies	MN	Agriculture	Oil	CO2	2006	2.436606
Current policies	MN	Agriculture	Oil	N2O	2006	0.011434
Current policies	MN	Agriculture	Organic Soil	CO2	2006	6.464522
Current policies	MN	Agriculture	Other	CH4	2006	0.000159
Current policies	MN	Agriculture	Other	N2O	2006	0.000115
Current policies	MN	Agriculture	Poultry	CH4	2006	0.047781
Current policies	MN	Agriculture	Poultry	N2O	2006	0.057075
Current policies	MN	Agriculture	Pulses	CH4	2006	0.002721

Current policies	MN	Agriculture	Pulses	N2O	2006	0.000897
Current policies	MN	Agriculture	Rice Cultivation	CH4	2006	0.033994
Current policies	MN	Agriculture	Sheep	CH4	2006	0.04095
Current policies	MN	Agriculture	Sheep	N2O	2006	0.013295
Current policies	MN	Agriculture	Swine	CH4	2006	1.943305
Current policies	MN	Agriculture	Swine	N2O	2006	0.152431
Current policies	MN	Agriculture	Tubers and Roots	CH4	2006	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2006	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2006	0.357723
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2006	0.599008
Current policies	MN	Commercial	Biofuel	CO2	2006	0
Current policies	MN	Commercial	Coal	CH4	2006	0.000416
Current policies	MN	Commercial	Coal	CO2	2006	0.161869
Current policies	MN	Commercial	Coal	N2O	2006	0.000744
Current policies	MN	Commercial	Limestone use	CO2	2006	0.000959
Current policies	MN	Commercial	Medical use	N2O	2006	0.079354
Current policies	MN	Commercial	Natural gas	CH4	2006	0.010469
Current policies	MN	Commercial	Natural gas	CO2	2006	4.66349
Current policies	MN	Commercial	Natural gas	N2O	2006	0.002496
Current policies	MN	Commercial	Refined Liquids	CH4	2006	0.037848
Current policies	MN	Commercial	Refined Liquids	CO2	2006	7.973961
Current policies	MN	Commercial	Refined Liquids	N2O	2006	0.020752
Current policies	MN	Commercial	Solvent use	CO2	2006	0.082831
Current policies	MN	Electricity	Coal	CH4	2006	0.006963
Current policies	MN	Electricity	Coal	CO2	2006	38.303463
Current policies	MN	Electricity	Coal	N2O	2006	0.090873
Current policies	MN	Electricity	Coal storage	CH4	2006	0.062052
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2006	0.005857
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2006	0.005426
Current policies	MN	Electricity	Natural gas	CH4	2006	0.003069
Current policies	MN	Electricity	Natural gas	CO2	2006	1.945983
Current policies	MN	Electricity	Natural gas	N2O	2006	0.017726
Current policies	MN	Electricity	Net electricity imports	CH4	2006	0.029403
Current policies	MN	Electricity	Net electricity imports	CO2	2006	14.031576
Current policies	MN	Electricity	Net electricity imports	N2O	2006	0.065687
Current policies	MN	Electricity	Refined Liquids	CH4	2006	0.00932
Current policies	MN	Electricity	Refined Liquids	CO2	2006	1.180811
Current policies	MN	Electricity	Refined Liquids	N2O	2006	0.085379
Current policies	MN	Electricity	Transmission	SF6	2006	0.245162
Current policies	MN	Industry	Ammonia manufacture	CO2	2006	0
Current policies	MN	Industry	Coal	CH4	2006	0.038944
Current policies	MN	Industry	Coal	CO2	2006	2.821893
Current policies	MN	Industry	Coal	N2O	2006	0.012338
Current policies	MN	Industry	Industrial solvent release	CO2	2006	0.020794
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2006	0.185203
Current policies	MN	Industry	Insulating foam manufacture	HFC	2006	0
Current policies	MN	Industry	Magnesium casting	SF6	2006	0.224546
Current policies	MN	Industry	Natural gas	CH4	2006	0.00274
Current policies	MN	Industry	Natural gas	CO2	2006	6.104101
Current policies	MN	Industry	Natural gas	N2O	2006	0.003267
Current policies	MN	Industry	Oil refining	CH4	2006	0.036036
Current policies	MN	Industry	Oil refining	CO2	2006	0.008043
Current policies	MN	Industry	Other industrial process	CO2	2006	0.011878
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2006	0.025259
Current policies	MN	Industry	Refined Liquids	CH4	2006	0.012613
Current policies	MN	Industry	Refined Liquids	CO2	2006	6.783392

Current policies	MN	Industry	Refined Liquids	N2O	2006	0.02389
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2006	0.278451
Current policies	MN	Industry	Solvent	HFC	2006	0.030523
Current policies	MN	Industry	Taconite induration	CO2	2006	1.914214
Current policies	MN	Industry	VOC and toxics release	CO2	2006	0.108305
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2006	-12.799616
Current policies	MN	LULUCF	Belowground Biomass	CO2	2006	-2.154494
Current policies	MN	LULUCF	Canals and ditches	CH4	2006	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2006	-2.031905
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2006	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2006	1.728547
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2006	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2006	0.125103
Current policies	MN	LULUCF	Forest Fires	N2O	2006	0.090474
Current policies	MN	LULUCF	Grass Fires	CH4	2006	0.000213
Current policies	MN	LULUCF	Grass Fires	N2O	2006	0.000184
Current policies	MN	LULUCF	Lakes and ponds	CH4	2006	3.280806
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2006	-0.171438
Current policies	MN	LULUCF	Litter	CO2	2006	-0.911414
Current policies	MN	LULUCF	Mineral Soil	CO2	2006	-0.843371
Current policies	MN	LULUCF	Organic Soil	CO2	2006	1.995818
Current policies	MN	LULUCF	Peat harvesting	CH4	2006	0.00046
Current policies	MN	LULUCF	Peat harvesting	CO2	2006	0.019382
Current policies	MN	LULUCF	Peat harvesting	N2O	2006	0.00006
Current policies	MN	LULUCF	Peatland restoration	CO2	2006	0
Current policies	MN	LULUCF	Reservoirs	CH4	2006	0.651022
Current policies	MN	LULUCF	Reservoirs	CO2	2006	0.021823
Current policies	MN	LULUCF	Rivers and streams	CH4	2006	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2006	0.186304
Current policies	MN	LULUCF	Urban Trees	CO2	2006	-0.804509
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2006	0.164211
Current policies	MN	Residential	Air conditioning	HFC125	2006	0.0481
Current policies	MN	Residential	Air conditioning	HFC143a	2006	0.00001
Current policies	MN	Residential	Air conditioning	HFC32	2006	0.009276
Current policies	MN	Residential	Coal	CH4	2006	0.000149
Current policies	MN	Residential	Coal	CO2	2006	0.001752
Current policies	MN	Residential	Coal	N2O	2006	0.000009
Current policies	MN	Residential	Food additives	CO2	2006	0.015265
Current policies	MN	Residential	Lawn fertilizer	N2O	2006	0.016799
Current policies	MN	Residential	Natural gas	CH4	2006	0.015586
Current policies	MN	Residential	Natural gas	CO2	2006	6.943739
Current policies	MN	Residential	Natural gas	N2O	2006	0.003716
Current policies	MN	Residential	Refined Liquids	CH4	2006	0.004773
Current policies	MN	Residential	Refined Liquids	CO2	2006	1.933473
Current policies	MN	Residential	Refined Liquids	N2O	2006	0.0023
Current policies	MN	Residential	Refrigeration	HFC134a	2006	0.001702
Current policies	MN	Residential	Sequestration in housing	CO2	2006	-2.293894
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2006	0.133566
Current policies	MN	Residential	Wood	CH4	2006	0.118589
Current policies	MN	Residential	Wood	N2O	2006	0.018848
Current policies	MN	Transportation	Aviation	CH4	2006	0.003888
Current policies	MN	Transportation	Aviation	CO2	2006	4.399249
Current policies	MN	Transportation	Aviation	N2O	2006	0.041476
Current policies	MN	Transportation	Bus	CH4	2006	0.002311
Current policies	MN	Transportation	Bus	CO2	2006	0.391298
Current policies	MN	Transportation	Bus	N2O	2006	0.000704

Current policies	MN	Transportation	Heavy-duty trucks	CH4	2006	0.00171
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2006	7.00382
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2006	0.013666
Current policies	MN	Transportation	Light-duty trucks	CH4	2006	0.029666
Current policies	MN	Transportation	Light-duty trucks	CO2	2006	14.693906
Current policies	MN	Transportation	Light-duty trucks	N2O	2006	0.276637
Current policies	MN	Transportation	Military and other off-highway	CH4	2006	0.066409
Current policies	MN	Transportation	Military and other off-highway	CO2	2006	0.63229
Current policies	MN	Transportation	Military and other off-highway	N2O	2006	0.329709
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2006	1.207818
Current policies	MN	Transportation	Motorcycle	CH4	2006	0.000587
Current policies	MN	Transportation	Motorcycle	CO2	2006	0.225084
Current policies	MN	Transportation	Motorcycle	N2O	2006	0.000763
Current policies	MN	Transportation	Natural gas transmission	CH4	2006	1.115018
Current policies	MN	Transportation	Natural gas transmission	CO2	2006	1.218036
Current policies	MN	Transportation	Natural gas transmission	N2O	2006	0.007159
Current policies	MN	Transportation	Passenger cars	CH4	2006	0.017415
Current policies	MN	Transportation	Passenger cars	CO2	2006	10.247915
Current policies	MN	Transportation	Passenger cars	N2O	2006	0.173039
Current policies	MN	Transportation	Railroad	CH4	2006	0.004985
Current policies	MN	Transportation	Railroad	CO2	2006	0.846803
Current policies	MN	Transportation	Railroad	N2O	2006	0.019017
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2006	0.000137
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2006	0.661557
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2006	0.004106
Current policies	MN	Waste	Biosolids land application	N2O	2006	0.021606
Current policies	MN	Waste	Coal	CH4	2006	0
Current policies	MN	Waste	Coal	CO2	2006	0
Current policies	MN	Waste	Coal	N2O	2006	0
Current policies	MN	Waste	Food waste prevention	CO2	2006	0
Current policies	MN	Waste	Hazardous waste	CO2	2006	0.119897
Current policies	MN	Waste	Hazardous waste	N2O	2006	0.003686
Current policies	MN	Waste	Incinerator ash disposal	CH4	2006	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2006	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2006	0
Current policies	MN	Waste	Industrial landfills	CH4	2006	0.14017
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2006	0.013108
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2006	0.001387
Current policies	MN	Waste	Landfill operations	CH4	2006	0.000026
Current policies	MN	Waste	Landfill operations	CO2	2006	0.018218
Current policies	MN	Waste	Landfill operations	N2O	2006	0.000138
Current policies	MN	Waste	Limestone use	CO2	2006	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2006	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2006	0.000109
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2006	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2006	0.001791
Current policies	MN	Waste	MMSW composting	N2O	2006	0.002021
Current policies	MN	Waste	MMSW landfills	CH4	2006	2.121089
Current policies	MN	Waste	Mass burn	CH4	2006	0
Current policies	MN	Waste	Mass burn	CO2	2006	0
Current policies	MN	Waste	Mass burn	N2O	2006	0
Current policies	MN	Waste	Materials recovery facility	CH4	2006	0.000014
Current policies	MN	Waste	Materials recovery facility	CO2	2006	0.009671
Current policies	MN	Waste	Materials recovery facility	N2O	2006	0.000073
Current policies	MN	Waste	Medical	CO2	2006	0.004438
Current policies	MN	Waste	Medical	N2O	2006	0.000175

Current policies	MN	Waste	Miscellaneous	CO2	2006	0
Current policies	MN	Waste	Miscellaneous	N2O	2006	0
Current policies	MN	Waste	Natural gas	CH4	2006	0.000006
Current policies	MN	Waste	Natural gas	CO2	2006	0.013106
Current policies	MN	Waste	Natural gas	N2O	2006	0.000066
Current policies	MN	Waste	Oil	CH4	2006	0.000001
Current policies	MN	Waste	Oil	CO2	2006	0.002115
Current policies	MN	Waste	Oil	N2O	2006	0.000005
Current policies	MN	Waste	Propane	CH4	2006	0
Current policies	MN	Waste	Propane	CO2	2006	0.000002
Current policies	MN	Waste	Propane	N2O	2006	0
Current policies	MN	Waste	RDF	CH4	2006	0
Current policies	MN	Waste	RDF	CO2	2006	0
Current policies	MN	Waste	RDF	N2O	2006	0
Current policies	MN	Waste	RDF processing	CH4	2006	0.000003
Current policies	MN	Waste	RDF processing	CO2	2006	0.002238
Current policies	MN	Waste	RDF processing	N2O	2006	0.000017
Current policies	MN	Waste	Rural open burning	CH4	2006	0.009956
Current policies	MN	Waste	Rural open burning	CO2	2006	0.034575
Current policies	MN	Waste	Rural open burning	N2O	2006	0.002739
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2006	-1.17577
Current policies	MN	Waste	Sludge	CH4	2006	0.004299
Current policies	MN	Waste	Sludge	N2O	2006	0.00169
Current policies	MN	Waste	Waste solvent	CO2	2006	0.024036
Current policies	MN	Waste	Wastewater treatment	CH4	2006	0.329413
Current policies	MN	Waste	Wastewater treatment	N2O	2006	0.103487
Current policies	MN	Waste	Wood	CH4	2006	0
Current policies	MN	Waste	Wood	N2O	2006	0
Current policies	MN	Waste	Yard waste composting	CH4	2006	0.04
Current policies	MN	Waste	Yard waste preprocessing	CH4	2006	0.000004
Current policies	MN	Waste	Yard waste preprocessing	CO2	2006	0.002882
Current policies	MN	Waste	Yard waste preprocessing	N2O	2006	0.000022
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2006	0.188614
Net-zero pathway	MN	Agriculture	American Bison	CH4	2006	0.017433
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2006	2.174411
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2006	0.125617
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2006	0.03133
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2006	0.000134
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2006	0.000284
Net-zero pathway	MN	Agriculture	Cereals	CH4	2006	0.007844
Net-zero pathway	MN	Agriculture	Cereals	N2O	2006	0.002603
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2006	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2006	12.667803
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2006	2.757918
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2006	0.179683
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2006	0.147879
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2006	0.064265
Net-zero pathway	MN	Agriculture	Goats	CH4	2006	0.008533
Net-zero pathway	MN	Agriculture	Goats	N2O	2006	0.000263
Net-zero pathway	MN	Agriculture	Grassland	N2O	2006	1.82539
Net-zero pathway	MN	Agriculture	Horses	CH4	2006	0.048909
Net-zero pathway	MN	Agriculture	Horses	N2O	2006	0.002834
Net-zero pathway	MN	Agriculture	Liming	CO2	2006	0.053192
Net-zero pathway	MN	Agriculture	Litter	CO2	2006	0.100115
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2006	-1.723985
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2006	0.000935

Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2006	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2006	0.00704
Net-zero pathway	MN	Agriculture	Oil	CO2	2006	2.436606
Net-zero pathway	MN	Agriculture	Oil	N2O	2006	0.011434
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2006	6.464522
Net-zero pathway	MN	Agriculture	Other	CH4	2006	0.000159
Net-zero pathway	MN	Agriculture	Other	N2O	2006	0.000115
Net-zero pathway	MN	Agriculture	Poultry	CH4	2006	0.047781
Net-zero pathway	MN	Agriculture	Poultry	N2O	2006	0.057075
Net-zero pathway	MN	Agriculture	Pulses	CH4	2006	0.002721
Net-zero pathway	MN	Agriculture	Pulses	N2O	2006	0.000897
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2006	0.033994
Net-zero pathway	MN	Agriculture	Sheep	CH4	2006	0.04095
Net-zero pathway	MN	Agriculture	Sheep	N2O	2006	0.013295
Net-zero pathway	MN	Agriculture	Swine	CH4	2006	1.943305
Net-zero pathway	MN	Agriculture	Swine	N2O	2006	0.152431
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2006	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2006	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2006	0.357723
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2006	0.599008
Net-zero pathway	MN	Commercial	Biofuel	CO2	2006	0
Net-zero pathway	MN	Commercial	Coal	CH4	2006	0.000416
Net-zero pathway	MN	Commercial	Coal	CO2	2006	0.161869
Net-zero pathway	MN	Commercial	Coal	N2O	2006	0.000744
Net-zero pathway	MN	Commercial	Limestone use	CO2	2006	0.000959
Net-zero pathway	MN	Commercial	Medical use	N2O	2006	0.079354
Net-zero pathway	MN	Commercial	Natural gas	CH4	2006	0.010469
Net-zero pathway	MN	Commercial	Natural gas	CO2	2006	4.66349
Net-zero pathway	MN	Commercial	Natural gas	N2O	2006	0.002496
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2006	0.037848
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2006	7.973961
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2006	0.020752
Net-zero pathway	MN	Commercial	Solvent use	CO2	2006	0.082831
Net-zero pathway	MN	Electricity	Coal	CH4	2006	0.006963
Net-zero pathway	MN	Electricity	Coal	CO2	2006	38.303463
Net-zero pathway	MN	Electricity	Coal	N2O	2006	0.090873
Net-zero pathway	MN	Electricity	Coal storage	CH4	2006	0.062052
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2006	0.005857
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2006	0.005426
Net-zero pathway	MN	Electricity	Natural gas	CH4	2006	0.003069
Net-zero pathway	MN	Electricity	Natural gas	CO2	2006	1.945983
Net-zero pathway	MN	Electricity	Natural gas	N2O	2006	0.017726
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2006	0.029403
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2006	14.031576
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2006	0.065687
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2006	0.00932
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2006	1.180811
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2006	0.085379
Net-zero pathway	MN	Electricity	Transmission	SF6	2006	0.245162
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2006	0
Net-zero pathway	MN	Industry	Coal	CH4	2006	0.038944
Net-zero pathway	MN	Industry	Coal	CO2	2006	2.821893
Net-zero pathway	MN	Industry	Coal	N2O	2006	0.012338
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2006	0.020794
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2006	0.185203
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2006	0

Net-zero pathway	MN	Industry	Magnesium casting	SF6	2006	0.224546
Net-zero pathway	MN	Industry	Natural gas	CH4	2006	0.00274
Net-zero pathway	MN	Industry	Natural gas	CO2	2006	6.104101
Net-zero pathway	MN	Industry	Natural gas	N2O	2006	0.003267
Net-zero pathway	MN	Industry	Oil refining	CH4	2006	0.036036
Net-zero pathway	MN	Industry	Oil refining	CO2	2006	0.008043
Net-zero pathway	MN	Industry	Other industrial process	CO2	2006	0.011878
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2006	0.025259
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2006	0.012613
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2006	6.783392
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2006	0.02389
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2006	0.278451
Net-zero pathway	MN	Industry	Solvent	HFC	2006	0.030523
Net-zero pathway	MN	Industry	Taconite induration	CO2	2006	1.914214
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2006	0.108305
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2006	-12.799616
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2006	-2.154494
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2006	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2006	-2.031905
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2006	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2006	1.728547
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2006	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2006	0.125103
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2006	0.090474
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2006	0.000213
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2006	0.000184
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2006	3.280806
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2006	-0.171438
Net-zero pathway	MN	LULUCF	Litter	CO2	2006	-0.911414
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2006	-0.843371
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2006	1.995818
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2006	0.00046
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2006	0.019382
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2006	0.00006
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2006	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2006	0.651022
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2006	0.021823
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2006	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2006	0.186304
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2006	-0.804509
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2006	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2006	0.164211
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2006	0.0481
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2006	0.00001
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2006	0.009276
Net-zero pathway	MN	Residential	Coal	CH4	2006	0.000149
Net-zero pathway	MN	Residential	Coal	CO2	2006	0.001752
Net-zero pathway	MN	Residential	Coal	N2O	2006	0.000009
Net-zero pathway	MN	Residential	Food additives	CO2	2006	0.015265
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2006	0.016799
Net-zero pathway	MN	Residential	Natural gas	CH4	2006	0.015586
Net-zero pathway	MN	Residential	Natural gas	CO2	2006	6.943739
Net-zero pathway	MN	Residential	Natural gas	N2O	2006	0.003716
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2006	0.004773
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2006	1.933473
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2006	0.0023

Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2006	0.001702
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2006	-2.293894
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2006	0.133566
Net-zero pathway	MN	Residential	Wood	CH4	2006	0.118589
Net-zero pathway	MN	Residential	Wood	N2O	2006	0.018848
Net-zero pathway	MN	Transportation	Aviation	CH4	2006	0.003888
Net-zero pathway	MN	Transportation	Aviation	CO2	2006	4.399249
Net-zero pathway	MN	Transportation	Aviation	N2O	2006	0.041476
Net-zero pathway	MN	Transportation	Bus	CH4	2006	0.002311
Net-zero pathway	MN	Transportation	Bus	CO2	2006	0.391298
Net-zero pathway	MN	Transportation	Bus	N2O	2006	0.000704
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2006	0.00171
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2006	7.00382
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2006	0.013666
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2006	0.029666
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2006	14.693906
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2006	0.276637
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2006	0.066409
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2006	0.63229
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2006	0.329709
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2006	1.207818
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2006	0.000587
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2006	0.225084
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2006	0.000763
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2006	1.115018
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2006	1.218036
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2006	0.007159
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2006	0.017415
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2006	10.247915
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2006	0.173039
Net-zero pathway	MN	Transportation	Railroad	CH4	2006	0.004985
Net-zero pathway	MN	Transportation	Railroad	CO2	2006	0.846803
Net-zero pathway	MN	Transportation	Railroad	N2O	2006	0.019017
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2006	0.000137
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2006	0.661557
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2006	0.004106
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2006	0.021606
Net-zero pathway	MN	Waste	Coal	CH4	2006	0
Net-zero pathway	MN	Waste	Coal	CO2	2006	0
Net-zero pathway	MN	Waste	Coal	N2O	2006	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2006	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2006	0.119897
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2006	0.003686
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2006	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2006	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2006	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2006	0.14017
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2006	0.013108
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2006	0.001387
Net-zero pathway	MN	Waste	Landfill operations	CH4	2006	0.000026
Net-zero pathway	MN	Waste	Landfill operations	CO2	2006	0.018218
Net-zero pathway	MN	Waste	Landfill operations	N2O	2006	0.000138
Net-zero pathway	MN	Waste	Limestone use	CO2	2006	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2006	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2006	0.000109
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2006	0.000001

Net-zero pathway	MN	Waste	MMSW composting	CH4	2006	0.001791
Net-zero pathway	MN	Waste	MMSW composting	N2O	2006	0.002021
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2006	2.121089
Net-zero pathway	MN	Waste	Mass burn	CH4	2006	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2006	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2006	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2006	0.000014
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2006	0.009671
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2006	0.000073
Net-zero pathway	MN	Waste	Medical	CO2	2006	0.004438
Net-zero pathway	MN	Waste	Medical	N2O	2006	0.000175
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2006	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2006	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2006	0.000006
Net-zero pathway	MN	Waste	Natural gas	CO2	2006	0.013106
Net-zero pathway	MN	Waste	Natural gas	N2O	2006	0.000066
Net-zero pathway	MN	Waste	Oil	CH4	2006	0.000001
Net-zero pathway	MN	Waste	Oil	CO2	2006	0.002115
Net-zero pathway	MN	Waste	Oil	N2O	2006	0.000005
Net-zero pathway	MN	Waste	Propane	CH4	2006	0
Net-zero pathway	MN	Waste	Propane	CO2	2006	0.000002
Net-zero pathway	MN	Waste	Propane	N2O	2006	0
Net-zero pathway	MN	Waste	RDF	CH4	2006	0
Net-zero pathway	MN	Waste	RDF	CO2	2006	0
Net-zero pathway	MN	Waste	RDF	N2O	2006	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2006	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2006	0.002238
Net-zero pathway	MN	Waste	RDF processing	N2O	2006	0.000017
Net-zero pathway	MN	Waste	Rural open burning	CH4	2006	0.009956
Net-zero pathway	MN	Waste	Rural open burning	CO2	2006	0.034575
Net-zero pathway	MN	Waste	Rural open burning	N2O	2006	0.002739
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2006	-1.17577
Net-zero pathway	MN	Waste	Sludge	CH4	2006	0.004299
Net-zero pathway	MN	Waste	Sludge	N2O	2006	0.00169
Net-zero pathway	MN	Waste	Waste solvent	CO2	2006	0.024036
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2006	0.329413
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2006	0.103487
Net-zero pathway	MN	Waste	Wood	CH4	2006	0
Net-zero pathway	MN	Waste	Wood	N2O	2006	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2006	0.04
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2006	0.000004
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2006	0.002882
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2006	0.000022
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2007	0.188199
Current policies	MN	Agriculture	American Bison	CH4	2007	0.01461
Current policies	MN	Agriculture	Beef Cattle	CH4	2007	2.195047
Current policies	MN	Agriculture	Beef Cattle	N2O	2007	0.117805
Current policies	MN	Agriculture	Belowground Biomass	CO2	2007	0.031262
Current policies	MN	Agriculture	Biofuel	CH4	2007	0.000206
Current policies	MN	Agriculture	Biofuel	N2O	2007	0.000435
Current policies	MN	Agriculture	Cereals	CH4	2007	0.008169
Current policies	MN	Agriculture	Cereals	N2O	2007	0.0027
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2007	0
Current policies	MN	Agriculture	Cropland	N2O	2007	13.69016
Current policies	MN	Agriculture	Dairy Cattle	CH4	2007	2.973259
Current policies	MN	Agriculture	Dairy Cattle	N2O	2007	0.177375

Current policies	MN	Agriculture	Dairy Heifers	N2O	2007	0.146832
Current policies	MN	Agriculture	Dead Wood	CO2	2007	0.064123
Current policies	MN	Agriculture	Goats	CH4	2007	0.009403
Current policies	MN	Agriculture	Goats	N2O	2007	0.000289
Current policies	MN	Agriculture	Grassland	N2O	2007	1.849395
Current policies	MN	Agriculture	Horses	CH4	2007	0.048445
Current policies	MN	Agriculture	Horses	N2O	2007	0.002757
Current policies	MN	Agriculture	Liming	CO2	2007	0.059528
Current policies	MN	Agriculture	Litter	CO2	2007	0.099895
Current policies	MN	Agriculture	Mineral Soil	CO2	2007	-2.15471
Current policies	MN	Agriculture	Mules and Asses	CH4	2007	0.001076
Current policies	MN	Agriculture	Mules and Asses	N2O	2007	0.000039
Current policies	MN	Agriculture	Oil	CH4	2007	0.007963
Current policies	MN	Agriculture	Oil	CO2	2007	2.687746
Current policies	MN	Agriculture	Oil	N2O	2007	0.013472
Current policies	MN	Agriculture	Organic Soil	CO2	2007	6.548677
Current policies	MN	Agriculture	Other	CH4	2007	0.000133
Current policies	MN	Agriculture	Other	N2O	2007	0.000102
Current policies	MN	Agriculture	Poultry	CH4	2007	0.048266
Current policies	MN	Agriculture	Poultry	N2O	2007	0.057679
Current policies	MN	Agriculture	Pulses	CH4	2007	0.002741
Current policies	MN	Agriculture	Pulses	N2O	2007	0.000856
Current policies	MN	Agriculture	Rice Cultivation	CH4	2007	0.0007
Current policies	MN	Agriculture	Sheep	CH4	2007	0.03961
Current policies	MN	Agriculture	Sheep	N2O	2007	0.012953
Current policies	MN	Agriculture	Swine	CH4	2007	2.096628
Current policies	MN	Agriculture	Swine	N2O	2007	0.162898
Current policies	MN	Agriculture	Tubers and Roots	CH4	2007	0.000054
Current policies	MN	Agriculture	Tubers and Roots	N2O	2007	0.000036
Current policies	MN	Agriculture	Urea Fertilization	CO2	2007	0.391849
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2007	0.550417
Current policies	MN	Commercial	Biofuel	CO2	2007	0
Current policies	MN	Commercial	Coal	CH4	2007	0.000413
Current policies	MN	Commercial	Coal	CO2	2007	0.160759
Current policies	MN	Commercial	Coal	N2O	2007	0.000739
Current policies	MN	Commercial	Limestone use	CO2	2007	0.000892
Current policies	MN	Commercial	Medical use	N2O	2007	0.079237
Current policies	MN	Commercial	Natural gas	CH4	2007	0.011165
Current policies	MN	Commercial	Natural gas	CO2	2007	4.97359
Current policies	MN	Commercial	Natural gas	N2O	2007	0.002662
Current policies	MN	Commercial	Refined Liquids	CH4	2007	0.037662
Current policies	MN	Commercial	Refined Liquids	CO2	2007	7.703524
Current policies	MN	Commercial	Refined Liquids	N2O	2007	0.020258
Current policies	MN	Commercial	Solvent use	CO2	2007	0.092429
Current policies	MN	Electricity	Coal	CH4	2007	0.006796
Current policies	MN	Electricity	Coal	CO2	2007	37.324188
Current policies	MN	Electricity	Coal	N2O	2007	0.086946
Current policies	MN	Electricity	Coal storage	CH4	2007	0.067948
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2007	0.0058
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2007	0.005426
Current policies	MN	Electricity	Natural gas	CH4	2007	0.003171
Current policies	MN	Electricity	Natural gas	CO2	2007	2.477134
Current policies	MN	Electricity	Natural gas	N2O	2007	0.025498
Current policies	MN	Electricity	Net electricity imports	CH4	2007	0.032222
Current policies	MN	Electricity	Net electricity imports	CO2	2007	13.878868
Current policies	MN	Electricity	Net electricity imports	N2O	2007	0.065402

Current policies	MN	Electricity	Refined Liquids	CH4	2007	0.011595
Current policies	MN	Electricity	Refined Liquids	CO2	2007	1.084836
Current policies	MN	Electricity	Refined Liquids	N2O	2007	0.080252
Current policies	MN	Electricity	Transmission	SF6	2007	0.209461
Current policies	MN	Industry	Ammonia manufacture	CO2	2007	0
Current policies	MN	Industry	Coal	CH4	2007	0.028909
Current policies	MN	Industry	Coal	CO2	2007	2.866806
Current policies	MN	Industry	Coal	N2O	2007	0.012677
Current policies	MN	Industry	Industrial solvent release	CO2	2007	0.016892
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2007	0.187882
Current policies	MN	Industry	Insulating foam manufacture	HFC	2007	0.048295
Current policies	MN	Industry	Magnesium casting	SF6	2007	0.20857
Current policies	MN	Industry	Natural gas	CH4	2007	0.00303
Current policies	MN	Industry	Natural gas	CO2	2007	6.748439
Current policies	MN	Industry	Natural gas	N2O	2007	0.003611
Current policies	MN	Industry	Oil refining	CH4	2007	0.035179
Current policies	MN	Industry	Oil refining	CO2	2007	0.004844
Current policies	MN	Industry	Other industrial process	CO2	2007	0.010581
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2007	0.021161
Current policies	MN	Industry	Refined Liquids	CH4	2007	0.011627
Current policies	MN	Industry	Refined Liquids	CO2	2007	6.584975
Current policies	MN	Industry	Refined Liquids	N2O	2007	0.022136
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2007	0.273147
Current policies	MN	Industry	Solvent	HFC	2007	0.030482
Current policies	MN	Industry	Taconite induration	CO2	2007	1.845517
Current policies	MN	Industry	VOC and toxics release	CO2	2007	0.110107
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2007	-12.875181
Current policies	MN	LULUCF	Belowground Biomass	CO2	2007	-2.1662
Current policies	MN	LULUCF	Canals and ditches	CH4	2007	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2007	-2.075657
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2007	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2007	1.748578
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2007	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2007	0.060327
Current policies	MN	LULUCF	Forest Fires	N2O	2007	0.043446
Current policies	MN	LULUCF	Grass Fires	CH4	2007	0.002402
Current policies	MN	LULUCF	Grass Fires	N2O	2007	0.002076
Current policies	MN	LULUCF	Lakes and ponds	CH4	2007	3.283243
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2007	-0.171104
Current policies	MN	LULUCF	Litter	CO2	2007	-0.904918
Current policies	MN	LULUCF	Mineral Soil	CO2	2007	-0.807703
Current policies	MN	LULUCF	Organic Soil	CO2	2007	2.00648
Current policies	MN	LULUCF	Peat harvesting	CH4	2007	0.000414
Current policies	MN	LULUCF	Peat harvesting	CO2	2007	0.021125
Current policies	MN	LULUCF	Peat harvesting	N2O	2007	0.000051
Current policies	MN	LULUCF	Peatland restoration	CO2	2007	0
Current policies	MN	LULUCF	Reservoirs	CH4	2007	0.650285
Current policies	MN	LULUCF	Reservoirs	CO2	2007	0.018884
Current policies	MN	LULUCF	Rivers and streams	CH4	2007	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2007	0.188426
Current policies	MN	LULUCF	Urban Trees	CO2	2007	-0.81022
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2007	0.174217
Current policies	MN	Residential	Air conditioning	HFC125	2007	0.061486
Current policies	MN	Residential	Air conditioning	HFC143a	2007	0.000012
Current policies	MN	Residential	Air conditioning	HFC32	2007	0.011858
Current policies	MN	Residential	Coal	CH4	2007	0.000299

Current policies	MN	Residential	Coal	CO2	2007	0.003531
Current policies	MN	Residential	Coal	N2O	2007	0.000018
Current policies	MN	Residential	Food additives	CO2	2007	0.015244
Current policies	MN	Residential	Lawn fertilizer	N2O	2007	0.017318
Current policies	MN	Residential	Natural gas	CH4	2007	0.017206
Current policies	MN	Residential	Natural gas	CO2	2007	7.666539
Current policies	MN	Residential	Natural gas	N2O	2007	0.004102
Current policies	MN	Residential	Refined Liquids	CH4	2007	0.004893
Current policies	MN	Residential	Refined Liquids	CO2	2007	1.734327
Current policies	MN	Residential	Refined Liquids	N2O	2007	0.002338
Current policies	MN	Residential	Refrigeration	HFC134a	2007	0.00174
Current policies	MN	Residential	Sequestration in housing	CO2	2007	-1.115405
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2007	0.144819
Current policies	MN	Residential	Wood	CH4	2007	0.127602
Current policies	MN	Residential	Wood	N2O	2007	0.02028
Current policies	MN	Transportation	Aviation	CH4	2007	0.004045
Current policies	MN	Transportation	Aviation	CO2	2007	4.480199
Current policies	MN	Transportation	Aviation	N2O	2007	0.042216
Current policies	MN	Transportation	Bus	CH4	2007	0.002307
Current policies	MN	Transportation	Bus	CO2	2007	0.390395
Current policies	MN	Transportation	Bus	N2O	2007	0.000684
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2007	0.003448
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2007	6.993247
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2007	0.013107
Current policies	MN	Transportation	Light-duty trucks	CH4	2007	0.030429
Current policies	MN	Transportation	Light-duty trucks	CO2	2007	14.845772
Current policies	MN	Transportation	Light-duty trucks	N2O	2007	0.265962
Current policies	MN	Transportation	Military and other off-highway	CH4	2007	0.067235
Current policies	MN	Transportation	Military and other off-highway	CO2	2007	0.569797
Current policies	MN	Transportation	Military and other off-highway	N2O	2007	0.33357
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2007	1.342113
Current policies	MN	Transportation	Motorcycle	CH4	2007	0.000537
Current policies	MN	Transportation	Motorcycle	CO2	2007	0.226395
Current policies	MN	Transportation	Motorcycle	N2O	2007	0.000783
Current policies	MN	Transportation	Natural gas transmission	CH4	2007	1.128789
Current policies	MN	Transportation	Natural gas transmission	CO2	2007	1.1981
Current policies	MN	Transportation	Natural gas transmission	N2O	2007	0.007039
Current policies	MN	Transportation	Passenger cars	CH4	2007	0.016762
Current policies	MN	Transportation	Passenger cars	CO2	2007	10.215587
Current policies	MN	Transportation	Passenger cars	N2O	2007	0.164531
Current policies	MN	Transportation	Railroad	CH4	2007	0.006525
Current policies	MN	Transportation	Railroad	CO2	2007	1.593832
Current policies	MN	Transportation	Railroad	N2O	2007	0.024888
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2007	0.000164
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2007	0.672264
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2007	0.00508
Current policies	MN	Waste	Biosolids land application	N2O	2007	0.022568
Current policies	MN	Waste	Coal	CH4	2007	0
Current policies	MN	Waste	Coal	CO2	2007	0
Current policies	MN	Waste	Coal	N2O	2007	0
Current policies	MN	Waste	Food waste prevention	CO2	2007	0
Current policies	MN	Waste	Hazardous waste	CO2	2007	0.112074
Current policies	MN	Waste	Hazardous waste	N2O	2007	0.003446
Current policies	MN	Waste	Incinerator ash disposal	CH4	2007	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2007	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2007	0

Current policies	MN	Waste	Industrial landfills	CH4	2007	0.142275
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2007	0.012236
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2007	0.001421
Current policies	MN	Waste	Landfill operations	CH4	2007	0.000026
Current policies	MN	Waste	Landfill operations	CO2	2007	0.018047
Current policies	MN	Waste	Landfill operations	N2O	2007	0.000137
Current policies	MN	Waste	Limestone use	CO2	2007	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2007	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2007	0.000109
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2007	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2007	0.001793
Current policies	MN	Waste	MMSW composting	N2O	2007	0.002023
Current policies	MN	Waste	MMSW landfills	CH4	2007	2.060426
Current policies	MN	Waste	Mass burn	CH4	2007	0
Current policies	MN	Waste	Mass burn	CO2	2007	0
Current policies	MN	Waste	Mass burn	N2O	2007	0
Current policies	MN	Waste	Materials recovery facility	CH4	2007	0.000014
Current policies	MN	Waste	Materials recovery facility	CO2	2007	0.009934
Current policies	MN	Waste	Materials recovery facility	N2O	2007	0.000075
Current policies	MN	Waste	Medical	CO2	2007	0.005623
Current policies	MN	Waste	Medical	N2O	2007	0.000222
Current policies	MN	Waste	Miscellaneous	CO2	2007	0
Current policies	MN	Waste	Miscellaneous	N2O	2007	0
Current policies	MN	Waste	Natural gas	CH4	2007	0.000006
Current policies	MN	Waste	Natural gas	CO2	2007	0.014782
Current policies	MN	Waste	Natural gas	N2O	2007	0.000075
Current policies	MN	Waste	Oil	CH4	2007	0.000001
Current policies	MN	Waste	Oil	CO2	2007	0.002876
Current policies	MN	Waste	Oil	N2O	2007	0.000007
Current policies	MN	Waste	Propane	CH4	2007	0
Current policies	MN	Waste	Propane	CO2	2007	0.000002
Current policies	MN	Waste	Propane	N2O	2007	0
Current policies	MN	Waste	RDF	CH4	2007	0
Current policies	MN	Waste	RDF	CO2	2007	0
Current policies	MN	Waste	RDF	N2O	2007	0
Current policies	MN	Waste	RDF processing	CH4	2007	0.000004
Current policies	MN	Waste	RDF processing	CO2	2007	0.00245
Current policies	MN	Waste	RDF processing	N2O	2007	0.000019
Current policies	MN	Waste	Rural open burning	CH4	2007	0.009234
Current policies	MN	Waste	Rural open burning	CO2	2007	0.032066
Current policies	MN	Waste	Rural open burning	N2O	2007	0.00254
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2007	-1.113918
Current policies	MN	Waste	Sludge	CH4	2007	0.004184
Current policies	MN	Waste	Sludge	N2O	2007	0.001646
Current policies	MN	Waste	Waste solvent	CO2	2007	0.02033
Current policies	MN	Waste	Wastewater treatment	CH4	2007	0.308765
Current policies	MN	Waste	Wastewater treatment	N2O	2007	0.10453
Current policies	MN	Waste	Wood	CH4	2007	0
Current policies	MN	Waste	Wood	N2O	2007	0
Current policies	MN	Waste	Yard waste composting	CH4	2007	0.04
Current policies	MN	Waste	Yard waste preprocessing	CH4	2007	0.000004
Current policies	MN	Waste	Yard waste preprocessing	CO2	2007	0.002879
Current policies	MN	Waste	Yard waste preprocessing	N2O	2007	0.000022
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2007	0.188199
Net-zero pathway	MN	Agriculture	American Bison	CH4	2007	0.01461
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2007	2.195047

Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2007	0.117805
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2007	0.031262
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2007	0.000206
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2007	0.000435
Net-zero pathway	MN	Agriculture	Cereals	CH4	2007	0.008169
Net-zero pathway	MN	Agriculture	Cereals	N2O	2007	0.0027
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2007	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2007	13.69016
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2007	2.973259
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2007	0.177375
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2007	0.146832
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2007	0.064123
Net-zero pathway	MN	Agriculture	Goats	CH4	2007	0.009403
Net-zero pathway	MN	Agriculture	Goats	N2O	2007	0.000289
Net-zero pathway	MN	Agriculture	Grassland	N2O	2007	1.849395
Net-zero pathway	MN	Agriculture	Horses	CH4	2007	0.048445
Net-zero pathway	MN	Agriculture	Horses	N2O	2007	0.002757
Net-zero pathway	MN	Agriculture	Liming	CO2	2007	0.059528
Net-zero pathway	MN	Agriculture	Litter	CO2	2007	0.099895
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2007	-2.15471
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2007	0.001076
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2007	0.000039
Net-zero pathway	MN	Agriculture	Oil	CH4	2007	0.007963
Net-zero pathway	MN	Agriculture	Oil	CO2	2007	2.687746
Net-zero pathway	MN	Agriculture	Oil	N2O	2007	0.013472
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2007	6.548677
Net-zero pathway	MN	Agriculture	Other	CH4	2007	0.000133
Net-zero pathway	MN	Agriculture	Other	N2O	2007	0.000102
Net-zero pathway	MN	Agriculture	Poultry	CH4	2007	0.048266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2007	0.057679
Net-zero pathway	MN	Agriculture	Pulses	CH4	2007	0.002741
Net-zero pathway	MN	Agriculture	Pulses	N2O	2007	0.000856
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2007	0.0007
Net-zero pathway	MN	Agriculture	Sheep	CH4	2007	0.03961
Net-zero pathway	MN	Agriculture	Sheep	N2O	2007	0.012953
Net-zero pathway	MN	Agriculture	Swine	CH4	2007	2.096628
Net-zero pathway	MN	Agriculture	Swine	N2O	2007	0.162898
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2007	0.000054
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2007	0.000036
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2007	0.391849
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2007	0.550417
Net-zero pathway	MN	Commercial	Biofuel	CO2	2007	0
Net-zero pathway	MN	Commercial	Coal	CH4	2007	0.000413
Net-zero pathway	MN	Commercial	Coal	CO2	2007	0.160759
Net-zero pathway	MN	Commercial	Coal	N2O	2007	0.000739
Net-zero pathway	MN	Commercial	Limestone use	CO2	2007	0.000892
Net-zero pathway	MN	Commercial	Medical use	N2O	2007	0.079237
Net-zero pathway	MN	Commercial	Natural gas	CH4	2007	0.011165
Net-zero pathway	MN	Commercial	Natural gas	CO2	2007	4.97359
Net-zero pathway	MN	Commercial	Natural gas	N2O	2007	0.002662
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2007	0.037662
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2007	7.703524
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2007	0.020258
Net-zero pathway	MN	Commercial	Solvent use	CO2	2007	0.092429
Net-zero pathway	MN	Electricity	Coal	CH4	2007	0.006796
Net-zero pathway	MN	Electricity	Coal	CO2	2007	37.324188

Net-zero pathway	MN	Electricity	Coal	N2O	2007	0.086946
Net-zero pathway	MN	Electricity	Coal storage	CH4	2007	0.067948
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2007	0.0058
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2007	0.005426
Net-zero pathway	MN	Electricity	Natural gas	CH4	2007	0.003171
Net-zero pathway	MN	Electricity	Natural gas	CO2	2007	2.477134
Net-zero pathway	MN	Electricity	Natural gas	N2O	2007	0.025498
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2007	0.032222
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2007	13.878868
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2007	0.065402
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2007	0.011595
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2007	1.084836
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2007	0.080252
Net-zero pathway	MN	Electricity	Transmission	SF6	2007	0.209461
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2007	0
Net-zero pathway	MN	Industry	Coal	CH4	2007	0.028909
Net-zero pathway	MN	Industry	Coal	CO2	2007	2.866806
Net-zero pathway	MN	Industry	Coal	N2O	2007	0.012677
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2007	0.016892
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2007	0.187882
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2007	0.048295
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2007	0.20857
Net-zero pathway	MN	Industry	Natural gas	CH4	2007	0.00303
Net-zero pathway	MN	Industry	Natural gas	CO2	2007	6.748439
Net-zero pathway	MN	Industry	Natural gas	N2O	2007	0.003611
Net-zero pathway	MN	Industry	Oil refining	CH4	2007	0.035179
Net-zero pathway	MN	Industry	Oil refining	CO2	2007	0.004844
Net-zero pathway	MN	Industry	Other industrial process	CO2	2007	0.010581
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2007	0.021161
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2007	0.011627
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2007	6.584975
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2007	0.022136
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2007	0.273147
Net-zero pathway	MN	Industry	Solvent	HFC	2007	0.030482
Net-zero pathway	MN	Industry	Taconite induration	CO2	2007	1.845517
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2007	0.110107
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2007	-12.875181
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2007	-2.1662
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2007	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2007	-2.075657
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2007	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2007	1.748578
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2007	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2007	0.060327
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2007	0.043446
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2007	0.002402
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2007	0.002076
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2007	3.283243
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2007	-0.171104
Net-zero pathway	MN	LULUCF	Litter	CO2	2007	-0.904918
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2007	-0.807703
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2007	2.00648
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2007	0.000414
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2007	0.021125
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2007	0.000051
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2007	0

Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2007	0.650285
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2007	0.018884
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2007	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2007	0.188426
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2007	-0.81022
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2007	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2007	0.174217
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2007	0.061486
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2007	0.000012
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2007	0.011858
Net-zero pathway	MN	Residential	Coal	CH4	2007	0.000299
Net-zero pathway	MN	Residential	Coal	CO2	2007	0.003531
Net-zero pathway	MN	Residential	Coal	N2O	2007	0.000018
Net-zero pathway	MN	Residential	Food additives	CO2	2007	0.015244
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2007	0.017318
Net-zero pathway	MN	Residential	Natural gas	CH4	2007	0.017206
Net-zero pathway	MN	Residential	Natural gas	CO2	2007	7.666539
Net-zero pathway	MN	Residential	Natural gas	N2O	2007	0.004102
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2007	0.004893
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2007	1.734327
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2007	0.002338
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2007	0.00174
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2007	-1.115405
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2007	0.144819
Net-zero pathway	MN	Residential	Wood	CH4	2007	0.127602
Net-zero pathway	MN	Residential	Wood	N2O	2007	0.02028
Net-zero pathway	MN	Transportation	Aviation	CH4	2007	0.004045
Net-zero pathway	MN	Transportation	Aviation	CO2	2007	4.480199
Net-zero pathway	MN	Transportation	Aviation	N2O	2007	0.042216
Net-zero pathway	MN	Transportation	Bus	CH4	2007	0.002307
Net-zero pathway	MN	Transportation	Bus	CO2	2007	0.390395
Net-zero pathway	MN	Transportation	Bus	N2O	2007	0.000684
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2007	0.003448
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2007	6.993247
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2007	0.013107
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2007	0.030429
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2007	14.845772
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2007	0.265962
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2007	0.067235
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2007	0.569797
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2007	0.33357
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2007	1.342113
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2007	0.000537
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2007	0.226395
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2007	0.000783
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2007	1.128789
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2007	1.1981
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2007	0.007039
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2007	0.016762
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2007	10.215587
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2007	0.164531
Net-zero pathway	MN	Transportation	Railroad	CH4	2007	0.006525
Net-zero pathway	MN	Transportation	Railroad	CO2	2007	1.593832
Net-zero pathway	MN	Transportation	Railroad	N2O	2007	0.024888
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2007	0.000164
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2007	0.672264

Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2007	0.00508
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2007	0.022568
Net-zero pathway	MN	Waste	Coal	CH4	2007	0
Net-zero pathway	MN	Waste	Coal	CO2	2007	0
Net-zero pathway	MN	Waste	Coal	N2O	2007	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2007	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2007	0.112074
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2007	0.003446
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2007	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2007	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2007	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2007	0.142275
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2007	0.012236
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2007	0.001421
Net-zero pathway	MN	Waste	Landfill operations	CH4	2007	0.000026
Net-zero pathway	MN	Waste	Landfill operations	CO2	2007	0.018047
Net-zero pathway	MN	Waste	Landfill operations	N2O	2007	0.000137
Net-zero pathway	MN	Waste	Limestone use	CO2	2007	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2007	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2007	0.000109
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2007	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2007	0.001793
Net-zero pathway	MN	Waste	MMSW composting	N2O	2007	0.002023
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2007	2.060426
Net-zero pathway	MN	Waste	Mass burn	CH4	2007	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2007	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2007	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2007	0.000014
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2007	0.009934
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2007	0.000075
Net-zero pathway	MN	Waste	Medical	CO2	2007	0.005623
Net-zero pathway	MN	Waste	Medical	N2O	2007	0.000222
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2007	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2007	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2007	0.000006
Net-zero pathway	MN	Waste	Natural gas	CO2	2007	0.014782
Net-zero pathway	MN	Waste	Natural gas	N2O	2007	0.000075
Net-zero pathway	MN	Waste	Oil	CH4	2007	0.000001
Net-zero pathway	MN	Waste	Oil	CO2	2007	0.002876
Net-zero pathway	MN	Waste	Oil	N2O	2007	0.000007
Net-zero pathway	MN	Waste	Propane	CH4	2007	0
Net-zero pathway	MN	Waste	Propane	CO2	2007	0.000002
Net-zero pathway	MN	Waste	Propane	N2O	2007	0
Net-zero pathway	MN	Waste	RDF	CH4	2007	0
Net-zero pathway	MN	Waste	RDF	CO2	2007	0
Net-zero pathway	MN	Waste	RDF	N2O	2007	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2007	0.000004
Net-zero pathway	MN	Waste	RDF processing	CO2	2007	0.00245
Net-zero pathway	MN	Waste	RDF processing	N2O	2007	0.000019
Net-zero pathway	MN	Waste	Rural open burning	CH4	2007	0.009234
Net-zero pathway	MN	Waste	Rural open burning	CO2	2007	0.032066
Net-zero pathway	MN	Waste	Rural open burning	N2O	2007	0.00254
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2007	-1.113918
Net-zero pathway	MN	Waste	Sludge	CH4	2007	0.004184
Net-zero pathway	MN	Waste	Sludge	N2O	2007	0.001646
Net-zero pathway	MN	Waste	Waste solvent	CO2	2007	0.02033

Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2007	0.308765
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2007	0.10453
Net-zero pathway	MN	Waste	Wood	CH4	2007	0
Net-zero pathway	MN	Waste	Wood	N2O	2007	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2007	0.04
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2007	0.000004
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2007	0.002879
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2007	0.000022
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2008	0.187784
Current policies	MN	Agriculture	American Bison	CH4	2008	0.013128
Current policies	MN	Agriculture	Beef Cattle	CH4	2008	2.189075
Current policies	MN	Agriculture	Beef Cattle	N2O	2008	0.123678
Current policies	MN	Agriculture	Belowground Biomass	CO2	2008	0.031193
Current policies	MN	Agriculture	Biofuel	CH4	2008	0.000162
Current policies	MN	Agriculture	Biofuel	N2O	2008	0.000342
Current policies	MN	Agriculture	Cereals	CH4	2008	0.008904
Current policies	MN	Agriculture	Cereals	N2O	2008	0.002986
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2008	0
Current policies	MN	Agriculture	Cropland	N2O	2008	14.110967
Current policies	MN	Agriculture	Dairy Cattle	CH4	2008	2.915177
Current policies	MN	Agriculture	Dairy Cattle	N2O	2008	0.172353
Current policies	MN	Agriculture	Dairy Heifers	N2O	2008	0.141048
Current policies	MN	Agriculture	Dead Wood	CO2	2008	0.063982
Current policies	MN	Agriculture	Goats	CH4	2008	0.009246
Current policies	MN	Agriculture	Goats	N2O	2008	0.000285
Current policies	MN	Agriculture	Grassland	N2O	2008	1.881897
Current policies	MN	Agriculture	Horses	CH4	2008	0.045719
Current policies	MN	Agriculture	Horses	N2O	2008	0.002554
Current policies	MN	Agriculture	Liming	CO2	2008	0.042651
Current policies	MN	Agriculture	Litter	CO2	2008	0.099674
Current policies	MN	Agriculture	Mineral Soil	CO2	2008	-3.770989
Current policies	MN	Agriculture	Mules and Asses	CH4	2008	0.001046
Current policies	MN	Agriculture	Mules and Asses	N2O	2008	0.000038
Current policies	MN	Agriculture	Oil	CH4	2008	0.007337
Current policies	MN	Agriculture	Oil	CO2	2008	2.39367
Current policies	MN	Agriculture	Oil	N2O	2008	0.013089
Current policies	MN	Agriculture	Organic Soil	CO2	2008	6.358989
Current policies	MN	Agriculture	Other	CH4	2008	0.000154
Current policies	MN	Agriculture	Other	N2O	2008	0.000109
Current policies	MN	Agriculture	Poultry	CH4	2008	0.048659
Current policies	MN	Agriculture	Poultry	N2O	2008	0.058276
Current policies	MN	Agriculture	Pulses	CH4	2008	0.002042
Current policies	MN	Agriculture	Pulses	N2O	2008	0.000683
Current policies	MN	Agriculture	Rice Cultivation	CH4	2008	0.02389
Current policies	MN	Agriculture	Sheep	CH4	2008	0.038271
Current policies	MN	Agriculture	Sheep	N2O	2008	0.012606
Current policies	MN	Agriculture	Swine	CH4	2008	1.943309
Current policies	MN	Agriculture	Swine	N2O	2008	0.163393
Current policies	MN	Agriculture	Tubers and Roots	CH4	2008	0.000068
Current policies	MN	Agriculture	Tubers and Roots	N2O	2008	0.000046
Current policies	MN	Agriculture	Urea Fertilization	CO2	2008	0.382109
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2008	0.506642
Current policies	MN	Commercial	Biofuel	CO2	2008	0
Current policies	MN	Commercial	Coal	CH4	2008	0.000457
Current policies	MN	Commercial	Coal	CO2	2008	0.177844
Current policies	MN	Commercial	Coal	N2O	2008	0.000817

Current policies	MN	Commercial	Limestone use	CO2	2008	0.001158
Current policies	MN	Commercial	Medical use	N2O	2008	0.07911
Current policies	MN	Commercial	Natural gas	CH4	2008	0.012791
Current policies	MN	Commercial	Natural gas	CO2	2008	5.698204
Current policies	MN	Commercial	Natural gas	N2O	2008	0.003049
Current policies	MN	Commercial	Refined Liquids	CH4	2008	0.053093
Current policies	MN	Commercial	Refined Liquids	CO2	2008	12.102277
Current policies	MN	Commercial	Refined Liquids	N2O	2008	0.030845
Current policies	MN	Commercial	Solvent use	CO2	2008	0.102028
Current policies	MN	Electricity	Coal	CH4	2008	0.006448
Current policies	MN	Electricity	Coal	CO2	2008	36.928422
Current policies	MN	Electricity	Coal	N2O	2008	0.094765
Current policies	MN	Electricity	Coal storage	CH4	2008	0.065584
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2008	0.006012
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2008	0.005426
Current policies	MN	Electricity	Natural gas	CH4	2008	0.001539
Current policies	MN	Electricity	Natural gas	CO2	2008	1.690676
Current policies	MN	Electricity	Natural gas	N2O	2008	0.021735
Current policies	MN	Electricity	Net electricity imports	CH4	2008	0.032754
Current policies	MN	Electricity	Net electricity imports	CO2	2008	14.15621
Current policies	MN	Electricity	Net electricity imports	N2O	2008	0.070232
Current policies	MN	Electricity	Refined Liquids	CH4	2008	0.012544
Current policies	MN	Electricity	Refined Liquids	CO2	2008	0.938172
Current policies	MN	Electricity	Refined Liquids	N2O	2008	0.079782
Current policies	MN	Electricity	Transmission	SF6	2008	0.175553
Current policies	MN	Industry	Ammonia manufacture	CO2	2008	0
Current policies	MN	Industry	Coal	CH4	2008	0.030171
Current policies	MN	Industry	Coal	CO2	2008	2.550504
Current policies	MN	Industry	Coal	N2O	2008	0.011172
Current policies	MN	Industry	Industrial solvent release	CO2	2008	0.012991
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2008	0.193785
Current policies	MN	Industry	Insulating foam manufacture	HFC	2008	0.05586
Current policies	MN	Industry	Magnesium casting	SF6	2008	0.20857
Current policies	MN	Industry	Natural gas	CH4	2008	0.003853
Current policies	MN	Industry	Natural gas	CO2	2008	8.581435
Current policies	MN	Industry	Natural gas	N2O	2008	0.004592
Current policies	MN	Industry	Oil refining	CH4	2008	0.034933
Current policies	MN	Industry	Oil refining	CO2	2008	0.001644
Current policies	MN	Industry	Other industrial process	CO2	2008	0.009285
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2008	0.018508
Current policies	MN	Industry	Refined Liquids	CH4	2008	0.011767
Current policies	MN	Industry	Refined Liquids	CO2	2008	6.655791
Current policies	MN	Industry	Refined Liquids	N2O	2008	0.024081
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2008	0.265893
Current policies	MN	Industry	Solvent	HFC	2008	0.030435
Current policies	MN	Industry	Taconite induration	CO2	2008	1.96116
Current policies	MN	Industry	VOC and toxics release	CO2	2008	0.111852
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2008	-12.950748
Current policies	MN	LULUCF	Belowground Biomass	CO2	2008	-2.177908
Current policies	MN	LULUCF	Canals and ditches	CH4	2008	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2008	-2.119408
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2008	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2008	1.780533
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2008	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2008	0.004559
Current policies	MN	LULUCF	Forest Fires	N2O	2008	0.003317

Current policies	MN	LULUCF	Grass Fires	CH4	2008	0.002905
Current policies	MN	LULUCF	Grass Fires	N2O	2008	0.002511
Current policies	MN	LULUCF	Lakes and ponds	CH4	2008	3.283519
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2008	-0.200484
Current policies	MN	LULUCF	Litter	CO2	2008	-0.898424
Current policies	MN	LULUCF	Mineral Soil	CO2	2008	-0.84042
Current policies	MN	LULUCF	Organic Soil	CO2	2008	2.03793
Current policies	MN	LULUCF	Peat harvesting	CH4	2008	0.000423
Current policies	MN	LULUCF	Peat harvesting	CO2	2008	0.02068
Current policies	MN	LULUCF	Peat harvesting	N2O	2008	0.000052
Current policies	MN	LULUCF	Peatland restoration	CO2	2008	0
Current policies	MN	LULUCF	Reservoirs	CH4	2008	0.651476
Current policies	MN	LULUCF	Reservoirs	CO2	2008	0.020243
Current policies	MN	LULUCF	Rivers and streams	CH4	2008	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2008	0.187212
Current policies	MN	LULUCF	Urban Trees	CO2	2008	-0.814143
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2008	0.182124
Current policies	MN	Residential	Air conditioning	HFC125	2008	0.076164
Current policies	MN	Residential	Air conditioning	HFC143a	2008	0.000015
Current policies	MN	Residential	Air conditioning	HFC32	2008	0.014689
Current policies	MN	Residential	Coal	CH4	2008	0
Current policies	MN	Residential	Coal	CO2	2008	0
Current policies	MN	Residential	Coal	N2O	2008	0
Current policies	MN	Residential	Food additives	CO2	2008	0.015221
Current policies	MN	Residential	Lawn fertilizer	N2O	2008	0.015987
Current policies	MN	Residential	Natural gas	CH4	2008	0.01869
Current policies	MN	Residential	Natural gas	CO2	2008	8.327313
Current policies	MN	Residential	Natural gas	N2O	2008	0.004456
Current policies	MN	Residential	Refined Liquids	CH4	2008	0.005381
Current policies	MN	Residential	Refined Liquids	CO2	2008	2.162315
Current policies	MN	Residential	Refined Liquids	N2O	2008	0.002629
Current policies	MN	Residential	Refrigeration	HFC134a	2008	0.001782
Current policies	MN	Residential	Sequestration in housing	CO2	2008	-0.790414
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2008	0.129376
Current policies	MN	Residential	Wood	CH4	2008	0.136615
Current policies	MN	Residential	Wood	N2O	2008	0.021713
Current policies	MN	Transportation	Aviation	CH4	2008	0.003628
Current policies	MN	Transportation	Aviation	CO2	2008	4.116563
Current policies	MN	Transportation	Aviation	N2O	2008	0.038814
Current policies	MN	Transportation	Bus	CH4	2008	0.002221
Current policies	MN	Transportation	Bus	CO2	2008	0.38191
Current policies	MN	Transportation	Bus	N2O	2008	0.000669
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2008	0.00403
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2008	6.890247
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2008	0.012633
Current policies	MN	Transportation	Light-duty trucks	CH4	2008	0.030657
Current policies	MN	Transportation	Light-duty trucks	CO2	2008	14.522518
Current policies	MN	Transportation	Light-duty trucks	N2O	2008	0.249678
Current policies	MN	Transportation	Military and other off-highway	CH4	2008	0.064115
Current policies	MN	Transportation	Military and other off-highway	CO2	2008	0.616917
Current policies	MN	Transportation	Military and other off-highway	N2O	2008	0.317874
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2008	1.469488
Current policies	MN	Transportation	Motorcycle	CH4	2008	0.000555
Current policies	MN	Transportation	Motorcycle	CO2	2008	0.225606
Current policies	MN	Transportation	Motorcycle	N2O	2008	0.000809
Current policies	MN	Transportation	Natural gas transmission	CH4	2008	1.129155

Current policies	MN	Transportation	Natural gas transmission	CO2	2008	1.063641
Current policies	MN	Transportation	Natural gas transmission	N2O	2008	0.006164
Current policies	MN	Transportation	Passenger cars	CH4	2008	0.017176
Current policies	MN	Transportation	Passenger cars	CO2	2008	10.189917
Current policies	MN	Transportation	Passenger cars	N2O	2008	0.159247
Current policies	MN	Transportation	Railroad	CH4	2008	0.005707
Current policies	MN	Transportation	Railroad	CO2	2008	1.170434
Current policies	MN	Transportation	Railroad	N2O	2008	0.021769
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2008	0.00019
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2008	0.859245
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2008	0.007991
Current policies	MN	Waste	Biosolids land application	N2O	2008	0.019017
Current policies	MN	Waste	Coal	CH4	2008	0
Current policies	MN	Waste	Coal	CO2	2008	0
Current policies	MN	Waste	Coal	N2O	2008	0
Current policies	MN	Waste	Food waste prevention	CO2	2008	0
Current policies	MN	Waste	Hazardous waste	CO2	2008	0.117295
Current policies	MN	Waste	Hazardous waste	N2O	2008	0.003606
Current policies	MN	Waste	Incinerator ash disposal	CH4	2008	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2008	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2008	0
Current policies	MN	Waste	Industrial landfills	CH4	2008	0.145974
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2008	0.011701
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2008	0.001363
Current policies	MN	Waste	Landfill operations	CH4	2008	0.000025
Current policies	MN	Waste	Landfill operations	CO2	2008	0.01749
Current policies	MN	Waste	Landfill operations	N2O	2008	0.000133
Current policies	MN	Waste	Limestone use	CO2	2008	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2008	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2008	0.000107
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2008	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2008	0.001763
Current policies	MN	Waste	MMSW composting	N2O	2008	0.001989
Current policies	MN	Waste	MMSW landfills	CH4	2008	2.014443
Current policies	MN	Waste	Mass burn	CH4	2008	0
Current policies	MN	Waste	Mass burn	CO2	2008	0
Current policies	MN	Waste	Mass burn	N2O	2008	0
Current policies	MN	Waste	Materials recovery facility	CH4	2008	0.000014
Current policies	MN	Waste	Materials recovery facility	CO2	2008	0.009952
Current policies	MN	Waste	Materials recovery facility	N2O	2008	0.000075
Current policies	MN	Waste	Medical	CO2	2008	0.004663
Current policies	MN	Waste	Medical	N2O	2008	0.000184
Current policies	MN	Waste	Miscellaneous	CO2	2008	0
Current policies	MN	Waste	Miscellaneous	N2O	2008	0
Current policies	MN	Waste	Natural gas	CH4	2008	0.000007
Current policies	MN	Waste	Natural gas	CO2	2008	0.017142
Current policies	MN	Waste	Natural gas	N2O	2008	0.000087
Current policies	MN	Waste	Oil	CH4	2008	0.000001
Current policies	MN	Waste	Oil	CO2	2008	0.003041
Current policies	MN	Waste	Oil	N2O	2008	0.000006
Current policies	MN	Waste	Propane	CH4	2008	0
Current policies	MN	Waste	Propane	CO2	2008	0
Current policies	MN	Waste	Propane	N2O	2008	0
Current policies	MN	Waste	RDF	CH4	2008	0
Current policies	MN	Waste	RDF	CO2	2008	0
Current policies	MN	Waste	RDF	N2O	2008	0

Current policies	MN	Waste	RDF processing	CH4	2008	0.000003
Current policies	MN	Waste	RDF processing	CO2	2008	0.002374
Current policies	MN	Waste	RDF processing	N2O	2008	0.000018
Current policies	MN	Waste	Rural open burning	CH4	2008	0.009285
Current policies	MN	Waste	Rural open burning	CO2	2008	0.032244
Current policies	MN	Waste	Rural open burning	N2O	2008	0.002554
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2008	-1.018593
Current policies	MN	Waste	Sludge	CH4	2008	0.004323
Current policies	MN	Waste	Sludge	N2O	2008	0.001706
Current policies	MN	Waste	Waste solvent	CO2	2008	0.017655
Current policies	MN	Waste	Wastewater treatment	CH4	2008	0.28706
Current policies	MN	Waste	Wastewater treatment	N2O	2008	0.104457
Current policies	MN	Waste	Wood	CH4	2008	0
Current policies	MN	Waste	Wood	N2O	2008	0
Current policies	MN	Waste	Yard waste composting	CH4	2008	0.04
Current policies	MN	Waste	Yard waste preprocessing	CH4	2008	0.000003
Current policies	MN	Waste	Yard waste preprocessing	CO2	2008	0.002433
Current policies	MN	Waste	Yard waste preprocessing	N2O	2008	0.000018
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2008	0.187784
Net-zero pathway	MN	Agriculture	American Bison	CH4	2008	0.013128
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2008	2.189075
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2008	0.123678
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2008	0.031193
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2008	0.000162
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2008	0.000342
Net-zero pathway	MN	Agriculture	Cereals	CH4	2008	0.008904
Net-zero pathway	MN	Agriculture	Cereals	N2O	2008	0.002986
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2008	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2008	14.110967
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2008	2.915177
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2008	0.172353
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2008	0.141048
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2008	0.063982
Net-zero pathway	MN	Agriculture	Goats	CH4	2008	0.009246
Net-zero pathway	MN	Agriculture	Goats	N2O	2008	0.000285
Net-zero pathway	MN	Agriculture	Grassland	N2O	2008	1.881897
Net-zero pathway	MN	Agriculture	Horses	CH4	2008	0.045719
Net-zero pathway	MN	Agriculture	Horses	N2O	2008	0.002554
Net-zero pathway	MN	Agriculture	Liming	CO2	2008	0.042651
Net-zero pathway	MN	Agriculture	Litter	CO2	2008	0.099674
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2008	-3.770989
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2008	0.001046
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2008	0.000038
Net-zero pathway	MN	Agriculture	Oil	CH4	2008	0.007337
Net-zero pathway	MN	Agriculture	Oil	CO2	2008	2.39367
Net-zero pathway	MN	Agriculture	Oil	N2O	2008	0.013089
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2008	6.358989
Net-zero pathway	MN	Agriculture	Other	CH4	2008	0.000154
Net-zero pathway	MN	Agriculture	Other	N2O	2008	0.000109
Net-zero pathway	MN	Agriculture	Poultry	CH4	2008	0.048659
Net-zero pathway	MN	Agriculture	Poultry	N2O	2008	0.058276
Net-zero pathway	MN	Agriculture	Pulses	CH4	2008	0.002042
Net-zero pathway	MN	Agriculture	Pulses	N2O	2008	0.000683
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2008	0.02389
Net-zero pathway	MN	Agriculture	Sheep	CH4	2008	0.038271
Net-zero pathway	MN	Agriculture	Sheep	N2O	2008	0.012606

Net-zero pathway	MN	Agriculture	Swine	CH4	2008	1.943309
Net-zero pathway	MN	Agriculture	Swine	N2O	2008	0.163393
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2008	0.000068
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2008	0.000046
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2008	0.382109
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2008	0.506642
Net-zero pathway	MN	Commercial	Biofuel	CO2	2008	0
Net-zero pathway	MN	Commercial	Coal	CH4	2008	0.000457
Net-zero pathway	MN	Commercial	Coal	CO2	2008	0.177844
Net-zero pathway	MN	Commercial	Coal	N2O	2008	0.000817
Net-zero pathway	MN	Commercial	Limestone use	CO2	2008	0.001158
Net-zero pathway	MN	Commercial	Medical use	N2O	2008	0.07911
Net-zero pathway	MN	Commercial	Natural gas	CH4	2008	0.012791
Net-zero pathway	MN	Commercial	Natural gas	CO2	2008	5.698204
Net-zero pathway	MN	Commercial	Natural gas	N2O	2008	0.003049
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2008	0.053093
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2008	12.102277
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2008	0.030845
Net-zero pathway	MN	Commercial	Solvent use	CO2	2008	0.102028
Net-zero pathway	MN	Electricity	Coal	CH4	2008	0.006448
Net-zero pathway	MN	Electricity	Coal	CO2	2008	36.928422
Net-zero pathway	MN	Electricity	Coal	N2O	2008	0.094765
Net-zero pathway	MN	Electricity	Coal storage	CH4	2008	0.065584
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2008	0.006012
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2008	0.005426
Net-zero pathway	MN	Electricity	Natural gas	CH4	2008	0.001539
Net-zero pathway	MN	Electricity	Natural gas	CO2	2008	1.690676
Net-zero pathway	MN	Electricity	Natural gas	N2O	2008	0.021735
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2008	0.032754
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2008	14.15621
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2008	0.070232
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2008	0.012544
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2008	0.938172
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2008	0.079782
Net-zero pathway	MN	Electricity	Transmission	SF6	2008	0.175553
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2008	0
Net-zero pathway	MN	Industry	Coal	CH4	2008	0.030171
Net-zero pathway	MN	Industry	Coal	CO2	2008	2.550504
Net-zero pathway	MN	Industry	Coal	N2O	2008	0.011172
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2008	0.012991
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2008	0.193785
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2008	0.05586
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2008	0.20857
Net-zero pathway	MN	Industry	Natural gas	CH4	2008	0.003853
Net-zero pathway	MN	Industry	Natural gas	CO2	2008	8.581435
Net-zero pathway	MN	Industry	Natural gas	N2O	2008	0.004592
Net-zero pathway	MN	Industry	Oil refining	CH4	2008	0.034933
Net-zero pathway	MN	Industry	Oil refining	CO2	2008	0.001644
Net-zero pathway	MN	Industry	Other industrial process	CO2	2008	0.009285
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2008	0.018508
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2008	0.011767
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2008	6.655791
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2008	0.024081
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2008	0.265893
Net-zero pathway	MN	Industry	Solvent	HFC	2008	0.030435
Net-zero pathway	MN	Industry	Taconite induration	CO2	2008	1.96116

Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2008	0.111852
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2008	-12.950748
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2008	-2.177908
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2008	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2008	-2.119408
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2008	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2008	1.780533
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2008	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2008	0.004559
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2008	0.003317
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2008	0.002905
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2008	0.002511
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2008	3.283519
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2008	-0.200484
Net-zero pathway	MN	LULUCF	Litter	CO2	2008	-0.898424
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2008	-0.84042
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2008	2.03793
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2008	0.000423
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2008	0.02068
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2008	0.000052
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2008	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2008	0.651476
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2008	0.020243
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2008	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2008	0.187212
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2008	-0.814143
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2008	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2008	0.182124
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2008	0.076164
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2008	0.000015
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2008	0.014689
Net-zero pathway	MN	Residential	Coal	CH4	2008	0
Net-zero pathway	MN	Residential	Coal	CO2	2008	0
Net-zero pathway	MN	Residential	Coal	N2O	2008	0
Net-zero pathway	MN	Residential	Food additives	CO2	2008	0.015221
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2008	0.015987
Net-zero pathway	MN	Residential	Natural gas	CH4	2008	0.01869
Net-zero pathway	MN	Residential	Natural gas	CO2	2008	8.327313
Net-zero pathway	MN	Residential	Natural gas	N2O	2008	0.004456
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2008	0.005381
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2008	2.162315
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2008	0.002629
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2008	0.001782
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2008	-0.790414
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2008	0.129376
Net-zero pathway	MN	Residential	Wood	CH4	2008	0.136615
Net-zero pathway	MN	Residential	Wood	N2O	2008	0.021713
Net-zero pathway	MN	Transportation	Aviation	CH4	2008	0.003628
Net-zero pathway	MN	Transportation	Aviation	CO2	2008	4.116563
Net-zero pathway	MN	Transportation	Aviation	N2O	2008	0.038814
Net-zero pathway	MN	Transportation	Bus	CH4	2008	0.002221
Net-zero pathway	MN	Transportation	Bus	CO2	2008	0.38191
Net-zero pathway	MN	Transportation	Bus	N2O	2008	0.000669
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2008	0.00403
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2008	6.890247
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2008	0.012633

Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2008	0.030657
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2008	14.522518
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2008	0.249678
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2008	0.064115
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2008	0.616917
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2008	0.317874
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2008	1.469488
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2008	0.000555
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2008	0.225606
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2008	0.000809
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2008	1.129155
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2008	1.063641
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2008	0.006164
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2008	0.017176
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2008	10.189917
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2008	0.159247
Net-zero pathway	MN	Transportation	Railroad	CH4	2008	0.005707
Net-zero pathway	MN	Transportation	Railroad	CO2	2008	1.170434
Net-zero pathway	MN	Transportation	Railroad	N2O	2008	0.021769
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2008	0.00019
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2008	0.859245
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2008	0.007991
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2008	0.019017
Net-zero pathway	MN	Waste	Coal	CH4	2008	0
Net-zero pathway	MN	Waste	Coal	CO2	2008	0
Net-zero pathway	MN	Waste	Coal	N2O	2008	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2008	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2008	0.117295
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2008	0.003606
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2008	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2008	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2008	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2008	0.145974
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2008	0.011701
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2008	0.001363
Net-zero pathway	MN	Waste	Landfill operations	CH4	2008	0.000025
Net-zero pathway	MN	Waste	Landfill operations	CO2	2008	0.01749
Net-zero pathway	MN	Waste	Landfill operations	N2O	2008	0.000133
Net-zero pathway	MN	Waste	Limestone use	CO2	2008	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2008	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2008	0.000107
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2008	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2008	0.001763
Net-zero pathway	MN	Waste	MMSW composting	N2O	2008	0.001989
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2008	2.014443
Net-zero pathway	MN	Waste	Mass burn	CH4	2008	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2008	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2008	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2008	0.000014
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2008	0.009952
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2008	0.000075
Net-zero pathway	MN	Waste	Medical	CO2	2008	0.004663
Net-zero pathway	MN	Waste	Medical	N2O	2008	0.000184
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2008	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2008	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2008	0.000007

Net-zero pathway	MN	Waste	Natural gas	CO2	2008	0.017142
Net-zero pathway	MN	Waste	Natural gas	N2O	2008	0.000087
Net-zero pathway	MN	Waste	Oil	CH4	2008	0.000001
Net-zero pathway	MN	Waste	Oil	CO2	2008	0.003041
Net-zero pathway	MN	Waste	Oil	N2O	2008	0.000006
Net-zero pathway	MN	Waste	Propane	CH4	2008	0
Net-zero pathway	MN	Waste	Propane	CO2	2008	0
Net-zero pathway	MN	Waste	Propane	N2O	2008	0
Net-zero pathway	MN	Waste	RDF	CH4	2008	0
Net-zero pathway	MN	Waste	RDF	CO2	2008	0
Net-zero pathway	MN	Waste	RDF	N2O	2008	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2008	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2008	0.002374
Net-zero pathway	MN	Waste	RDF processing	N2O	2008	0.000018
Net-zero pathway	MN	Waste	Rural open burning	CH4	2008	0.009285
Net-zero pathway	MN	Waste	Rural open burning	CO2	2008	0.032244
Net-zero pathway	MN	Waste	Rural open burning	N2O	2008	0.002554
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2008	-1.018593
Net-zero pathway	MN	Waste	Sludge	CH4	2008	0.004323
Net-zero pathway	MN	Waste	Sludge	N2O	2008	0.001706
Net-zero pathway	MN	Waste	Waste solvent	CO2	2008	0.017655
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2008	0.28706
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2008	0.104457
Net-zero pathway	MN	Waste	Wood	CH4	2008	0
Net-zero pathway	MN	Waste	Wood	N2O	2008	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2008	0.04
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2008	0.000003
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2008	0.002433
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2008	0.000018
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2009	0.187368
Current policies	MN	Agriculture	American Bison	CH4	2009	0.011646
Current policies	MN	Agriculture	Beef Cattle	CH4	2009	2.188424
Current policies	MN	Agriculture	Beef Cattle	N2O	2009	0.121618
Current policies	MN	Agriculture	Belowground Biomass	CO2	2009	0.031124
Current policies	MN	Agriculture	Biofuel	CH4	2009	0.000295
Current policies	MN	Agriculture	Biofuel	N2O	2009	0.000626
Current policies	MN	Agriculture	Cereals	CH4	2009	0.0092
Current policies	MN	Agriculture	Cereals	N2O	2009	0.003047
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2009	0
Current policies	MN	Agriculture	Cropland	N2O	2009	12.779433
Current policies	MN	Agriculture	Dairy Cattle	CH4	2009	3.004516
Current policies	MN	Agriculture	Dairy Cattle	N2O	2009	0.172862
Current policies	MN	Agriculture	Dairy Heifers	N2O	2009	0.149956
Current policies	MN	Agriculture	Dead Wood	CO2	2009	0.06384
Current policies	MN	Agriculture	Goats	CH4	2009	0.00909
Current policies	MN	Agriculture	Goats	N2O	2009	0.00028
Current policies	MN	Agriculture	Grassland	N2O	2009	1.825946
Current policies	MN	Agriculture	Horses	CH4	2009	0.043175
Current policies	MN	Agriculture	Horses	N2O	2009	0.002412
Current policies	MN	Agriculture	Liming	CO2	2009	0.101291
Current policies	MN	Agriculture	Litter	CO2	2009	0.099454
Current policies	MN	Agriculture	Mineral Soil	CO2	2009	-1.815353
Current policies	MN	Agriculture	Mules and Asses	CH4	2009	0.001015
Current policies	MN	Agriculture	Mules and Asses	N2O	2009	0.000037
Current policies	MN	Agriculture	Oil	CH4	2009	0.008603
Current policies	MN	Agriculture	Oil	CO2	2009	2.850845

Current policies	MN	Agriculture	Oil	N2O	2009	0.014997
Current policies	MN	Agriculture	Organic Soil	CO2	2009	6.231898
Current policies	MN	Agriculture	Other	CH4	2009	0.00013
Current policies	MN	Agriculture	Other	N2O	2009	0.000097
Current policies	MN	Agriculture	Poultry	CH4	2009	0.047032
Current policies	MN	Agriculture	Poultry	N2O	2009	0.05698
Current policies	MN	Agriculture	Pulses	CH4	2009	0.002192
Current policies	MN	Agriculture	Pulses	N2O	2009	0.000725
Current policies	MN	Agriculture	Rice Cultivation	CH4	2009	0.067744
Current policies	MN	Agriculture	Sheep	CH4	2009	0.036951
Current policies	MN	Agriculture	Sheep	N2O	2009	0.012171
Current policies	MN	Agriculture	Swine	CH4	2009	1.797553
Current policies	MN	Agriculture	Swine	N2O	2009	0.157485
Current policies	MN	Agriculture	Tubers and Roots	CH4	2009	0.000048
Current policies	MN	Agriculture	Tubers and Roots	N2O	2009	0.000033
Current policies	MN	Agriculture	Urea Fertilization	CO2	2009	0.391966
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2009	0.489046
Current policies	MN	Commercial	Biofuel	CO2	2009	0
Current policies	MN	Commercial	Coal	CH4	2009	0.000412
Current policies	MN	Commercial	Coal	CO2	2009	0.160426
Current policies	MN	Commercial	Coal	N2O	2009	0.000737
Current policies	MN	Commercial	Limestone use	CO2	2009	0.001142
Current policies	MN	Commercial	Medical use	N2O	2009	0.079267
Current policies	MN	Commercial	Natural gas	CH4	2009	0.012141
Current policies	MN	Commercial	Natural gas	CO2	2009	5.408382
Current policies	MN	Commercial	Natural gas	N2O	2009	0.002894
Current policies	MN	Commercial	Refined Liquids	CH4	2009	0.055986
Current policies	MN	Commercial	Refined Liquids	CO2	2009	12.438712
Current policies	MN	Commercial	Refined Liquids	N2O	2009	0.032012
Current policies	MN	Commercial	Solvent use	CO2	2009	0.097413
Current policies	MN	Electricity	Coal	CH4	2009	0.006027
Current policies	MN	Electricity	Coal	CO2	2009	33.993462
Current policies	MN	Electricity	Coal	N2O	2009	0.084895
Current policies	MN	Electricity	Coal storage	CH4	2009	0.057952
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2009	0.006129
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2009	0.005426
Current policies	MN	Electricity	Natural gas	CH4	2009	0.001528
Current policies	MN	Electricity	Natural gas	CO2	2009	1.740376
Current policies	MN	Electricity	Natural gas	N2O	2009	0.022464
Current policies	MN	Electricity	Net electricity imports	CH4	2009	0.030415
Current policies	MN	Electricity	Net electricity imports	CO2	2009	12.588895
Current policies	MN	Electricity	Net electricity imports	N2O	2009	0.063204
Current policies	MN	Electricity	Refined Liquids	CH4	2009	0.017102
Current policies	MN	Electricity	Refined Liquids	CO2	2009	0.697724
Current policies	MN	Electricity	Refined Liquids	N2O	2009	0.07558
Current policies	MN	Electricity	Transmission	SF6	2009	0.135386
Current policies	MN	Industry	Ammonia manufacture	CO2	2009	0
Current policies	MN	Industry	Coal	CH4	2009	0.033188
Current policies	MN	Industry	Coal	CO2	2009	2.140888
Current policies	MN	Industry	Coal	N2O	2009	0.009146
Current policies	MN	Industry	Industrial solvent release	CO2	2009	0.012827
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2009	0.190769
Current policies	MN	Industry	Insulating foam manufacture	HFC	2009	0.059532
Current policies	MN	Industry	Magnesium casting	SF6	2009	0.20857
Current policies	MN	Industry	Natural gas	CH4	2009	0.00346
Current policies	MN	Industry	Natural gas	CO2	2009	7.707106

Current policies	MN	Industry	Natural gas	N2O	2009	0.004125
Current policies	MN	Industry	Oil refining	CH4	2009	0.034917
Current policies	MN	Industry	Oil refining	CO2	2009	0.001533
Current policies	MN	Industry	Other industrial process	CO2	2009	0.009257
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2009	0.011823
Current policies	MN	Industry	Refined Liquids	CH4	2009	0.009747
Current policies	MN	Industry	Refined Liquids	CO2	2009	5.886981
Current policies	MN	Industry	Refined Liquids	N2O	2009	0.018178
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2009	0.237737
Current policies	MN	Industry	Solvent	HFC	2009	0.030486
Current policies	MN	Industry	Taconite induration	CO2	2009	1.057145
Current policies	MN	Industry	VOC and toxics release	CO2	2009	0.111465
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2009	-13.142857
Current policies	MN	LULUCF	Belowground Biomass	CO2	2009	-2.208842
Current policies	MN	LULUCF	Canals and ditches	CH4	2009	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2009	-2.206015
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2009	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2009	1.803534
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2009	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2009	0.026788
Current policies	MN	LULUCF	Forest Fires	N2O	2009	0.022313
Current policies	MN	LULUCF	Grass Fires	CH4	2009	0.002147
Current policies	MN	LULUCF	Grass Fires	N2O	2009	0.001855
Current policies	MN	LULUCF	Lakes and ponds	CH4	2009	3.285078
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2009	-0.211676
Current policies	MN	LULUCF	Litter	CO2	2009	-0.894917
Current policies	MN	LULUCF	Mineral Soil	CO2	2009	-0.670003
Current policies	MN	LULUCF	Organic Soil	CO2	2009	2.073752
Current policies	MN	LULUCF	Peat harvesting	CH4	2009	0.000579
Current policies	MN	LULUCF	Peat harvesting	CO2	2009	0.022212
Current policies	MN	LULUCF	Peat harvesting	N2O	2009	0.000072
Current policies	MN	LULUCF	Peatland restoration	CO2	2009	0
Current policies	MN	LULUCF	Reservoirs	CH4	2009	0.649874
Current policies	MN	LULUCF	Reservoirs	CO2	2009	0.012808
Current policies	MN	LULUCF	Rivers and streams	CH4	2009	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2009	0.185115
Current policies	MN	LULUCF	Urban Trees	CO2	2009	-0.817885
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2009	0.192736
Current policies	MN	Residential	Air conditioning	HFC125	2009	0.092358
Current policies	MN	Residential	Air conditioning	HFC143a	2009	0.000018
Current policies	MN	Residential	Air conditioning	HFC32	2009	0.017812
Current policies	MN	Residential	Coal	CH4	2009	0
Current policies	MN	Residential	Coal	CO2	2009	0
Current policies	MN	Residential	Coal	N2O	2009	0
Current policies	MN	Residential	Food additives	CO2	2009	0.017152
Current policies	MN	Residential	Lawn fertilizer	N2O	2009	0.015489
Current policies	MN	Residential	Natural gas	CH4	2009	0.017978
Current policies	MN	Residential	Natural gas	CO2	2009	8.010224
Current policies	MN	Residential	Natural gas	N2O	2009	0.004286
Current policies	MN	Residential	Refined Liquids	CH4	2009	0.004168
Current policies	MN	Residential	Refined Liquids	CO2	2009	1.803212
Current policies	MN	Residential	Refined Liquids	N2O	2009	0.001765
Current policies	MN	Residential	Refrigeration	HFC134a	2009	0.001804
Current policies	MN	Residential	Sequestration in housing	CO2	2009	-0.246018
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2009	0.116253
Current policies	MN	Residential	Wood	CH4	2009	0.147469

Current policies	MN	Residential	Wood	N2O	2009	0.023438
Current policies	MN	Transportation	Aviation	CH4	2009	0.004382
Current policies	MN	Transportation	Aviation	CO2	2009	3.960866
Current policies	MN	Transportation	Aviation	N2O	2009	0.037105
Current policies	MN	Transportation	Bus	CH4	2009	0.00203
Current policies	MN	Transportation	Bus	CO2	2009	0.34442
Current policies	MN	Transportation	Bus	N2O	2009	0.000627
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2009	0.004235
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2009	6.1179
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2009	0.011555
Current policies	MN	Transportation	Light-duty trucks	CH4	2009	0.029324
Current policies	MN	Transportation	Light-duty trucks	CO2	2009	14.532522
Current policies	MN	Transportation	Light-duty trucks	N2O	2009	0.244055
Current policies	MN	Transportation	Military and other off-highway	CH4	2009	0.059114
Current policies	MN	Transportation	Military and other off-highway	CO2	2009	0.384756
Current policies	MN	Transportation	Military and other off-highway	N2O	2009	0.293497
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2009	1.57632
Current policies	MN	Transportation	Motorcycle	CH4	2009	0.00052
Current policies	MN	Transportation	Motorcycle	CO2	2009	0.215784
Current policies	MN	Transportation	Motorcycle	N2O	2009	0.000788
Current policies	MN	Transportation	Natural gas transmission	CH4	2009	1.12781
Current policies	MN	Transportation	Natural gas transmission	CO2	2009	0.768586
Current policies	MN	Transportation	Natural gas transmission	N2O	2009	0.004258
Current policies	MN	Transportation	Passenger cars	CH4	2009	0.016229
Current policies	MN	Transportation	Passenger cars	CO2	2009	10.204037
Current policies	MN	Transportation	Passenger cars	N2O	2009	0.154097
Current policies	MN	Transportation	Railroad	CH4	2009	0.004309
Current policies	MN	Transportation	Railroad	CO2	2009	0.528462
Current policies	MN	Transportation	Railroad	N2O	2009	0.016436
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2009	0.000203
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2009	0.555529
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2009	0.003833
Current policies	MN	Waste	Biosolids land application	N2O	2009	0.020345
Current policies	MN	Waste	Coal	CH4	2009	0
Current policies	MN	Waste	Coal	CO2	2009	0
Current policies	MN	Waste	Coal	N2O	2009	0
Current policies	MN	Waste	Food waste prevention	CO2	2009	0
Current policies	MN	Waste	Hazardous waste	CO2	2009	0.0977
Current policies	MN	Waste	Hazardous waste	N2O	2009	0.003004
Current policies	MN	Waste	Incinerator ash disposal	CH4	2009	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2009	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2009	0
Current policies	MN	Waste	Industrial landfills	CH4	2009	0.147631
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2009	0.014189
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2009	0.001399
Current policies	MN	Waste	Landfill operations	CH4	2009	0.000021
Current policies	MN	Waste	Landfill operations	CO2	2009	0.014095
Current policies	MN	Waste	Landfill operations	N2O	2009	0.000109
Current policies	MN	Waste	Limestone use	CO2	2009	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2009	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2009	0.0001
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2009	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2009	0.001672
Current policies	MN	Waste	MMSW composting	N2O	2009	0.001887
Current policies	MN	Waste	MMSW landfills	CH4	2009	1.931712
Current policies	MN	Waste	Mass burn	CH4	2009	0

Current policies	MN	Waste	Mass burn	CO2	2009	0
Current policies	MN	Waste	Mass burn	N2O	2009	0
Current policies	MN	Waste	Materials recovery facility	CH4	2009	0.000013
Current policies	MN	Waste	Materials recovery facility	CO2	2009	0.009247
Current policies	MN	Waste	Materials recovery facility	N2O	2009	0.000071
Current policies	MN	Waste	Medical	CO2	2009	0.004606
Current policies	MN	Waste	Medical	N2O	2009	0.000182
Current policies	MN	Waste	Miscellaneous	CO2	2009	0
Current policies	MN	Waste	Miscellaneous	N2O	2009	0
Current policies	MN	Waste	Natural gas	CH4	2009	0.000007
Current policies	MN	Waste	Natural gas	CO2	2009	0.016139
Current policies	MN	Waste	Natural gas	N2O	2009	0.000082
Current policies	MN	Waste	Oil	CH4	2009	0
Current policies	MN	Waste	Oil	CO2	2009	0.002822
Current policies	MN	Waste	Oil	N2O	2009	0.000003
Current policies	MN	Waste	Propane	CH4	2009	0
Current policies	MN	Waste	Propane	CO2	2009	0
Current policies	MN	Waste	Propane	N2O	2009	0
Current policies	MN	Waste	RDF	CH4	2009	0
Current policies	MN	Waste	RDF	CO2	2009	0
Current policies	MN	Waste	RDF	N2O	2009	0
Current policies	MN	Waste	RDF processing	CH4	2009	0.000003
Current policies	MN	Waste	RDF processing	CO2	2009	0.002123
Current policies	MN	Waste	RDF processing	N2O	2009	0.000016
Current policies	MN	Waste	Rural open burning	CH4	2009	0.009155
Current policies	MN	Waste	Rural open burning	CO2	2009	0.031794
Current policies	MN	Waste	Rural open burning	N2O	2009	0.002518
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2009	-0.629156
Current policies	MN	Waste	Sludge	CH4	2009	0.004126
Current policies	MN	Waste	Sludge	N2O	2009	0.001625
Current policies	MN	Waste	Waste solvent	CO2	2009	0.010937
Current policies	MN	Waste	Wastewater treatment	CH4	2009	0.265558
Current policies	MN	Waste	Wastewater treatment	N2O	2009	0.103074
Current policies	MN	Waste	Wood	CH4	2009	0
Current policies	MN	Waste	Wood	N2O	2009	0
Current policies	MN	Waste	Yard waste composting	CH4	2009	0.02
Current policies	MN	Waste	Yard waste preprocessing	CH4	2009	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2009	0.001311
Current policies	MN	Waste	Yard waste preprocessing	N2O	2009	0.00001
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2009	0.187368
Net-zero pathway	MN	Agriculture	American Bison	CH4	2009	0.011646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2009	2.188424
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2009	0.121618
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2009	0.031124
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2009	0.000295
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2009	0.000626
Net-zero pathway	MN	Agriculture	Cereals	CH4	2009	0.0092
Net-zero pathway	MN	Agriculture	Cereals	N2O	2009	0.003047
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2009	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2009	12.779433
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2009	3.004516
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2009	0.172862
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2009	0.149956
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2009	0.06384
Net-zero pathway	MN	Agriculture	Goats	CH4	2009	0.00909
Net-zero pathway	MN	Agriculture	Goats	N2O	2009	0.00028

Net-zero pathway	MN	Agriculture	Grassland	N2O	2009	1.825946
Net-zero pathway	MN	Agriculture	Horses	CH4	2009	0.043175
Net-zero pathway	MN	Agriculture	Horses	N2O	2009	0.002412
Net-zero pathway	MN	Agriculture	Liming	CO2	2009	0.101291
Net-zero pathway	MN	Agriculture	Litter	CO2	2009	0.099454
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2009	-1.815353
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2009	0.001015
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2009	0.000037
Net-zero pathway	MN	Agriculture	Oil	CH4	2009	0.008603
Net-zero pathway	MN	Agriculture	Oil	CO2	2009	2.850845
Net-zero pathway	MN	Agriculture	Oil	N2O	2009	0.014997
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2009	6.231898
Net-zero pathway	MN	Agriculture	Other	CH4	2009	0.00013
Net-zero pathway	MN	Agriculture	Other	N2O	2009	0.000097
Net-zero pathway	MN	Agriculture	Poultry	CH4	2009	0.047032
Net-zero pathway	MN	Agriculture	Poultry	N2O	2009	0.05698
Net-zero pathway	MN	Agriculture	Pulses	CH4	2009	0.002192
Net-zero pathway	MN	Agriculture	Pulses	N2O	2009	0.000725
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2009	0.067744
Net-zero pathway	MN	Agriculture	Sheep	CH4	2009	0.036951
Net-zero pathway	MN	Agriculture	Sheep	N2O	2009	0.012171
Net-zero pathway	MN	Agriculture	Swine	CH4	2009	1.797553
Net-zero pathway	MN	Agriculture	Swine	N2O	2009	0.157485
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2009	0.000048
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2009	0.000033
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2009	0.391966
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2009	0.489046
Net-zero pathway	MN	Commercial	Biofuel	CO2	2009	0
Net-zero pathway	MN	Commercial	Coal	CH4	2009	0.000412
Net-zero pathway	MN	Commercial	Coal	CO2	2009	0.160426
Net-zero pathway	MN	Commercial	Coal	N2O	2009	0.000737
Net-zero pathway	MN	Commercial	Limestone use	CO2	2009	0.001142
Net-zero pathway	MN	Commercial	Medical use	N2O	2009	0.079267
Net-zero pathway	MN	Commercial	Natural gas	CH4	2009	0.012141
Net-zero pathway	MN	Commercial	Natural gas	CO2	2009	5.408382
Net-zero pathway	MN	Commercial	Natural gas	N2O	2009	0.002894
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2009	0.055986
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2009	12.438712
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2009	0.032012
Net-zero pathway	MN	Commercial	Solvent use	CO2	2009	0.097413
Net-zero pathway	MN	Electricity	Coal	CH4	2009	0.006027
Net-zero pathway	MN	Electricity	Coal	CO2	2009	33.993462
Net-zero pathway	MN	Electricity	Coal	N2O	2009	0.084895
Net-zero pathway	MN	Electricity	Coal storage	CH4	2009	0.057952
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2009	0.006129
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2009	0.005426
Net-zero pathway	MN	Electricity	Natural gas	CH4	2009	0.001528
Net-zero pathway	MN	Electricity	Natural gas	CO2	2009	1.740376
Net-zero pathway	MN	Electricity	Natural gas	N2O	2009	0.022464
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2009	0.030415
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2009	12.588895
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2009	0.063204
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2009	0.017102
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2009	0.697724
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2009	0.07558
Net-zero pathway	MN	Electricity	Transmission	SF6	2009	0.135386

Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2009	0
Net-zero pathway	MN	Industry	Coal	CH4	2009	0.033188
Net-zero pathway	MN	Industry	Coal	CO2	2009	2.140888
Net-zero pathway	MN	Industry	Coal	N2O	2009	0.009146
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2009	0.012827
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2009	0.190769
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2009	0.059532
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2009	0.20857
Net-zero pathway	MN	Industry	Natural gas	CH4	2009	0.00346
Net-zero pathway	MN	Industry	Natural gas	CO2	2009	7.707106
Net-zero pathway	MN	Industry	Natural gas	N2O	2009	0.004125
Net-zero pathway	MN	Industry	Oil refining	CH4	2009	0.034917
Net-zero pathway	MN	Industry	Oil refining	CO2	2009	0.001533
Net-zero pathway	MN	Industry	Other industrial process	CO2	2009	0.009257
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2009	0.011823
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2009	0.009747
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2009	5.886981
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2009	0.018178
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2009	0.237737
Net-zero pathway	MN	Industry	Solvent	HFC	2009	0.030486
Net-zero pathway	MN	Industry	Taconite induration	CO2	2009	1.057145
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2009	0.111465
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2009	-13.142857
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2009	-2.208842
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2009	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2009	-2.206015
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2009	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2009	1.803534
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2009	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2009	0.026788
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2009	0.022313
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2009	0.002147
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2009	0.001855
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2009	3.285078
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2009	-0.211676
Net-zero pathway	MN	LULUCF	Litter	CO2	2009	-0.894917
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2009	-0.670003
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2009	2.073752
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2009	0.000579
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2009	0.022212
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2009	0.000072
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2009	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2009	0.649874
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2009	0.012808
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2009	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2009	0.185115
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2009	-0.817885
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2009	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2009	0.192736
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2009	0.092358
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2009	0.000018
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2009	0.017812
Net-zero pathway	MN	Residential	Coal	CH4	2009	0
Net-zero pathway	MN	Residential	Coal	CO2	2009	0
Net-zero pathway	MN	Residential	Coal	N2O	2009	0
Net-zero pathway	MN	Residential	Food additives	CO2	2009	0.017152

Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2009	0.015489
Net-zero pathway	MN	Residential	Natural gas	CH4	2009	0.017978
Net-zero pathway	MN	Residential	Natural gas	CO2	2009	8.010224
Net-zero pathway	MN	Residential	Natural gas	N2O	2009	0.004286
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2009	0.004168
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2009	1.803212
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2009	0.001765
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2009	0.001804
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2009	-0.246018
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2009	0.116253
Net-zero pathway	MN	Residential	Wood	CH4	2009	0.147469
Net-zero pathway	MN	Residential	Wood	N2O	2009	0.023438
Net-zero pathway	MN	Transportation	Aviation	CH4	2009	0.004382
Net-zero pathway	MN	Transportation	Aviation	CO2	2009	3.960866
Net-zero pathway	MN	Transportation	Aviation	N2O	2009	0.037105
Net-zero pathway	MN	Transportation	Bus	CH4	2009	0.00203
Net-zero pathway	MN	Transportation	Bus	CO2	2009	0.34442
Net-zero pathway	MN	Transportation	Bus	N2O	2009	0.000627
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2009	0.004235
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2009	6.1179
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2009	0.011555
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2009	0.029324
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2009	14.532522
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2009	0.244055
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2009	0.059114
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2009	0.384756
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2009	0.293497
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2009	1.57632
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2009	0.00052
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2009	0.215784
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2009	0.000788
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2009	1.12781
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2009	0.768586
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2009	0.004258
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2009	0.016229
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2009	10.204037
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2009	0.154097
Net-zero pathway	MN	Transportation	Railroad	CH4	2009	0.004309
Net-zero pathway	MN	Transportation	Railroad	CO2	2009	0.528462
Net-zero pathway	MN	Transportation	Railroad	N2O	2009	0.016436
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2009	0.000203
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2009	0.555529
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2009	0.003833
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2009	0.020345
Net-zero pathway	MN	Waste	Coal	CH4	2009	0
Net-zero pathway	MN	Waste	Coal	CO2	2009	0
Net-zero pathway	MN	Waste	Coal	N2O	2009	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2009	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2009	0.0977
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2009	0.003004
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2009	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2009	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2009	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2009	0.147631
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2009	0.014189
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2009	0.001399

Net-zero pathway	MN	Waste	Landfill operations	CH4	2009	0.000021
Net-zero pathway	MN	Waste	Landfill operations	CO2	2009	0.014095
Net-zero pathway	MN	Waste	Landfill operations	N2O	2009	0.000109
Net-zero pathway	MN	Waste	Limestone use	CO2	2009	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2009	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2009	0.0001
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2009	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2009	0.001672
Net-zero pathway	MN	Waste	MMSW composting	N2O	2009	0.001887
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2009	1.931712
Net-zero pathway	MN	Waste	Mass burn	CH4	2009	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2009	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2009	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2009	0.000013
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2009	0.009247
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2009	0.000071
Net-zero pathway	MN	Waste	Medical	CO2	2009	0.004606
Net-zero pathway	MN	Waste	Medical	N2O	2009	0.000182
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2009	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2009	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2009	0.000007
Net-zero pathway	MN	Waste	Natural gas	CO2	2009	0.016139
Net-zero pathway	MN	Waste	Natural gas	N2O	2009	0.000082
Net-zero pathway	MN	Waste	Oil	CH4	2009	0
Net-zero pathway	MN	Waste	Oil	CO2	2009	0.002822
Net-zero pathway	MN	Waste	Oil	N2O	2009	0.000003
Net-zero pathway	MN	Waste	Propane	CH4	2009	0
Net-zero pathway	MN	Waste	Propane	CO2	2009	0
Net-zero pathway	MN	Waste	Propane	N2O	2009	0
Net-zero pathway	MN	Waste	RDF	CH4	2009	0
Net-zero pathway	MN	Waste	RDF	CO2	2009	0
Net-zero pathway	MN	Waste	RDF	N2O	2009	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2009	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2009	0.002123
Net-zero pathway	MN	Waste	RDF processing	N2O	2009	0.000016
Net-zero pathway	MN	Waste	Rural open burning	CH4	2009	0.009155
Net-zero pathway	MN	Waste	Rural open burning	CO2	2009	0.031794
Net-zero pathway	MN	Waste	Rural open burning	N2O	2009	0.002518
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2009	-0.629156
Net-zero pathway	MN	Waste	Sludge	CH4	2009	0.004126
Net-zero pathway	MN	Waste	Sludge	N2O	2009	0.001625
Net-zero pathway	MN	Waste	Waste solvent	CO2	2009	0.010937
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2009	0.265558
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2009	0.103074
Net-zero pathway	MN	Waste	Wood	CH4	2009	0
Net-zero pathway	MN	Waste	Wood	N2O	2009	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2009	0.02
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2009	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2009	0.001311
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2009	0.00001
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2010	0.186885
Current policies	MN	Agriculture	American Bison	CH4	2010	0.010164
Current policies	MN	Agriculture	Beef Cattle	CH4	2010	2.175417
Current policies	MN	Agriculture	Beef Cattle	N2O	2010	0.124067
Current policies	MN	Agriculture	Belowground Biomass	CO2	2010	0.031043
Current policies	MN	Agriculture	Biofuel	CH4	2010	0.000369

Current policies	MN	Agriculture	Biofuel	N2O	2010	0.000781
Current policies	MN	Agriculture	Cereals	CH4	2010	0.009274
Current policies	MN	Agriculture	Cereals	N2O	2010	0.00309
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2010	0
Current policies	MN	Agriculture	Cropland	N2O	2010	13.754978
Current policies	MN	Agriculture	Dairy Cattle	CH4	2010	3.096097
Current policies	MN	Agriculture	Dairy Cattle	N2O	2010	0.171623
Current policies	MN	Agriculture	Dairy Heifers	N2O	2010	0.154325
Current policies	MN	Agriculture	Dead Wood	CO2	2010	0.063675
Current policies	MN	Agriculture	Goats	CH4	2010	0.008932
Current policies	MN	Agriculture	Goats	N2O	2010	0.000275
Current policies	MN	Agriculture	Grassland	N2O	2010	1.962358
Current policies	MN	Agriculture	Horses	CH4	2010	0.040632
Current policies	MN	Agriculture	Horses	N2O	2010	0.00227
Current policies	MN	Agriculture	Liming	CO2	2010	0.046868
Current policies	MN	Agriculture	Litter	CO2	2010	0.099197
Current policies	MN	Agriculture	Mineral Soil	CO2	2010	-1.182677
Current policies	MN	Agriculture	Mules and Asses	CH4	2010	0.000983
Current policies	MN	Agriculture	Mules and Asses	N2O	2010	0.000036
Current policies	MN	Agriculture	Oil	CH4	2010	0.008313
Current policies	MN	Agriculture	Oil	CO2	2010	2.604341
Current policies	MN	Agriculture	Oil	N2O	2010	0.015696
Current policies	MN	Agriculture	Organic Soil	CO2	2010	6.397551
Current policies	MN	Agriculture	Other	CH4	2010	0.000136
Current policies	MN	Agriculture	Other	N2O	2010	0.000103
Current policies	MN	Agriculture	Poultry	CH4	2010	0.04798
Current policies	MN	Agriculture	Poultry	N2O	2010	0.058278
Current policies	MN	Agriculture	Pulses	CH4	2010	0.002358
Current policies	MN	Agriculture	Pulses	N2O	2010	0.000785
Current policies	MN	Agriculture	Rice Cultivation	CH4	2010	0.0565
Current policies	MN	Agriculture	Sheep	CH4	2010	0.034312
Current policies	MN	Agriculture	Sheep	N2O	2010	0.011301
Current policies	MN	Agriculture	Swine	CH4	2010	2.029273
Current policies	MN	Agriculture	Swine	N2O	2010	0.160562
Current policies	MN	Agriculture	Tubers and Roots	CH4	2010	0.000064
Current policies	MN	Agriculture	Tubers and Roots	N2O	2010	0.000045
Current policies	MN	Agriculture	Urea Fertilization	CO2	2010	0.415371
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2010	0.542017
Current policies	MN	Commercial	Biofuel	CO2	2010	0
Current policies	MN	Commercial	Coal	CH4	2010	0.000377
Current policies	MN	Commercial	Coal	CO2	2010	0.146841
Current policies	MN	Commercial	Coal	N2O	2010	0.000675
Current policies	MN	Commercial	Limestone use	CO2	2010	0.001198
Current policies	MN	Commercial	Medical use	N2O	2010	0.078952
Current policies	MN	Commercial	Natural gas	CH4	2010	0.011174
Current policies	MN	Commercial	Natural gas	CO2	2010	4.977614
Current policies	MN	Commercial	Natural gas	N2O	2010	0.002664
Current policies	MN	Commercial	Refined Liquids	CH4	2010	0.046706
Current policies	MN	Commercial	Refined Liquids	CO2	2010	9.83086
Current policies	MN	Commercial	Refined Liquids	N2O	2010	0.025658
Current policies	MN	Commercial	Solvent use	CO2	2010	0.092798
Current policies	MN	Electricity	Coal	CH4	2010	0.00565
Current policies	MN	Electricity	Coal	CO2	2010	32.532438
Current policies	MN	Electricity	Coal	N2O	2010	0.082952
Current policies	MN	Electricity	Coal storage	CH4	2010	0.056782
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2010	0.006447

Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2010	0.005426
Current policies	MN	Electricity	Natural gas	CH4	2010	0.002228
Current policies	MN	Electricity	Natural gas	CO2	2010	2.427377
Current policies	MN	Electricity	Natural gas	N2O	2010	0.03078
Current policies	MN	Electricity	Net electricity imports	CH4	2010	0.032568
Current policies	MN	Electricity	Net electricity imports	CO2	2010	13.341378
Current policies	MN	Electricity	Net electricity imports	N2O	2010	0.070971
Current policies	MN	Electricity	Refined Liquids	CH4	2010	0.016796
Current policies	MN	Electricity	Refined Liquids	CO2	2010	0.624081
Current policies	MN	Electricity	Refined Liquids	N2O	2010	0.075596
Current policies	MN	Electricity	Transmission	SF6	2010	0.099411
Current policies	MN	Industry	Ammonia manufacture	CO2	2010	0
Current policies	MN	Industry	Coal	CH4	2010	0.038725
Current policies	MN	Industry	Coal	CO2	2010	2.389448
Current policies	MN	Industry	Coal	N2O	2010	0.010282
Current policies	MN	Industry	Industrial solvent release	CO2	2010	0.012664
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2010	0.193643
Current policies	MN	Industry	Insulating foam manufacture	HFC	2010	0.054076
Current policies	MN	Industry	Magnesium casting	SF6	2010	0.184555
Current policies	MN	Industry	Natural gas	CH4	2010	0.004188
Current policies	MN	Industry	Natural gas	CO2	2010	9.327713
Current policies	MN	Industry	Natural gas	N2O	2010	0.004992
Current policies	MN	Industry	Oil refining	CH4	2010	0.033963
Current policies	MN	Industry	Oil refining	CO2	2010	0.001422
Current policies	MN	Industry	Other industrial process	CO2	2010	0.009228
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2010	0.016526
Current policies	MN	Industry	Refined Liquids	CH4	2010	0.013502
Current policies	MN	Industry	Refined Liquids	CO2	2010	6.510682
Current policies	MN	Industry	Refined Liquids	N2O	2010	0.024929
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2010	0.187926
Current policies	MN	Industry	Solvent	HFC	2010	0.032174
Current policies	MN	Industry	Taconite induration	CO2	2010	2.064748
Current policies	MN	Industry	VOC and toxics release	CO2	2010	0.112131
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2010	-13.333732
Current policies	MN	LULUCF	Belowground Biomass	CO2	2010	-2.23957
Current policies	MN	LULUCF	Canals and ditches	CH4	2010	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2010	-2.292402
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2010	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2010	1.821167
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2010	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2010	0.095791
Current policies	MN	LULUCF	Forest Fires	N2O	2010	0.061156
Current policies	MN	LULUCF	Grass Fires	CH4	2010	0.000705
Current policies	MN	LULUCF	Grass Fires	N2O	2010	0.000609
Current policies	MN	LULUCF	Lakes and ponds	CH4	2010	3.28762
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2010	-0.203165
Current policies	MN	LULUCF	Litter	CO2	2010	-0.89108
Current policies	MN	LULUCF	Mineral Soil	CO2	2010	-0.529345
Current policies	MN	LULUCF	Organic Soil	CO2	2010	2.095972
Current policies	MN	LULUCF	Peat harvesting	CH4	2010	0.000681
Current policies	MN	LULUCF	Peat harvesting	CO2	2010	0.023848
Current policies	MN	LULUCF	Peat harvesting	N2O	2010	0.000082
Current policies	MN	LULUCF	Peatland restoration	CO2	2010	0
Current policies	MN	LULUCF	Reservoirs	CH4	2010	0.649846
Current policies	MN	LULUCF	Reservoirs	CO2	2010	0.012693
Current policies	MN	LULUCF	Rivers and streams	CH4	2010	2.103652

Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2010	0.171742
Current policies	MN	LULUCF	Urban Trees	CO2	2010	-0.820319
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2010	0.198097
Current policies	MN	Residential	Air conditioning	HFC125	2010	0.107048
Current policies	MN	Residential	Air conditioning	HFC143a	2010	0.000025
Current policies	MN	Residential	Air conditioning	HFC32	2010	0.020645
Current policies	MN	Residential	Coal	CH4	2010	0
Current policies	MN	Residential	Coal	CO2	2010	0
Current policies	MN	Residential	Coal	N2O	2010	0
Current policies	MN	Residential	Food additives	CO2	2010	0.017037
Current policies	MN	Residential	Lawn fertilizer	N2O	2010	0.016535
Current policies	MN	Residential	Natural gas	CH4	2010	0.016255
Current policies	MN	Residential	Natural gas	CO2	2010	7.241463
Current policies	MN	Residential	Natural gas	N2O	2010	0.003875
Current policies	MN	Residential	Refined Liquids	CH4	2010	0.004384
Current policies	MN	Residential	Refined Liquids	CO2	2010	1.864661
Current policies	MN	Residential	Refined Liquids	N2O	2010	0.001923
Current policies	MN	Residential	Refrigeration	HFC134a	2010	0.001839
Current policies	MN	Residential	Sequestration in housing	CO2	2010	0.394017
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2010	0.109792
Current policies	MN	Residential	Wood	CH4	2010	0.158324
Current policies	MN	Residential	Wood	N2O	2010	0.025163
Current policies	MN	Transportation	Aviation	CH4	2010	0.003179
Current policies	MN	Transportation	Aviation	CO2	2010	3.533434
Current policies	MN	Transportation	Aviation	N2O	2010	0.033298
Current policies	MN	Transportation	Bus	CH4	2010	0.002099
Current policies	MN	Transportation	Bus	CO2	2010	0.353411
Current policies	MN	Transportation	Bus	N2O	2010	0.000617
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2010	0.004691
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2010	6.279297
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2010	0.011591
Current policies	MN	Transportation	Light-duty trucks	CH4	2010	0.029317
Current policies	MN	Transportation	Light-duty trucks	CO2	2010	14.656425
Current policies	MN	Transportation	Light-duty trucks	N2O	2010	0.243259
Current policies	MN	Transportation	Military and other off-highway	CH4	2010	0.059673
Current policies	MN	Transportation	Military and other off-highway	CO2	2010	0.481575
Current policies	MN	Transportation	Military and other off-highway	N2O	2010	0.296259
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2010	1.652324
Current policies	MN	Transportation	Motorcycle	CH4	2010	0.000506
Current policies	MN	Transportation	Motorcycle	CO2	2010	0.214232
Current policies	MN	Transportation	Motorcycle	N2O	2010	0.000788
Current policies	MN	Transportation	Natural gas transmission	CH4	2010	1.14939
Current policies	MN	Transportation	Natural gas transmission	CO2	2010	0.925138
Current policies	MN	Transportation	Natural gas transmission	N2O	2010	0.004897
Current policies	MN	Transportation	Passenger cars	CH4	2010	0.014958
Current policies	MN	Transportation	Passenger cars	CO2	2010	9.92038
Current policies	MN	Transportation	Passenger cars	N2O	2010	0.146546
Current policies	MN	Transportation	Railroad	CH4	2010	0.004523
Current policies	MN	Transportation	Railroad	CO2	2010	0.62934
Current policies	MN	Transportation	Railroad	N2O	2010	0.017253
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2010	0.000118
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2010	0.559869
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2010	0.003292
Current policies	MN	Waste	Biosolids land application	N2O	2010	0.019236
Current policies	MN	Waste	Coal	CH4	2010	0
Current policies	MN	Waste	Coal	CO2	2010	0

Current policies	MN	Waste	Coal	N2O	2010	0
Current policies	MN	Waste	Food waste prevention	CO2	2010	0
Current policies	MN	Waste	Hazardous waste	CO2	2010	0.109257
Current policies	MN	Waste	Hazardous waste	N2O	2010	0.003359
Current policies	MN	Waste	Incinerator ash disposal	CH4	2010	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2010	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2010	0
Current policies	MN	Waste	Industrial landfills	CH4	2010	0.148505
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2010	0.014052
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2010	0.00134
Current policies	MN	Waste	Landfill operations	CH4	2010	0.000025
Current policies	MN	Waste	Landfill operations	CO2	2010	0.016775
Current policies	MN	Waste	Landfill operations	N2O	2010	0.000131
Current policies	MN	Waste	Limestone use	CO2	2010	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2010	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2010	0.000096
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2010	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2010	0.001627
Current policies	MN	Waste	MMSW composting	N2O	2010	0.001835
Current policies	MN	Waste	MMSW landfills	CH4	2010	1.796226
Current policies	MN	Waste	Mass burn	CH4	2010	0
Current policies	MN	Waste	Mass burn	CO2	2010	0
Current policies	MN	Waste	Mass burn	N2O	2010	0
Current policies	MN	Waste	Materials recovery facility	CH4	2010	0.000013
Current policies	MN	Waste	Materials recovery facility	CO2	2010	0.009051
Current policies	MN	Waste	Materials recovery facility	N2O	2010	0.000071
Current policies	MN	Waste	Medical	CO2	2010	0.00456
Current policies	MN	Waste	Medical	N2O	2010	0.00018
Current policies	MN	Waste	Miscellaneous	CO2	2010	0
Current policies	MN	Waste	Miscellaneous	N2O	2010	0
Current policies	MN	Waste	Natural gas	CH4	2010	0.000006
Current policies	MN	Waste	Natural gas	CO2	2010	0.015244
Current policies	MN	Waste	Natural gas	N2O	2010	0.000077
Current policies	MN	Waste	Oil	CH4	2010	0
Current policies	MN	Waste	Oil	CO2	2010	0.001655
Current policies	MN	Waste	Oil	N2O	2010	0.000001
Current policies	MN	Waste	Propane	CH4	2010	0
Current policies	MN	Waste	Propane	CO2	2010	0
Current policies	MN	Waste	Propane	N2O	2010	0
Current policies	MN	Waste	RDF	CH4	2010	0
Current policies	MN	Waste	RDF	CO2	2010	0
Current policies	MN	Waste	RDF	N2O	2010	0
Current policies	MN	Waste	RDF processing	CH4	2010	0.000003
Current policies	MN	Waste	RDF processing	CO2	2010	0.001765
Current policies	MN	Waste	RDF processing	N2O	2010	0.000014
Current policies	MN	Waste	Rural open burning	CH4	2010	0.008902
Current policies	MN	Waste	Rural open burning	CO2	2010	0.030915
Current policies	MN	Waste	Rural open burning	N2O	2010	0.002449
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2010	-0.72857
Current policies	MN	Waste	Sludge	CH4	2010	0.0043
Current policies	MN	Waste	Sludge	N2O	2010	0.001678
Current policies	MN	Waste	Waste solvent	CO2	2010	0.012399
Current policies	MN	Waste	Wastewater treatment	CH4	2010	0.243544
Current policies	MN	Waste	Wastewater treatment	N2O	2010	0.103509
Current policies	MN	Waste	Wood	CH4	2010	0
Current policies	MN	Waste	Wood	N2O	2010	0

Current policies	MN	Waste	Yard waste composting	CH4	2010	0.02
Current policies	MN	Waste	Yard waste preprocessing	CH4	2010	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2010	0.001563
Current policies	MN	Waste	Yard waste preprocessing	N2O	2010	0.000012
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2010	0.186885
Net-zero pathway	MN	Agriculture	American Bison	CH4	2010	0.010164
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2010	2.175417
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2010	0.124067
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2010	0.031043
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2010	0.000369
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2010	0.000781
Net-zero pathway	MN	Agriculture	Cereals	CH4	2010	0.009274
Net-zero pathway	MN	Agriculture	Cereals	N2O	2010	0.00309
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2010	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2010	13.754978
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2010	3.096097
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2010	0.171623
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2010	0.154325
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2010	0.063675
Net-zero pathway	MN	Agriculture	Goats	CH4	2010	0.008932
Net-zero pathway	MN	Agriculture	Goats	N2O	2010	0.000275
Net-zero pathway	MN	Agriculture	Grassland	N2O	2010	1.962358
Net-zero pathway	MN	Agriculture	Horses	CH4	2010	0.040632
Net-zero pathway	MN	Agriculture	Horses	N2O	2010	0.00227
Net-zero pathway	MN	Agriculture	Liming	CO2	2010	0.046868
Net-zero pathway	MN	Agriculture	Litter	CO2	2010	0.099197
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2010	-1.182677
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2010	0.000983
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2010	0.000036
Net-zero pathway	MN	Agriculture	Oil	CH4	2010	0.008313
Net-zero pathway	MN	Agriculture	Oil	CO2	2010	2.604341
Net-zero pathway	MN	Agriculture	Oil	N2O	2010	0.015696
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2010	6.397551
Net-zero pathway	MN	Agriculture	Other	CH4	2010	0.000136
Net-zero pathway	MN	Agriculture	Other	N2O	2010	0.000103
Net-zero pathway	MN	Agriculture	Poultry	CH4	2010	0.04798
Net-zero pathway	MN	Agriculture	Poultry	N2O	2010	0.058278
Net-zero pathway	MN	Agriculture	Pulses	CH4	2010	0.002358
Net-zero pathway	MN	Agriculture	Pulses	N2O	2010	0.000785
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2010	0.0565
Net-zero pathway	MN	Agriculture	Sheep	CH4	2010	0.034312
Net-zero pathway	MN	Agriculture	Sheep	N2O	2010	0.011301
Net-zero pathway	MN	Agriculture	Swine	CH4	2010	2.029273
Net-zero pathway	MN	Agriculture	Swine	N2O	2010	0.160562
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2010	0.000064
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2010	0.000045
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2010	0.415371
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2010	0.542017
Net-zero pathway	MN	Commercial	Biofuel	CO2	2010	0
Net-zero pathway	MN	Commercial	Coal	CH4	2010	0.000377
Net-zero pathway	MN	Commercial	Coal	CO2	2010	0.146841
Net-zero pathway	MN	Commercial	Coal	N2O	2010	0.000675
Net-zero pathway	MN	Commercial	Limestone use	CO2	2010	0.001198
Net-zero pathway	MN	Commercial	Medical use	N2O	2010	0.078952
Net-zero pathway	MN	Commercial	Natural gas	CH4	2010	0.011174
Net-zero pathway	MN	Commercial	Natural gas	CO2	2010	4.977614

Net-zero pathway	MN	Commercial	Natural gas	N2O	2010	0.002664
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2010	0.046706
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2010	9.83086
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2010	0.025658
Net-zero pathway	MN	Commercial	Solvent use	CO2	2010	0.092798
Net-zero pathway	MN	Electricity	Coal	CH4	2010	0.00565
Net-zero pathway	MN	Electricity	Coal	CO2	2010	32.532438
Net-zero pathway	MN	Electricity	Coal	N2O	2010	0.082952
Net-zero pathway	MN	Electricity	Coal storage	CH4	2010	0.056782
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2010	0.006447
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2010	0.005426
Net-zero pathway	MN	Electricity	Natural gas	CH4	2010	0.002228
Net-zero pathway	MN	Electricity	Natural gas	CO2	2010	2.427377
Net-zero pathway	MN	Electricity	Natural gas	N2O	2010	0.03078
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2010	0.032568
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2010	13.341378
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2010	0.070971
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2010	0.016796
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2010	0.624081
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2010	0.075596
Net-zero pathway	MN	Electricity	Transmission	SF6	2010	0.099411
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2010	0
Net-zero pathway	MN	Industry	Coal	CH4	2010	0.038725
Net-zero pathway	MN	Industry	Coal	CO2	2010	2.389448
Net-zero pathway	MN	Industry	Coal	N2O	2010	0.010282
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2010	0.012664
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2010	0.193643
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2010	0.054076
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2010	0.184555
Net-zero pathway	MN	Industry	Natural gas	CH4	2010	0.004188
Net-zero pathway	MN	Industry	Natural gas	CO2	2010	9.327713
Net-zero pathway	MN	Industry	Natural gas	N2O	2010	0.004992
Net-zero pathway	MN	Industry	Oil refining	CH4	2010	0.033963
Net-zero pathway	MN	Industry	Oil refining	CO2	2010	0.001422
Net-zero pathway	MN	Industry	Other industrial process	CO2	2010	0.009228
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2010	0.016526
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2010	0.013502
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2010	6.510682
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2010	0.024929
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2010	0.187926
Net-zero pathway	MN	Industry	Solvent	HFC	2010	0.032174
Net-zero pathway	MN	Industry	Taconite induration	CO2	2010	2.064748
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2010	0.112131
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2010	-13.333732
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2010	-2.23957
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2010	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2010	-2.292402
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2010	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2010	1.821167
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2010	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2010	0.095791
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2010	0.061156
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2010	0.000705
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2010	0.000609
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2010	3.28762
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2010	-0.203165

Net-zero pathway	MN	LULUCF	Litter	CO2	2010	-0.89108
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2010	-0.529345
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2010	2.095972
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2010	0.000681
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2010	0.023848
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2010	0.000082
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2010	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2010	0.649846
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2010	0.012693
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2010	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2010	0.171742
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2010	-0.820319
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2010	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2010	0.198097
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2010	0.107048
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2010	0.000025
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2010	0.020645
Net-zero pathway	MN	Residential	Coal	CH4	2010	0
Net-zero pathway	MN	Residential	Coal	CO2	2010	0
Net-zero pathway	MN	Residential	Coal	N2O	2010	0
Net-zero pathway	MN	Residential	Food additives	CO2	2010	0.017037
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2010	0.016535
Net-zero pathway	MN	Residential	Natural gas	CH4	2010	0.016255
Net-zero pathway	MN	Residential	Natural gas	CO2	2010	7.241463
Net-zero pathway	MN	Residential	Natural gas	N2O	2010	0.003875
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2010	0.004384
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2010	1.864661
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2010	0.001923
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2010	0.001839
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2010	0.394017
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2010	0.109792
Net-zero pathway	MN	Residential	Wood	CH4	2010	0.158324
Net-zero pathway	MN	Residential	Wood	N2O	2010	0.025163
Net-zero pathway	MN	Transportation	Aviation	CH4	2010	0.003179
Net-zero pathway	MN	Transportation	Aviation	CO2	2010	3.533434
Net-zero pathway	MN	Transportation	Aviation	N2O	2010	0.033298
Net-zero pathway	MN	Transportation	Bus	CH4	2010	0.002099
Net-zero pathway	MN	Transportation	Bus	CO2	2010	0.353411
Net-zero pathway	MN	Transportation	Bus	N2O	2010	0.000617
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2010	0.004691
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2010	6.279297
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2010	0.011591
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2010	0.029317
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2010	14.656425
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2010	0.243259
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2010	0.059673
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2010	0.481575
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2010	0.296259
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2010	1.652324
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2010	0.000506
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2010	0.214232
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2010	0.000788
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2010	1.14939
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2010	0.925138
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2010	0.004897
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2010	0.014958

Net-zero pathway	MN	Transportation	Passenger cars	CO2	2010	9.92038
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2010	0.146546
Net-zero pathway	MN	Transportation	Railroad	CH4	2010	0.004523
Net-zero pathway	MN	Transportation	Railroad	CO2	2010	0.62934
Net-zero pathway	MN	Transportation	Railroad	N2O	2010	0.017253
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2010	0.000118
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2010	0.559869
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2010	0.003292
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2010	0.019236
Net-zero pathway	MN	Waste	Coal	CH4	2010	0
Net-zero pathway	MN	Waste	Coal	CO2	2010	0
Net-zero pathway	MN	Waste	Coal	N2O	2010	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2010	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2010	0.109257
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2010	0.003359
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2010	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2010	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2010	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2010	0.148505
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2010	0.014052
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2010	0.00134
Net-zero pathway	MN	Waste	Landfill operations	CH4	2010	0.000025
Net-zero pathway	MN	Waste	Landfill operations	CO2	2010	0.016775
Net-zero pathway	MN	Waste	Landfill operations	N2O	2010	0.000131
Net-zero pathway	MN	Waste	Limestone use	CO2	2010	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2010	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2010	0.000096
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2010	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2010	0.001627
Net-zero pathway	MN	Waste	MMSW composting	N2O	2010	0.001835
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2010	1.796226
Net-zero pathway	MN	Waste	Mass burn	CH4	2010	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2010	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2010	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2010	0.000013
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2010	0.009051
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2010	0.000071
Net-zero pathway	MN	Waste	Medical	CO2	2010	0.00456
Net-zero pathway	MN	Waste	Medical	N2O	2010	0.00018
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2010	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2010	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2010	0.000006
Net-zero pathway	MN	Waste	Natural gas	CO2	2010	0.015244
Net-zero pathway	MN	Waste	Natural gas	N2O	2010	0.000077
Net-zero pathway	MN	Waste	Oil	CH4	2010	0
Net-zero pathway	MN	Waste	Oil	CO2	2010	0.001655
Net-zero pathway	MN	Waste	Oil	N2O	2010	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2010	0
Net-zero pathway	MN	Waste	Propane	CO2	2010	0
Net-zero pathway	MN	Waste	Propane	N2O	2010	0
Net-zero pathway	MN	Waste	RDF	CH4	2010	0
Net-zero pathway	MN	Waste	RDF	CO2	2010	0
Net-zero pathway	MN	Waste	RDF	N2O	2010	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2010	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2010	0.001765
Net-zero pathway	MN	Waste	RDF processing	N2O	2010	0.000014

Net-zero pathway	MN	Waste	Rural open burning	CH4	2010	0.008902
Net-zero pathway	MN	Waste	Rural open burning	CO2	2010	0.030915
Net-zero pathway	MN	Waste	Rural open burning	N2O	2010	0.002449
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2010	-0.72857
Net-zero pathway	MN	Waste	Sludge	CH4	2010	0.0043
Net-zero pathway	MN	Waste	Sludge	N2O	2010	0.001678
Net-zero pathway	MN	Waste	Waste solvent	CO2	2010	0.012399
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2010	0.243544
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2010	0.103509
Net-zero pathway	MN	Waste	Wood	CH4	2010	0
Net-zero pathway	MN	Waste	Wood	N2O	2010	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2010	0.02
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2010	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2010	0.001563
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2010	0.000012
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2011	0.186401
Current policies	MN	Agriculture	American Bison	CH4	2011	0.008683
Current policies	MN	Agriculture	Beef Cattle	CH4	2011	2.144655
Current policies	MN	Agriculture	Beef Cattle	N2O	2011	0.131359
Current policies	MN	Agriculture	Belowground Biomass	CO2	2011	0.030963
Current policies	MN	Agriculture	Biofuel	CH4	2011	0.000355
Current policies	MN	Agriculture	Biofuel	N2O	2011	0.000753
Current policies	MN	Agriculture	Cereals	CH4	2011	0.008286
Current policies	MN	Agriculture	Cereals	N2O	2011	0.002771
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2011	0
Current policies	MN	Agriculture	Cropland	N2O	2011	12.726053
Current policies	MN	Agriculture	Dairy Cattle	CH4	2011	3.101379
Current policies	MN	Agriculture	Dairy Cattle	N2O	2011	0.16845
Current policies	MN	Agriculture	Dairy Heifers	N2O	2011	0.151871
Current policies	MN	Agriculture	Dead Wood	CO2	2011	0.06351
Current policies	MN	Agriculture	Goats	CH4	2011	0.008775
Current policies	MN	Agriculture	Goats	N2O	2011	0.00027
Current policies	MN	Agriculture	Grassland	N2O	2011	1.822741
Current policies	MN	Agriculture	Horses	CH4	2011	0.038087
Current policies	MN	Agriculture	Horses	N2O	2011	0.002128
Current policies	MN	Agriculture	Liming	CO2	2011	0.027205
Current policies	MN	Agriculture	Litter	CO2	2011	0.09894
Current policies	MN	Agriculture	Mineral Soil	CO2	2011	-3.546499
Current policies	MN	Agriculture	Mules and Asses	CH4	2011	0.000952
Current policies	MN	Agriculture	Mules and Asses	N2O	2011	0.000035
Current policies	MN	Agriculture	Oil	CH4	2011	0.007818
Current policies	MN	Agriculture	Oil	CO2	2011	2.167601
Current policies	MN	Agriculture	Oil	N2O	2011	0.014969
Current policies	MN	Agriculture	Organic Soil	CO2	2011	6.404022
Current policies	MN	Agriculture	Other	CH4	2011	0.000131
Current policies	MN	Agriculture	Other	N2O	2011	0.000099
Current policies	MN	Agriculture	Poultry	CH4	2011	0.047414
Current policies	MN	Agriculture	Poultry	N2O	2011	0.057846
Current policies	MN	Agriculture	Pulses	CH4	2011	0.002044
Current policies	MN	Agriculture	Pulses	N2O	2011	0.000672
Current policies	MN	Agriculture	Rice Cultivation	CH4	2011	0.059049
Current policies	MN	Agriculture	Sheep	CH4	2011	0.034312
Current policies	MN	Agriculture	Sheep	N2O	2011	0.011301
Current policies	MN	Agriculture	Swine	CH4	2011	2.076507
Current policies	MN	Agriculture	Swine	N2O	2011	0.166904
Current policies	MN	Agriculture	Tubers and Roots	CH4	2011	0.00007

Current policies	MN	Agriculture	Tubers and Roots	N2O	2011	0.000047
Current policies	MN	Agriculture	Urea Fertilization	CO2	2011	0.456937
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2011	0.488893
Current policies	MN	Commercial	Biofuel	CO2	2011	0
Current policies	MN	Commercial	Coal	CH4	2011	0.000239
Current policies	MN	Commercial	Coal	CO2	2011	0.093161
Current policies	MN	Commercial	Coal	N2O	2011	0.000428
Current policies	MN	Commercial	Limestone use	CO2	2011	0.000924
Current policies	MN	Commercial	Medical use	N2O	2011	0.078888
Current policies	MN	Commercial	Natural gas	CH4	2011	0.011666
Current policies	MN	Commercial	Natural gas	CO2	2011	5.19682
Current policies	MN	Commercial	Natural gas	N2O	2011	0.002781
Current policies	MN	Commercial	Refined Liquids	CH4	2011	0.054792
Current policies	MN	Commercial	Refined Liquids	CO2	2011	12.261486
Current policies	MN	Commercial	Refined Liquids	N2O	2011	0.03148
Current policies	MN	Commercial	Solvent use	CO2	2011	0.088184
Current policies	MN	Electricity	Coal	CH4	2011	0.005688
Current policies	MN	Electricity	Coal	CO2	2011	32.468936
Current policies	MN	Electricity	Coal	N2O	2011	0.085396
Current policies	MN	Electricity	Coal storage	CH4	2011	0.059618
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2011	0.005935
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2011	0.005436
Current policies	MN	Electricity	Natural gas	CH4	2011	0.001817
Current policies	MN	Electricity	Natural gas	CO2	2011	2.000316
Current policies	MN	Electricity	Natural gas	N2O	2011	0.023843
Current policies	MN	Electricity	Net electricity imports	CH4	2011	0.036556
Current policies	MN	Electricity	Net electricity imports	CO2	2011	14.079835
Current policies	MN	Electricity	Net electricity imports	N2O	2011	0.07458
Current policies	MN	Electricity	Refined Liquids	CH4	2011	0.018638
Current policies	MN	Electricity	Refined Liquids	CO2	2011	0.650032
Current policies	MN	Electricity	Refined Liquids	N2O	2011	0.076817
Current policies	MN	Electricity	Transmission	SF6	2011	0.062517
Current policies	MN	Industry	Ammonia manufacture	CO2	2011	0
Current policies	MN	Industry	Coal	CH4	2011	0.032998
Current policies	MN	Industry	Coal	CO2	2011	2.269419
Current policies	MN	Industry	Coal	N2O	2011	0.009831
Current policies	MN	Industry	Industrial solvent release	CO2	2011	0.012501
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2011	0.193364
Current policies	MN	Industry	Insulating foam manufacture	HFC	2011	0.055089
Current policies	MN	Industry	Magnesium casting	SF6	2011	0.146513
Current policies	MN	Industry	Natural gas	CH4	2011	0.00417
Current policies	MN	Industry	Natural gas	CO2	2011	9.288895
Current policies	MN	Industry	Natural gas	N2O	2011	0.004971
Current policies	MN	Industry	Oil refining	CH4	2011	0.035022
Current policies	MN	Industry	Oil refining	CO2	2011	0.001311
Current policies	MN	Industry	Other industrial process	CO2	2011	0.0092
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2011	0.014578
Current policies	MN	Industry	Refined Liquids	CH4	2011	0.01201
Current policies	MN	Industry	Refined Liquids	CO2	2011	6.413799
Current policies	MN	Industry	Refined Liquids	N2O	2011	0.023093
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2011	0.214812
Current policies	MN	Industry	Solvent	HFC	2011	0.032155
Current policies	MN	Industry	Taconite induration	CO2	2011	2.328063
Current policies	MN	Industry	VOC and toxics release	CO2	2011	0.113264
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2011	-13.524608
Current policies	MN	LULUCF	Belowground Biomass	CO2	2011	-2.270299

Current policies	MN	LULUCF	Canals and ditches	CH4	2011	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2011	-2.378791
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2011	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2011	1.824475
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2011	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2011	0.513834
Current policies	MN	LULUCF	Forest Fires	N2O	2011	0.318469
Current policies	MN	LULUCF	Grass Fires	CH4	2011	0
Current policies	MN	LULUCF	Grass Fires	N2O	2011	0
Current policies	MN	LULUCF	Lakes and ponds	CH4	2011	3.287928
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2011	-0.195945
Current policies	MN	LULUCF	Litter	CO2	2011	-0.887243
Current policies	MN	LULUCF	Mineral Soil	CO2	2011	-0.750746
Current policies	MN	LULUCF	Organic Soil	CO2	2011	2.117162
Current policies	MN	LULUCF	Peat harvesting	CH4	2011	0.000544
Current policies	MN	LULUCF	Peat harvesting	CO2	2011	0.02075
Current policies	MN	LULUCF	Peat harvesting	N2O	2011	0.000066
Current policies	MN	LULUCF	Peatland restoration	CO2	2011	0
Current policies	MN	LULUCF	Reservoirs	CH4	2011	0.651043
Current policies	MN	LULUCF	Reservoirs	CO2	2011	0.014116
Current policies	MN	LULUCF	Rivers and streams	CH4	2011	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2011	0.175356
Current policies	MN	LULUCF	Urban Trees	CO2	2011	-0.823687
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2011	0.206099
Current policies	MN	Residential	Air conditioning	HFC125	2011	0.121071
Current policies	MN	Residential	Air conditioning	HFC143a	2011	0.000031
Current policies	MN	Residential	Air conditioning	HFC32	2011	0.023349
Current policies	MN	Residential	Coal	CH4	2011	0
Current policies	MN	Residential	Coal	CO2	2011	0
Current policies	MN	Residential	Coal	N2O	2011	0
Current policies	MN	Residential	Food additives	CO2	2011	0.018919
Current policies	MN	Residential	Lawn fertilizer	N2O	2011	0.017157
Current policies	MN	Residential	Natural gas	CH4	2011	0.016545
Current policies	MN	Residential	Natural gas	CO2	2011	7.370968
Current policies	MN	Residential	Natural gas	N2O	2011	0.003944
Current policies	MN	Residential	Refined Liquids	CH4	2011	0.004086
Current policies	MN	Residential	Refined Liquids	CO2	2011	1.778782
Current policies	MN	Residential	Refined Liquids	N2O	2011	0.001706
Current policies	MN	Residential	Refrigeration	HFC134a	2011	0.001866
Current policies	MN	Residential	Sequestration in housing	CO2	2011	-0.719443
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2011	0.102162
Current policies	MN	Residential	Wood	CH4	2011	0.169178
Current policies	MN	Residential	Wood	N2O	2011	0.026888
Current policies	MN	Transportation	Aviation	CH4	2011	0.003229
Current policies	MN	Transportation	Aviation	CO2	2011	3.605799
Current policies	MN	Transportation	Aviation	N2O	2011	0.033984
Current policies	MN	Transportation	Bus	CH4	2011	0.002484
Current policies	MN	Transportation	Bus	CO2	2011	0.371939
Current policies	MN	Transportation	Bus	N2O	2011	0.000627
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2011	0.006009
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2011	6.521104
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2011	0.010342
Current policies	MN	Transportation	Light-duty trucks	CH4	2011	0.030488
Current policies	MN	Transportation	Light-duty trucks	CO2	2011	15.305445
Current policies	MN	Transportation	Light-duty trucks	N2O	2011	0.260764
Current policies	MN	Transportation	Military and other off-highway	CH4	2011	0.058799

Current policies	MN	Transportation	Military and other off-highway	CO2	2011	0.280511
Current policies	MN	Transportation	Military and other off-highway	N2O	2011	0.291983
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2011	1.745423
Current policies	MN	Transportation	Motorcycle	CH4	2011	0.000502
Current policies	MN	Transportation	Motorcycle	CO2	2011	0.207082
Current policies	MN	Transportation	Motorcycle	N2O	2011	0.000852
Current policies	MN	Transportation	Natural gas transmission	CH4	2011	1.132933
Current policies	MN	Transportation	Natural gas transmission	CO2	2011	0.910825
Current policies	MN	Transportation	Natural gas transmission	N2O	2011	0.004586
Current policies	MN	Transportation	Passenger cars	CH4	2011	0.012445
Current policies	MN	Transportation	Passenger cars	CO2	2011	9.276581
Current policies	MN	Transportation	Passenger cars	N2O	2011	0.133873
Current policies	MN	Transportation	Railroad	CH4	2011	0.004676
Current policies	MN	Transportation	Railroad	CO2	2011	0.755887
Current policies	MN	Transportation	Railroad	N2O	2011	0.017837
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2011	0.000103
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2011	0.434654
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2011	0.002251
Current policies	MN	Waste	Biosolids land application	N2O	2011	0.022869
Current policies	MN	Waste	Coal	CH4	2011	0
Current policies	MN	Waste	Coal	CO2	2011	0
Current policies	MN	Waste	Coal	N2O	2011	0
Current policies	MN	Waste	Food waste prevention	CO2	2011	0
Current policies	MN	Waste	Hazardous waste	CO2	2011	0.071375
Current policies	MN	Waste	Hazardous waste	N2O	2011	0.002194
Current policies	MN	Waste	Incinerator ash disposal	CH4	2011	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2011	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2011	0
Current policies	MN	Waste	Industrial landfills	CH4	2011	0.149411
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2011	0.015819
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2011	0.001398
Current policies	MN	Waste	Landfill operations	CH4	2011	0.000024
Current policies	MN	Waste	Landfill operations	CO2	2011	0.01662
Current policies	MN	Waste	Landfill operations	N2O	2011	0.00013
Current policies	MN	Waste	Limestone use	CO2	2011	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2011	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2011	0.000097
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2011	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2011	0.001644
Current policies	MN	Waste	MMSW composting	N2O	2011	0.001854
Current policies	MN	Waste	MMSW landfills	CH4	2011	1.787233
Current policies	MN	Waste	Mass burn	CH4	2011	0
Current policies	MN	Waste	Mass burn	CO2	2011	0
Current policies	MN	Waste	Mass burn	N2O	2011	0
Current policies	MN	Waste	Materials recovery facility	CH4	2011	0.000014
Current policies	MN	Waste	Materials recovery facility	CO2	2011	0.009524
Current policies	MN	Waste	Materials recovery facility	N2O	2011	0.000074
Current policies	MN	Waste	Medical	CO2	2011	0.004335
Current policies	MN	Waste	Medical	N2O	2011	0.000171
Current policies	MN	Waste	Miscellaneous	CO2	2011	0
Current policies	MN	Waste	Miscellaneous	N2O	2011	0
Current policies	MN	Waste	Natural gas	CH4	2011	0.000008
Current policies	MN	Waste	Natural gas	CO2	2011	0.017829
Current policies	MN	Waste	Natural gas	N2O	2011	0.00009
Current policies	MN	Waste	Oil	CH4	2011	0.000001
Current policies	MN	Waste	Oil	CO2	2011	0.001935

Current policies	MN	Waste	Oil	N2O	2011	0.000005
Current policies	MN	Waste	Propane	CH4	2011	0
Current policies	MN	Waste	Propane	CO2	2011	0
Current policies	MN	Waste	Propane	N2O	2011	0
Current policies	MN	Waste	RDF	CH4	2011	0
Current policies	MN	Waste	RDF	CO2	2011	0
Current policies	MN	Waste	RDF	N2O	2011	0
Current policies	MN	Waste	RDF processing	CH4	2011	0.000003
Current policies	MN	Waste	RDF processing	CO2	2011	0.002012
Current policies	MN	Waste	RDF processing	N2O	2011	0.000016
Current policies	MN	Waste	Rural open burning	CH4	2011	0.008409
Current policies	MN	Waste	Rural open burning	CO2	2011	0.029202
Current policies	MN	Waste	Rural open burning	N2O	2011	0.002313
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2011	-0.904061
Current policies	MN	Waste	Sludge	CH4	2011	0.004409
Current policies	MN	Waste	Sludge	N2O	2011	0.001717
Current policies	MN	Waste	Waste solvent	CO2	2011	0.013605
Current policies	MN	Waste	Wastewater treatment	CH4	2011	0.245164
Current policies	MN	Waste	Wastewater treatment	N2O	2011	0.100171
Current policies	MN	Waste	Wood	CH4	2011	0
Current policies	MN	Waste	Wood	N2O	2011	0
Current policies	MN	Waste	Yard waste composting	CH4	2011	0.02
Current policies	MN	Waste	Yard waste preprocessing	CH4	2011	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2011	0.001395
Current policies	MN	Waste	Yard waste preprocessing	N2O	2011	0.000011
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2011	0.186401
Net-zero pathway	MN	Agriculture	American Bison	CH4	2011	0.008683
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2011	2.144655
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2011	0.131359
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2011	0.030963
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2011	0.000355
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2011	0.000753
Net-zero pathway	MN	Agriculture	Cereals	CH4	2011	0.008286
Net-zero pathway	MN	Agriculture	Cereals	N2O	2011	0.002771
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2011	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2011	12.726053
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2011	3.101379
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2011	0.16845
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2011	0.151871
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2011	0.06351
Net-zero pathway	MN	Agriculture	Goats	CH4	2011	0.008775
Net-zero pathway	MN	Agriculture	Goats	N2O	2011	0.00027
Net-zero pathway	MN	Agriculture	Grassland	N2O	2011	1.822741
Net-zero pathway	MN	Agriculture	Horses	CH4	2011	0.038087
Net-zero pathway	MN	Agriculture	Horses	N2O	2011	0.002128
Net-zero pathway	MN	Agriculture	Liming	CO2	2011	0.027205
Net-zero pathway	MN	Agriculture	Litter	CO2	2011	0.09894
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2011	-3.546499
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2011	0.000952
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2011	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2011	0.007818
Net-zero pathway	MN	Agriculture	Oil	CO2	2011	2.167601
Net-zero pathway	MN	Agriculture	Oil	N2O	2011	0.014969
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2011	6.404022
Net-zero pathway	MN	Agriculture	Other	CH4	2011	0.000131
Net-zero pathway	MN	Agriculture	Other	N2O	2011	0.000099

Net-zero pathway	MN	Agriculture	Poultry	CH4	2011	0.047414
Net-zero pathway	MN	Agriculture	Poultry	N2O	2011	0.057846
Net-zero pathway	MN	Agriculture	Pulses	CH4	2011	0.002044
Net-zero pathway	MN	Agriculture	Pulses	N2O	2011	0.000672
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2011	0.059049
Net-zero pathway	MN	Agriculture	Sheep	CH4	2011	0.034312
Net-zero pathway	MN	Agriculture	Sheep	N2O	2011	0.011301
Net-zero pathway	MN	Agriculture	Swine	CH4	2011	2.076507
Net-zero pathway	MN	Agriculture	Swine	N2O	2011	0.166904
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2011	0.00007
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2011	0.000047
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2011	0.456937
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2011	0.488893
Net-zero pathway	MN	Commercial	Biofuel	CO2	2011	0
Net-zero pathway	MN	Commercial	Coal	CH4	2011	0.000239
Net-zero pathway	MN	Commercial	Coal	CO2	2011	0.093161
Net-zero pathway	MN	Commercial	Coal	N2O	2011	0.000428
Net-zero pathway	MN	Commercial	Limestone use	CO2	2011	0.000924
Net-zero pathway	MN	Commercial	Medical use	N2O	2011	0.078888
Net-zero pathway	MN	Commercial	Natural gas	CH4	2011	0.011666
Net-zero pathway	MN	Commercial	Natural gas	CO2	2011	5.19682
Net-zero pathway	MN	Commercial	Natural gas	N2O	2011	0.002781
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2011	0.054792
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2011	12.261486
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2011	0.03148
Net-zero pathway	MN	Commercial	Solvent use	CO2	2011	0.088184
Net-zero pathway	MN	Electricity	Coal	CH4	2011	0.005688
Net-zero pathway	MN	Electricity	Coal	CO2	2011	32.468936
Net-zero pathway	MN	Electricity	Coal	N2O	2011	0.085396
Net-zero pathway	MN	Electricity	Coal storage	CH4	2011	0.059618
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2011	0.005935
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2011	0.005436
Net-zero pathway	MN	Electricity	Natural gas	CH4	2011	0.001817
Net-zero pathway	MN	Electricity	Natural gas	CO2	2011	2.000316
Net-zero pathway	MN	Electricity	Natural gas	N2O	2011	0.023843
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2011	0.036556
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2011	14.079835
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2011	0.07458
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2011	0.018638
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2011	0.650032
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2011	0.076817
Net-zero pathway	MN	Electricity	Transmission	SF6	2011	0.062517
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2011	0
Net-zero pathway	MN	Industry	Coal	CH4	2011	0.032998
Net-zero pathway	MN	Industry	Coal	CO2	2011	2.269419
Net-zero pathway	MN	Industry	Coal	N2O	2011	0.009831
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2011	0.012501
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2011	0.193364
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2011	0.055089
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2011	0.146513
Net-zero pathway	MN	Industry	Natural gas	CH4	2011	0.00417
Net-zero pathway	MN	Industry	Natural gas	CO2	2011	9.288895
Net-zero pathway	MN	Industry	Natural gas	N2O	2011	0.004971
Net-zero pathway	MN	Industry	Oil refining	CH4	2011	0.035022
Net-zero pathway	MN	Industry	Oil refining	CO2	2011	0.001311
Net-zero pathway	MN	Industry	Other industrial process	CO2	2011	0.0092

Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2011	0.014578
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2011	0.01201
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2011	6.413799
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2011	0.023093
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2011	0.214812
Net-zero pathway	MN	Industry	Solvent	HFC	2011	0.032155
Net-zero pathway	MN	Industry	Taconite induration	CO2	2011	2.328063
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2011	0.113264
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2011	-13.524608
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2011	-2.270299
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2011	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2011	-2.378791
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2011	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2011	1.824475
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2011	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2011	0.513834
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2011	0.318469
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2011	0
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2011	0
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2011	3.287928
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2011	-0.195945
Net-zero pathway	MN	LULUCF	Litter	CO2	2011	-0.887243
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2011	-0.750746
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2011	2.117162
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2011	0.000544
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2011	0.02075
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2011	0.000066
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2011	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2011	0.651043
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2011	0.014116
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2011	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2011	0.175356
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2011	-0.823687
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2011	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2011	0.206099
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2011	0.121071
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2011	0.000031
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2011	0.023349
Net-zero pathway	MN	Residential	Coal	CH4	2011	0
Net-zero pathway	MN	Residential	Coal	CO2	2011	0
Net-zero pathway	MN	Residential	Coal	N2O	2011	0
Net-zero pathway	MN	Residential	Food additives	CO2	2011	0.018919
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2011	0.017157
Net-zero pathway	MN	Residential	Natural gas	CH4	2011	0.016545
Net-zero pathway	MN	Residential	Natural gas	CO2	2011	7.370968
Net-zero pathway	MN	Residential	Natural gas	N2O	2011	0.003944
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2011	0.004086
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2011	1.778782
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2011	0.001706
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2011	0.001866
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2011	-0.719443
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2011	0.102162
Net-zero pathway	MN	Residential	Wood	CH4	2011	0.169178
Net-zero pathway	MN	Residential	Wood	N2O	2011	0.026888
Net-zero pathway	MN	Transportation	Aviation	CH4	2011	0.003229
Net-zero pathway	MN	Transportation	Aviation	CO2	2011	3.605799

Net-zero pathway	MN	Transportation	Aviation	N2O	2011	0.033984
Net-zero pathway	MN	Transportation	Bus	CH4	2011	0.002484
Net-zero pathway	MN	Transportation	Bus	CO2	2011	0.371939
Net-zero pathway	MN	Transportation	Bus	N2O	2011	0.000627
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2011	0.006009
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2011	6.521104
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2011	0.010342
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2011	0.030488
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2011	15.305445
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2011	0.260764
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2011	0.058799
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2011	0.280511
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2011	0.291983
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2011	1.745423
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2011	0.000502
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2011	0.207082
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2011	0.000852
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2011	1.132933
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2011	0.910825
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2011	0.004586
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2011	0.012445
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2011	9.276581
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2011	0.133873
Net-zero pathway	MN	Transportation	Railroad	CH4	2011	0.004676
Net-zero pathway	MN	Transportation	Railroad	CO2	2011	0.755887
Net-zero pathway	MN	Transportation	Railroad	N2O	2011	0.017837
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2011	0.000103
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2011	0.434654
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2011	0.002251
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2011	0.022869
Net-zero pathway	MN	Waste	Coal	CH4	2011	0
Net-zero pathway	MN	Waste	Coal	CO2	2011	0
Net-zero pathway	MN	Waste	Coal	N2O	2011	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2011	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2011	0.071375
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2011	0.002194
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2011	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2011	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2011	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2011	0.149411
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2011	0.015819
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2011	0.001398
Net-zero pathway	MN	Waste	Landfill operations	CH4	2011	0.000024
Net-zero pathway	MN	Waste	Landfill operations	CO2	2011	0.01662
Net-zero pathway	MN	Waste	Landfill operations	N2O	2011	0.00013
Net-zero pathway	MN	Waste	Limestone use	CO2	2011	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2011	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2011	0.000097
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2011	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2011	0.001644
Net-zero pathway	MN	Waste	MMSW composting	N2O	2011	0.001854
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2011	1.787233
Net-zero pathway	MN	Waste	Mass burn	CH4	2011	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2011	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2011	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2011	0.000014

Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2011	0.009524
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2011	0.000074
Net-zero pathway	MN	Waste	Medical	CO2	2011	0.004335
Net-zero pathway	MN	Waste	Medical	N2O	2011	0.000171
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2011	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2011	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2011	0.000008
Net-zero pathway	MN	Waste	Natural gas	CO2	2011	0.017829
Net-zero pathway	MN	Waste	Natural gas	N2O	2011	0.00009
Net-zero pathway	MN	Waste	Oil	CH4	2011	0.000001
Net-zero pathway	MN	Waste	Oil	CO2	2011	0.001935
Net-zero pathway	MN	Waste	Oil	N2O	2011	0.000005
Net-zero pathway	MN	Waste	Propane	CH4	2011	0
Net-zero pathway	MN	Waste	Propane	CO2	2011	0
Net-zero pathway	MN	Waste	Propane	N2O	2011	0
Net-zero pathway	MN	Waste	RDF	CH4	2011	0
Net-zero pathway	MN	Waste	RDF	CO2	2011	0
Net-zero pathway	MN	Waste	RDF	N2O	2011	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2011	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2011	0.002012
Net-zero pathway	MN	Waste	RDF processing	N2O	2011	0.000016
Net-zero pathway	MN	Waste	Rural open burning	CH4	2011	0.008409
Net-zero pathway	MN	Waste	Rural open burning	CO2	2011	0.029202
Net-zero pathway	MN	Waste	Rural open burning	N2O	2011	0.002313
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2011	-0.904061
Net-zero pathway	MN	Waste	Sludge	CH4	2011	0.004409
Net-zero pathway	MN	Waste	Sludge	N2O	2011	0.001717
Net-zero pathway	MN	Waste	Waste solvent	CO2	2011	0.013605
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2011	0.245164
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2011	0.100171
Net-zero pathway	MN	Waste	Wood	CH4	2011	0
Net-zero pathway	MN	Waste	Wood	N2O	2011	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2011	0.02
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2011	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2011	0.001395
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2011	0.000011
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2012	0.185917
Current policies	MN	Agriculture	American Bison	CH4	2012	0.0072
Current policies	MN	Agriculture	Beef Cattle	CH4	2012	2.138229
Current policies	MN	Agriculture	Beef Cattle	N2O	2012	0.127265
Current policies	MN	Agriculture	Belowground Biomass	CO2	2012	0.030883
Current policies	MN	Agriculture	Biofuel	CH4	2012	0.000358
Current policies	MN	Agriculture	Biofuel	N2O	2012	0.000759
Current policies	MN	Agriculture	Cereals	CH4	2012	0.009164
Current policies	MN	Agriculture	Cereals	N2O	2012	0.003054
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2012	0
Current policies	MN	Agriculture	Cropland	N2O	2012	12.966344
Current policies	MN	Agriculture	Dairy Cattle	CH4	2012	3.155528
Current policies	MN	Agriculture	Dairy Cattle	N2O	2012	0.166232
Current policies	MN	Agriculture	Dairy Heifers	N2O	2012	0.148341
Current policies	MN	Agriculture	Dead Wood	CO2	2012	0.063346
Current policies	MN	Agriculture	Goats	CH4	2012	0.008619
Current policies	MN	Agriculture	Goats	N2O	2012	0.000265
Current policies	MN	Agriculture	Grassland	N2O	2012	1.705199
Current policies	MN	Agriculture	Horses	CH4	2012	0.035544
Current policies	MN	Agriculture	Horses	N2O	2012	0.001986

Current policies	MN	Agriculture	Liming	CO2	2012	0.130351
Current policies	MN	Agriculture	Litter	CO2	2012	0.098684
Current policies	MN	Agriculture	Mineral Soil	CO2	2012	-2.87708
Current policies	MN	Agriculture	Mules and Asses	CH4	2012	0.000922
Current policies	MN	Agriculture	Mules and Asses	N2O	2012	0.000034
Current policies	MN	Agriculture	Oil	CH4	2012	0.007926
Current policies	MN	Agriculture	Oil	CO2	2012	2.186203
Current policies	MN	Agriculture	Oil	N2O	2012	0.015076
Current policies	MN	Agriculture	Organic Soil	CO2	2012	6.391689
Current policies	MN	Agriculture	Other	CH4	2012	0.0001
Current policies	MN	Agriculture	Other	N2O	2012	0.000079
Current policies	MN	Agriculture	Poultry	CH4	2012	0.047612
Current policies	MN	Agriculture	Poultry	N2O	2012	0.058389
Current policies	MN	Agriculture	Pulses	CH4	2012	0.002312
Current policies	MN	Agriculture	Pulses	N2O	2012	0.000776
Current policies	MN	Agriculture	Rice Cultivation	CH4	2012	0.07959
Current policies	MN	Agriculture	Sheep	CH4	2012	0.03959
Current policies	MN	Agriculture	Sheep	N2O	2012	0.01304
Current policies	MN	Agriculture	Swine	CH4	2012	2.176856
Current policies	MN	Agriculture	Swine	N2O	2012	0.168494
Current policies	MN	Agriculture	Tubers and Roots	CH4	2012	0.000064
Current policies	MN	Agriculture	Tubers and Roots	N2O	2012	0.000042
Current policies	MN	Agriculture	Urea Fertilization	CO2	2012	0.472905
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2012	0.418148
Current policies	MN	Commercial	Biofuel	CO2	2012	0
Current policies	MN	Commercial	Coal	CH4	2012	0.000034
Current policies	MN	Commercial	Coal	CO2	2012	0.013043
Current policies	MN	Commercial	Coal	N2O	2012	0.00006
Current policies	MN	Commercial	Limestone use	CO2	2012	0.000084
Current policies	MN	Commercial	Medical use	N2O	2012	0.078763
Current policies	MN	Commercial	Natural gas	CH4	2012	0.010494
Current policies	MN	Commercial	Natural gas	CO2	2012	4.674775
Current policies	MN	Commercial	Natural gas	N2O	2012	0.002502
Current policies	MN	Commercial	Refined Liquids	CH4	2012	0.053588
Current policies	MN	Commercial	Refined Liquids	CO2	2012	12.408446
Current policies	MN	Commercial	Refined Liquids	N2O	2012	0.031611
Current policies	MN	Commercial	Solvent use	CO2	2012	0.080152
Current policies	MN	Electricity	Coal	CH4	2012	0.004714
Current policies	MN	Electricity	Coal	CO2	2012	26.451135
Current policies	MN	Electricity	Coal	N2O	2012	0.076114
Current policies	MN	Electricity	Coal storage	CH4	2012	0.045184
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2012	0.005115
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2012	0.005436
Current policies	MN	Electricity	Natural gas	CH4	2012	0.003001
Current policies	MN	Electricity	Natural gas	CO2	2012	3.642847
Current policies	MN	Electricity	Natural gas	N2O	2012	0.047805
Current policies	MN	Electricity	Net electricity imports	CH4	2012	0.035123
Current policies	MN	Electricity	Net electricity imports	CO2	2012	13.764949
Current policies	MN	Electricity	Net electricity imports	N2O	2012	0.091686
Current policies	MN	Electricity	Refined Liquids	CH4	2012	0.020232
Current policies	MN	Electricity	Refined Liquids	CO2	2012	0.691862
Current policies	MN	Electricity	Refined Liquids	N2O	2012	0.081175
Current policies	MN	Electricity	Transmission	SF6	2012	0.120947
Current policies	MN	Industry	Ammonia manufacture	CO2	2012	0
Current policies	MN	Industry	Coal	CH4	2012	0.038205
Current policies	MN	Industry	Coal	CO2	2012	1.876782

Current policies	MN	Industry	Coal	N2O	2012	0.007782
Current policies	MN	Industry	Industrial solvent release	CO2	2012	0.013091
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2012	0.188386
Current policies	MN	Industry	Insulating foam manufacture	HFC	2012	0.051934
Current policies	MN	Industry	Magnesium casting	SF6	2012	0.020094
Current policies	MN	Industry	Natural gas	CH4	2012	0.004265
Current policies	MN	Industry	Natural gas	CO2	2012	9.498953
Current policies	MN	Industry	Natural gas	N2O	2012	0.005083
Current policies	MN	Industry	Oil refining	CH4	2012	0.034834
Current policies	MN	Industry	Oil refining	CO2	2012	0.001293
Current policies	MN	Industry	Other industrial process	CO2	2012	0.009342
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2012	0.014779
Current policies	MN	Industry	Refined Liquids	CH4	2012	0.017108
Current policies	MN	Industry	Refined Liquids	CO2	2012	6.963182
Current policies	MN	Industry	Refined Liquids	N2O	2012	0.030932
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2012	0.119023
Current policies	MN	Industry	Solvent	HFC	2012	0.032104
Current policies	MN	Industry	Taconite induration	CO2	2012	2.302145
Current policies	MN	Industry	VOC and toxics release	CO2	2012	0.093749
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2012	-13.715483
Current policies	MN	LULUCF	Belowground Biomass	CO2	2012	-2.301028
Current policies	MN	LULUCF	Canals and ditches	CH4	2012	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2012	-2.465178
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2012	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2012	1.837154
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2012	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2012	0.249341
Current policies	MN	LULUCF	Forest Fires	N2O	2012	0.157053
Current policies	MN	LULUCF	Grass Fires	CH4	2012	0.000053
Current policies	MN	LULUCF	Grass Fires	N2O	2012	0.000046
Current policies	MN	LULUCF	Lakes and ponds	CH4	2012	3.290385
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2012	-0.186796
Current policies	MN	LULUCF	Litter	CO2	2012	-0.883405
Current policies	MN	LULUCF	Mineral Soil	CO2	2012	-0.756891
Current policies	MN	LULUCF	Organic Soil	CO2	2012	2.136452
Current policies	MN	LULUCF	Peat harvesting	CH4	2012	0.000748
Current policies	MN	LULUCF	Peat harvesting	CO2	2012	0.021029
Current policies	MN	LULUCF	Peat harvesting	N2O	2012	0.000085
Current policies	MN	LULUCF	Peatland restoration	CO2	2012	0
Current policies	MN	LULUCF	Reservoirs	CH4	2012	0.650711
Current policies	MN	LULUCF	Reservoirs	CO2	2012	0.012734
Current policies	MN	LULUCF	Rivers and streams	CH4	2012	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2012	0.171764
Current policies	MN	LULUCF	Urban Trees	CO2	2012	-0.825987
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2012	0.209846
Current policies	MN	Residential	Air conditioning	HFC125	2012	0.139004
Current policies	MN	Residential	Air conditioning	HFC143a	2012	0.000033
Current policies	MN	Residential	Air conditioning	HFC32	2012	0.026808
Current policies	MN	Residential	Coal	CH4	2012	0
Current policies	MN	Residential	Coal	CO2	2012	0
Current policies	MN	Residential	Coal	N2O	2012	0
Current policies	MN	Residential	Food additives	CO2	2012	0.020778
Current policies	MN	Residential	Lawn fertilizer	N2O	2012	0.017111
Current policies	MN	Residential	Natural gas	CH4	2012	0.014547
Current policies	MN	Residential	Natural gas	CO2	2012	6.480436
Current policies	MN	Residential	Natural gas	N2O	2012	0.003468

Current policies	MN	Residential	Refined Liquids	CH4	2012	0.003531
Current policies	MN	Residential	Refined Liquids	CO2	2012	1.539634
Current policies	MN	Residential	Refined Liquids	N2O	2012	0.001469
Current policies	MN	Residential	Refrigeration	HFC134a	2012	0.001894
Current policies	MN	Residential	Sequestration in housing	CO2	2012	-0.003656
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2012	0.088778
Current policies	MN	Residential	Wood	CH4	2012	0.180032
Current policies	MN	Residential	Wood	N2O	2012	0.028613
Current policies	MN	Transportation	Aviation	CH4	2012	0.003172
Current policies	MN	Transportation	Aviation	CO2	2012	3.662473
Current policies	MN	Transportation	Aviation	N2O	2012	0.034547
Current policies	MN	Transportation	Bus	CH4	2012	0.002212
Current policies	MN	Transportation	Bus	CO2	2012	0.383362
Current policies	MN	Transportation	Bus	N2O	2012	0.00058
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2012	0.006485
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2012	6.802798
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2012	0.011032
Current policies	MN	Transportation	Light-duty trucks	CH4	2012	0.028466
Current policies	MN	Transportation	Light-duty trucks	CO2	2012	15.35881
Current policies	MN	Transportation	Light-duty trucks	N2O	2012	0.23904
Current policies	MN	Transportation	Military and other off-highway	CH4	2012	0.061201
Current policies	MN	Transportation	Military and other off-highway	CO2	2012	0.27912
Current policies	MN	Transportation	Military and other off-highway	N2O	2012	0.303976
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2012	1.749427
Current policies	MN	Transportation	Motorcycle	CH4	2012	0.000479
Current policies	MN	Transportation	Motorcycle	CO2	2012	0.21164
Current policies	MN	Transportation	Motorcycle	N2O	2012	0.00083
Current policies	MN	Transportation	Natural gas transmission	CH4	2012	1.113916
Current policies	MN	Transportation	Natural gas transmission	CO2	2012	0.776988
Current policies	MN	Transportation	Natural gas transmission	N2O	2012	0.004013
Current policies	MN	Transportation	Passenger cars	CH4	2012	0.011078
Current policies	MN	Transportation	Passenger cars	CO2	2012	9.037409
Current policies	MN	Transportation	Passenger cars	N2O	2012	0.117059
Current policies	MN	Transportation	Railroad	CH4	2012	0.005359
Current policies	MN	Transportation	Railroad	CO2	2012	1.082428
Current policies	MN	Transportation	Railroad	N2O	2012	0.020443
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2012	0.000083
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2012	0.399045
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2012	0.001493
Current policies	MN	Waste	Biosolids land application	N2O	2012	0.017648
Current policies	MN	Waste	Coal	CH4	2012	0
Current policies	MN	Waste	Coal	CO2	2012	0
Current policies	MN	Waste	Coal	N2O	2012	0
Current policies	MN	Waste	Food waste prevention	CO2	2012	0
Current policies	MN	Waste	Hazardous waste	CO2	2012	0.10949
Current policies	MN	Waste	Hazardous waste	N2O	2012	0.003366
Current policies	MN	Waste	Incinerator ash disposal	CH4	2012	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2012	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2012	0
Current policies	MN	Waste	Industrial landfills	CH4	2012	0.149843
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2012	0.015037
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2012	0.001471
Current policies	MN	Waste	Landfill operations	CH4	2012	0.000021
Current policies	MN	Waste	Landfill operations	CO2	2012	0.014434
Current policies	MN	Waste	Landfill operations	N2O	2012	0.000113
Current policies	MN	Waste	Limestone use	CO2	2012	0

Current policies	MN	Waste	MMSW compost preprocessing	CH4	2012	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2012	0.00009
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2012	0.000001
Current policies	MN	Waste	MMSW composting	CH4	2012	0.001521
Current policies	MN	Waste	MMSW composting	N2O	2012	0.001715
Current policies	MN	Waste	MMSW landfills	CH4	2012	1.708012
Current policies	MN	Waste	Mass burn	CH4	2012	0
Current policies	MN	Waste	Mass burn	CO2	2012	0
Current policies	MN	Waste	Mass burn	N2O	2012	0
Current policies	MN	Waste	Materials recovery facility	CH4	2012	0.000014
Current policies	MN	Waste	Materials recovery facility	CO2	2012	0.009844
Current policies	MN	Waste	Materials recovery facility	N2O	2012	0.000077
Current policies	MN	Waste	Medical	CO2	2012	0.00481
Current policies	MN	Waste	Medical	N2O	2012	0.00019
Current policies	MN	Waste	Miscellaneous	CO2	2012	0
Current policies	MN	Waste	Miscellaneous	N2O	2012	0
Current policies	MN	Waste	Natural gas	CH4	2012	0.000009
Current policies	MN	Waste	Natural gas	CO2	2012	0.020034
Current policies	MN	Waste	Natural gas	N2O	2012	0.000102
Current policies	MN	Waste	Oil	CH4	2012	0.000001
Current policies	MN	Waste	Oil	CO2	2012	0.001102
Current policies	MN	Waste	Oil	N2O	2012	0.000003
Current policies	MN	Waste	Propane	CH4	2012	0
Current policies	MN	Waste	Propane	CO2	2012	0
Current policies	MN	Waste	Propane	N2O	2012	0
Current policies	MN	Waste	RDF	CH4	2012	0
Current policies	MN	Waste	RDF	CO2	2012	0
Current policies	MN	Waste	RDF	N2O	2012	0
Current policies	MN	Waste	RDF processing	CH4	2012	0.000003
Current policies	MN	Waste	RDF processing	CO2	2012	0.002179
Current policies	MN	Waste	RDF processing	N2O	2012	0.000017
Current policies	MN	Waste	Rural open burning	CH4	2012	0.007762
Current policies	MN	Waste	Rural open burning	CO2	2012	0.026957
Current policies	MN	Waste	Rural open burning	N2O	2012	0.002135
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2012	-0.778744
Current policies	MN	Waste	Sludge	CH4	2012	0.003964
Current policies	MN	Waste	Sludge	N2O	2012	0.001546
Current policies	MN	Waste	Waste solvent	CO2	2012	0.011793
Current policies	MN	Waste	Wastewater treatment	CH4	2012	0.246562
Current policies	MN	Waste	Wastewater treatment	N2O	2012	0.106467
Current policies	MN	Waste	Wood	CH4	2012	0
Current policies	MN	Waste	Wood	N2O	2012	0
Current policies	MN	Waste	Yard waste composting	CH4	2012	0.02
Current policies	MN	Waste	Yard waste preprocessing	CH4	2012	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2012	0.001395
Current policies	MN	Waste	Yard waste preprocessing	N2O	2012	0.000011
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2012	0.185917
Net-zero pathway	MN	Agriculture	American Bison	CH4	2012	0.0072
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2012	2.138229
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2012	0.127265
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2012	0.030883
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2012	0.000358
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2012	0.000759
Net-zero pathway	MN	Agriculture	Cereals	CH4	2012	0.009164
Net-zero pathway	MN	Agriculture	Cereals	N2O	2012	0.003054
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2012	0

Net-zero pathway	MN	Agriculture	Cropland	N2O	2012	12.966344
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2012	3.155528
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2012	0.166232
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2012	0.148341
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2012	0.063346
Net-zero pathway	MN	Agriculture	Goats	CH4	2012	0.008619
Net-zero pathway	MN	Agriculture	Goats	N2O	2012	0.000265
Net-zero pathway	MN	Agriculture	Grassland	N2O	2012	1.705199
Net-zero pathway	MN	Agriculture	Horses	CH4	2012	0.035544
Net-zero pathway	MN	Agriculture	Horses	N2O	2012	0.001986
Net-zero pathway	MN	Agriculture	Liming	CO2	2012	0.130351
Net-zero pathway	MN	Agriculture	Litter	CO2	2012	0.098684
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2012	-2.87708
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2012	0.000922
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2012	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2012	0.007926
Net-zero pathway	MN	Agriculture	Oil	CO2	2012	2.186203
Net-zero pathway	MN	Agriculture	Oil	N2O	2012	0.015076
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2012	6.391689
Net-zero pathway	MN	Agriculture	Other	CH4	2012	0.0001
Net-zero pathway	MN	Agriculture	Other	N2O	2012	0.000079
Net-zero pathway	MN	Agriculture	Poultry	CH4	2012	0.047612
Net-zero pathway	MN	Agriculture	Poultry	N2O	2012	0.058389
Net-zero pathway	MN	Agriculture	Pulses	CH4	2012	0.002312
Net-zero pathway	MN	Agriculture	Pulses	N2O	2012	0.000776
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2012	0.07959
Net-zero pathway	MN	Agriculture	Sheep	CH4	2012	0.03959
Net-zero pathway	MN	Agriculture	Sheep	N2O	2012	0.01304
Net-zero pathway	MN	Agriculture	Swine	CH4	2012	2.176856
Net-zero pathway	MN	Agriculture	Swine	N2O	2012	0.168494
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2012	0.000064
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2012	0.000042
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2012	0.472905
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2012	0.418148
Net-zero pathway	MN	Commercial	Biofuel	CO2	2012	0
Net-zero pathway	MN	Commercial	Coal	CH4	2012	0.000034
Net-zero pathway	MN	Commercial	Coal	CO2	2012	0.013043
Net-zero pathway	MN	Commercial	Coal	N2O	2012	0.00006
Net-zero pathway	MN	Commercial	Limestone use	CO2	2012	0.000084
Net-zero pathway	MN	Commercial	Medical use	N2O	2012	0.078763
Net-zero pathway	MN	Commercial	Natural gas	CH4	2012	0.010494
Net-zero pathway	MN	Commercial	Natural gas	CO2	2012	4.674775
Net-zero pathway	MN	Commercial	Natural gas	N2O	2012	0.002502
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2012	0.053588
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2012	12.408446
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2012	0.031611
Net-zero pathway	MN	Commercial	Solvent use	CO2	2012	0.080152
Net-zero pathway	MN	Electricity	Coal	CH4	2012	0.004714
Net-zero pathway	MN	Electricity	Coal	CO2	2012	26.451135
Net-zero pathway	MN	Electricity	Coal	N2O	2012	0.076114
Net-zero pathway	MN	Electricity	Coal storage	CH4	2012	0.045184
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2012	0.005115
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2012	0.005436
Net-zero pathway	MN	Electricity	Natural gas	CH4	2012	0.003001
Net-zero pathway	MN	Electricity	Natural gas	CO2	2012	3.642847
Net-zero pathway	MN	Electricity	Natural gas	N2O	2012	0.047805

Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2012	0.035123
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2012	13.764949
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2012	0.091686
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2012	0.020232
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2012	0.691862
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2012	0.081175
Net-zero pathway	MN	Electricity	Transmission	SF6	2012	0.120947
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2012	0
Net-zero pathway	MN	Industry	Coal	CH4	2012	0.038205
Net-zero pathway	MN	Industry	Coal	CO2	2012	1.876782
Net-zero pathway	MN	Industry	Coal	N2O	2012	0.007782
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2012	0.013091
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2012	0.188386
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2012	0.051934
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2012	0.020094
Net-zero pathway	MN	Industry	Natural gas	CH4	2012	0.004265
Net-zero pathway	MN	Industry	Natural gas	CO2	2012	9.498953
Net-zero pathway	MN	Industry	Natural gas	N2O	2012	0.005083
Net-zero pathway	MN	Industry	Oil refining	CH4	2012	0.034834
Net-zero pathway	MN	Industry	Oil refining	CO2	2012	0.001293
Net-zero pathway	MN	Industry	Other industrial process	CO2	2012	0.009342
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2012	0.014779
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2012	0.017108
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2012	6.963182
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2012	0.030932
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2012	0.119023
Net-zero pathway	MN	Industry	Solvent	HFC	2012	0.032104
Net-zero pathway	MN	Industry	Taconite induration	CO2	2012	2.302145
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2012	0.093749
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2012	-13.715483
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2012	-2.301028
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2012	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2012	-2.465178
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2012	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2012	1.837154
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2012	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2012	0.249341
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2012	0.157053
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2012	0.000053
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2012	0.000046
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2012	3.290385
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2012	-0.186796
Net-zero pathway	MN	LULUCF	Litter	CO2	2012	-0.883405
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2012	-0.756891
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2012	2.136452
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2012	0.000748
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2012	0.021029
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2012	0.000085
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2012	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2012	0.650711
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2012	0.012734
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2012	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2012	0.171764
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2012	-0.825987
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2012	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2012	0.209846

Net-zero pathway	MN	Residential	Air conditioning	HFC125	2012	0.139004
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2012	0.000033
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2012	0.026808
Net-zero pathway	MN	Residential	Coal	CH4	2012	0
Net-zero pathway	MN	Residential	Coal	CO2	2012	0
Net-zero pathway	MN	Residential	Coal	N2O	2012	0
Net-zero pathway	MN	Residential	Food additives	CO2	2012	0.020778
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2012	0.017111
Net-zero pathway	MN	Residential	Natural gas	CH4	2012	0.014547
Net-zero pathway	MN	Residential	Natural gas	CO2	2012	6.480436
Net-zero pathway	MN	Residential	Natural gas	N2O	2012	0.003468
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2012	0.003531
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2012	1.539634
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2012	0.001469
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2012	0.001894
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2012	-0.003656
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2012	0.088778
Net-zero pathway	MN	Residential	Wood	CH4	2012	0.180032
Net-zero pathway	MN	Residential	Wood	N2O	2012	0.028613
Net-zero pathway	MN	Transportation	Aviation	CH4	2012	0.003172
Net-zero pathway	MN	Transportation	Aviation	CO2	2012	3.662473
Net-zero pathway	MN	Transportation	Aviation	N2O	2012	0.034547
Net-zero pathway	MN	Transportation	Bus	CH4	2012	0.002212
Net-zero pathway	MN	Transportation	Bus	CO2	2012	0.383362
Net-zero pathway	MN	Transportation	Bus	N2O	2012	0.00058
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2012	0.006485
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2012	6.802798
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2012	0.011032
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2012	0.028466
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2012	15.35881
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2012	0.23904
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2012	0.061201
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2012	0.27912
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2012	0.303976
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2012	1.749427
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2012	0.000479
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2012	0.21164
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2012	0.00083
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2012	1.113916
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2012	0.776988
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2012	0.004013
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2012	0.011078
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2012	9.037409
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2012	0.117059
Net-zero pathway	MN	Transportation	Railroad	CH4	2012	0.005359
Net-zero pathway	MN	Transportation	Railroad	CO2	2012	1.082428
Net-zero pathway	MN	Transportation	Railroad	N2O	2012	0.020443
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2012	0.000083
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2012	0.399045
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2012	0.001493
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2012	0.017648
Net-zero pathway	MN	Waste	Coal	CH4	2012	0
Net-zero pathway	MN	Waste	Coal	CO2	2012	0
Net-zero pathway	MN	Waste	Coal	N2O	2012	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2012	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2012	0.10949

Net-zero pathway	MN	Waste	Hazardous waste	N2O	2012	0.003366
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2012	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2012	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2012	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2012	0.149843
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2012	0.015037
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2012	0.001471
Net-zero pathway	MN	Waste	Landfill operations	CH4	2012	0.000021
Net-zero pathway	MN	Waste	Landfill operations	CO2	2012	0.014434
Net-zero pathway	MN	Waste	Landfill operations	N2O	2012	0.000113
Net-zero pathway	MN	Waste	Limestone use	CO2	2012	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2012	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2012	0.00009
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2012	0.000001
Net-zero pathway	MN	Waste	MMSW composting	CH4	2012	0.001521
Net-zero pathway	MN	Waste	MMSW composting	N2O	2012	0.001715
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2012	1.708012
Net-zero pathway	MN	Waste	Mass burn	CH4	2012	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2012	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2012	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2012	0.000014
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2012	0.009844
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2012	0.000077
Net-zero pathway	MN	Waste	Medical	CO2	2012	0.00481
Net-zero pathway	MN	Waste	Medical	N2O	2012	0.00019
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2012	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2012	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2012	0.000009
Net-zero pathway	MN	Waste	Natural gas	CO2	2012	0.020034
Net-zero pathway	MN	Waste	Natural gas	N2O	2012	0.000102
Net-zero pathway	MN	Waste	Oil	CH4	2012	0.000001
Net-zero pathway	MN	Waste	Oil	CO2	2012	0.001102
Net-zero pathway	MN	Waste	Oil	N2O	2012	0.000003
Net-zero pathway	MN	Waste	Propane	CH4	2012	0
Net-zero pathway	MN	Waste	Propane	CO2	2012	0
Net-zero pathway	MN	Waste	Propane	N2O	2012	0
Net-zero pathway	MN	Waste	RDF	CH4	2012	0
Net-zero pathway	MN	Waste	RDF	CO2	2012	0
Net-zero pathway	MN	Waste	RDF	N2O	2012	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2012	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2012	0.002179
Net-zero pathway	MN	Waste	RDF processing	N2O	2012	0.000017
Net-zero pathway	MN	Waste	Rural open burning	CH4	2012	0.007762
Net-zero pathway	MN	Waste	Rural open burning	CO2	2012	0.026957
Net-zero pathway	MN	Waste	Rural open burning	N2O	2012	0.002135
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2012	-0.778744
Net-zero pathway	MN	Waste	Sludge	CH4	2012	0.003964
Net-zero pathway	MN	Waste	Sludge	N2O	2012	0.001546
Net-zero pathway	MN	Waste	Waste solvent	CO2	2012	0.011793
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2012	0.246562
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2012	0.106467
Net-zero pathway	MN	Waste	Wood	CH4	2012	0
Net-zero pathway	MN	Waste	Wood	N2O	2012	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2012	0.02
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2012	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2012	0.001395

Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2012	0.000011
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2013	0.185433
Current policies	MN	Agriculture	American Bison	CH4	2013	0.007108
Current policies	MN	Agriculture	Beef Cattle	CH4	2013	2.275383
Current policies	MN	Agriculture	Beef Cattle	N2O	2013	0.142149
Current policies	MN	Agriculture	Belowground Biomass	CO2	2013	0.030802
Current policies	MN	Agriculture	Biofuel	CH4	2013	0.000364
Current policies	MN	Agriculture	Biofuel	N2O	2013	0.000771
Current policies	MN	Agriculture	Cereals	CH4	2013	0.008813
Current policies	MN	Agriculture	Cereals	N2O	2013	0.00293
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2013	0
Current policies	MN	Agriculture	Cropland	N2O	2013	14.977186
Current policies	MN	Agriculture	Dairy Cattle	CH4	2013	3.155004
Current policies	MN	Agriculture	Dairy Cattle	N2O	2013	0.164934
Current policies	MN	Agriculture	Dairy Heifers	N2O	2013	0.146069
Current policies	MN	Agriculture	Dead Wood	CO2	2013	0.063181
Current policies	MN	Agriculture	Goats	CH4	2013	0.008751
Current policies	MN	Agriculture	Goats	N2O	2013	0.000269
Current policies	MN	Agriculture	Grassland	N2O	2013	1.803111
Current policies	MN	Agriculture	Horses	CH4	2013	0.033455
Current policies	MN	Agriculture	Horses	N2O	2013	0.001869
Current policies	MN	Agriculture	Liming	CO2	2013	0.070162
Current policies	MN	Agriculture	Litter	CO2	2013	0.098427
Current policies	MN	Agriculture	Mineral Soil	CO2	2013	-3.876702
Current policies	MN	Agriculture	Mules and Asses	CH4	2013	0.000926
Current policies	MN	Agriculture	Mules and Asses	N2O	2013	0.000034
Current policies	MN	Agriculture	Oil	CH4	2013	0.008587
Current policies	MN	Agriculture	Oil	CO2	2013	2.524493
Current policies	MN	Agriculture	Oil	N2O	2013	0.015466
Current policies	MN	Agriculture	Organic Soil	CO2	2013	6.532913
Current policies	MN	Agriculture	Other	CH4	2013	0.000097
Current policies	MN	Agriculture	Other	N2O	2013	0.00007
Current policies	MN	Agriculture	Poultry	CH4	2013	0.04769
Current policies	MN	Agriculture	Poultry	N2O	2013	0.059332
Current policies	MN	Agriculture	Pulses	CH4	2013	0.002117
Current policies	MN	Agriculture	Pulses	N2O	2013	0.000702
Current policies	MN	Agriculture	Rice Cultivation	CH4	2013	0.037051
Current policies	MN	Agriculture	Sheep	CH4	2013	0.035631
Current policies	MN	Agriculture	Sheep	N2O	2013	0.011736
Current policies	MN	Agriculture	Swine	CH4	2013	2.016556
Current policies	MN	Agriculture	Swine	N2O	2013	0.16659
Current policies	MN	Agriculture	Tubers and Roots	CH4	2013	0.000071
Current policies	MN	Agriculture	Tubers and Roots	N2O	2013	0.000048
Current policies	MN	Agriculture	Urea Fertilization	CO2	2013	0.467372
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2013	0.447799
Current policies	MN	Commercial	Biofuel	CO2	2013	0
Current policies	MN	Commercial	Coal	CH4	2013	0.000043
Current policies	MN	Commercial	Coal	CO2	2013	0.016733
Current policies	MN	Commercial	Coal	N2O	2013	0.000077
Current policies	MN	Commercial	Limestone use	CO2	2013	0.00012
Current policies	MN	Commercial	Medical use	N2O	2013	0.078762
Current policies	MN	Commercial	Natural gas	CH4	2013	0.013645
Current policies	MN	Commercial	Natural gas	CO2	2013	6.078607
Current policies	MN	Commercial	Natural gas	N2O	2013	0.003253
Current policies	MN	Commercial	Refined Liquids	CH4	2013	0.063867
Current policies	MN	Commercial	Refined Liquids	CO2	2013	14.921946

Current policies	MN	Commercial	Refined Liquids	N2O	2013	0.037864
Current policies	MN	Commercial	Solvent use	CO2	2013	0.07212
Current policies	MN	Electricity	Coal	CH4	2013	0.004883
Current policies	MN	Electricity	Coal	CO2	2013	27.371841
Current policies	MN	Electricity	Coal	N2O	2013	0.077524
Current policies	MN	Electricity	Coal storage	CH4	2013	0.04562
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2013	0.005097
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2013	0.005436
Current policies	MN	Electricity	Natural gas	CH4	2013	0.002882
Current policies	MN	Electricity	Natural gas	CO2	2013	3.182511
Current policies	MN	Electricity	Natural gas	N2O	2013	0.042084
Current policies	MN	Electricity	Net electricity imports	CH4	2013	0.037338
Current policies	MN	Electricity	Net electricity imports	CO2	2013	15.165389
Current policies	MN	Electricity	Net electricity imports	N2O	2013	0.095353
Current policies	MN	Electricity	Refined Liquids	CH4	2013	0.018173
Current policies	MN	Electricity	Refined Liquids	CO2	2013	0.71334
Current policies	MN	Electricity	Refined Liquids	N2O	2013	0.077022
Current policies	MN	Electricity	Transmission	SF6	2013	0.074223
Current policies	MN	Industry	Ammonia manufacture	CO2	2013	0
Current policies	MN	Industry	Coal	CH4	2013	0.034009
Current policies	MN	Industry	Coal	CO2	2013	1.858621
Current policies	MN	Industry	Coal	N2O	2013	0.007773
Current policies	MN	Industry	Industrial solvent release	CO2	2013	0.013682
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2013	0.171289
Current policies	MN	Industry	Insulating foam manufacture	HFC	2013	0.051452
Current policies	MN	Industry	Magnesium casting	SF6	2013	0.020594
Current policies	MN	Industry	Natural gas	CH4	2013	0.004301
Current policies	MN	Industry	Natural gas	CO2	2013	9.579969
Current policies	MN	Industry	Natural gas	N2O	2013	0.005127
Current policies	MN	Industry	Oil refining	CH4	2013	0.035601
Current policies	MN	Industry	Oil refining	CO2	2013	0.001274
Current policies	MN	Industry	Other industrial process	CO2	2013	0.009485
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2013	0.01619
Current policies	MN	Industry	Refined Liquids	CH4	2013	0.017102
Current policies	MN	Industry	Refined Liquids	CO2	2013	7.373207
Current policies	MN	Industry	Refined Liquids	N2O	2013	0.031719
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2013	0.117559
Current policies	MN	Industry	Solvent	HFC	2013	0.032103
Current policies	MN	Industry	Taconite induration	CO2	2013	2.353332
Current policies	MN	Industry	VOC and toxics release	CO2	2013	0.074517
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2013	-13.90636
Current policies	MN	LULUCF	Belowground Biomass	CO2	2013	-2.331756
Current policies	MN	LULUCF	Canals and ditches	CH4	2013	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2013	-2.551566
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2013	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2013	1.953358
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2013	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2013	0.013203
Current policies	MN	LULUCF	Forest Fires	N2O	2013	0.008933
Current policies	MN	LULUCF	Grass Fires	CH4	2013	0
Current policies	MN	LULUCF	Grass Fires	N2O	2013	0
Current policies	MN	LULUCF	Lakes and ponds	CH4	2013	3.290564
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2013	-0.193598
Current policies	MN	LULUCF	Litter	CO2	2013	-0.879569
Current policies	MN	LULUCF	Mineral Soil	CO2	2013	-0.603488
Current policies	MN	LULUCF	Organic Soil	CO2	2013	2.055189

Current policies	MN	LULUCF	Peat harvesting	CH4	2013	0.000672
Current policies	MN	LULUCF	Peat harvesting	CO2	2013	0.019489
Current policies	MN	LULUCF	Peat harvesting	N2O	2013	0.000082
Current policies	MN	LULUCF	Peatland restoration	CO2	2013	0
Current policies	MN	LULUCF	Reservoirs	CH4	2013	0.650808
Current policies	MN	LULUCF	Reservoirs	CO2	2013	0.012851
Current policies	MN	LULUCF	Rivers and streams	CH4	2013	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2013	0.173
Current policies	MN	LULUCF	Urban Trees	CO2	2013	-0.830256
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2013	0.213921
Current policies	MN	Residential	Air conditioning	HFC125	2013	0.155725
Current policies	MN	Residential	Air conditioning	HFC143a	2013	0.000033
Current policies	MN	Residential	Air conditioning	HFC32	2013	0.030033
Current policies	MN	Residential	Coal	CH4	2013	0
Current policies	MN	Residential	Coal	CO2	2013	0
Current policies	MN	Residential	Coal	N2O	2013	0
Current policies	MN	Residential	Food additives	CO2	2013	0.020777
Current policies	MN	Residential	Lawn fertilizer	N2O	2013	0.016396
Current policies	MN	Residential	Natural gas	CH4	2013	0.018722
Current policies	MN	Residential	Natural gas	CO2	2013	8.340692
Current policies	MN	Residential	Natural gas	N2O	2013	0.004463
Current policies	MN	Residential	Refined Liquids	CH4	2013	0.004133
Current policies	MN	Residential	Refined Liquids	CO2	2013	1.799532
Current policies	MN	Residential	Refined Liquids	N2O	2013	0.001725
Current policies	MN	Residential	Refrigeration	HFC134a	2013	0.00192
Current policies	MN	Residential	Sequestration in housing	CO2	2013	-0.081375
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2013	0.088775
Current policies	MN	Residential	Wood	CH4	2013	0.219574
Current policies	MN	Residential	Wood	N2O	2013	0.034898
Current policies	MN	Transportation	Aviation	CH4	2013	0.003316
Current policies	MN	Transportation	Aviation	CO2	2013	3.681582
Current policies	MN	Transportation	Aviation	N2O	2013	0.034693
Current policies	MN	Transportation	Bus	CH4	2013	0.0021
Current policies	MN	Transportation	Bus	CO2	2013	0.368456
Current policies	MN	Transportation	Bus	N2O	2013	0.000573
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2013	0.006951
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2013	6.537858
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2013	0.010267
Current policies	MN	Transportation	Light-duty trucks	CH4	2013	0.029494
Current policies	MN	Transportation	Light-duty trucks	CO2	2013	15.222896
Current policies	MN	Transportation	Light-duty trucks	N2O	2013	0.215153
Current policies	MN	Transportation	Military and other off-highway	CH4	2013	0.058162
Current policies	MN	Transportation	Military and other off-highway	CO2	2013	0.258751
Current policies	MN	Transportation	Military and other off-highway	N2O	2013	0.28887
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2013	1.720565
Current policies	MN	Transportation	Motorcycle	CH4	2013	0.000514
Current policies	MN	Transportation	Motorcycle	CO2	2013	0.213305
Current policies	MN	Transportation	Motorcycle	N2O	2013	0.000827
Current policies	MN	Transportation	Natural gas transmission	CH4	2013	1.10815
Current policies	MN	Transportation	Natural gas transmission	CO2	2013	0.707217
Current policies	MN	Transportation	Natural gas transmission	N2O	2013	0.003668
Current policies	MN	Transportation	Passenger cars	CH4	2013	0.012111
Current policies	MN	Transportation	Passenger cars	CO2	2013	9.041405
Current policies	MN	Transportation	Passenger cars	N2O	2013	0.107223
Current policies	MN	Transportation	Railroad	CH4	2013	0.005341
Current policies	MN	Transportation	Railroad	CO2	2013	1.085295

Current policies	MN	Transportation	Railroad	N2O	2013	0.020373
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2013	0.0001
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2013	0.436165
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2013	0.001903
Current policies	MN	Waste	Biosolids land application	N2O	2013	0.01512
Current policies	MN	Waste	Coal	CH4	2013	0
Current policies	MN	Waste	Coal	CO2	2013	0
Current policies	MN	Waste	Coal	N2O	2013	0
Current policies	MN	Waste	Food waste prevention	CO2	2013	0
Current policies	MN	Waste	Hazardous waste	CO2	2013	0.124998
Current policies	MN	Waste	Hazardous waste	N2O	2013	0.003843
Current policies	MN	Waste	Incinerator ash disposal	CH4	2013	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2013	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2013	0
Current policies	MN	Waste	Industrial landfills	CH4	2013	0.145415
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2013	0.017802
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2013	0.001559
Current policies	MN	Waste	Landfill operations	CH4	2013	0.000024
Current policies	MN	Waste	Landfill operations	CO2	2013	0.016106
Current policies	MN	Waste	Landfill operations	N2O	2013	0.000126
Current policies	MN	Waste	Limestone use	CO2	2013	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2013	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2013	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2013	0
Current policies	MN	Waste	MMSW composting	CH4	2013	0
Current policies	MN	Waste	MMSW composting	N2O	2013	0
Current policies	MN	Waste	MMSW landfills	CH4	2013	1.774662
Current policies	MN	Waste	Mass burn	CH4	2013	0
Current policies	MN	Waste	Mass burn	CO2	2013	0
Current policies	MN	Waste	Mass burn	N2O	2013	0
Current policies	MN	Waste	Materials recovery facility	CH4	2013	0.000015
Current policies	MN	Waste	Materials recovery facility	CO2	2013	0.010108
Current policies	MN	Waste	Materials recovery facility	N2O	2013	0.000079
Current policies	MN	Waste	Medical	CO2	2013	0.00453
Current policies	MN	Waste	Medical	N2O	2013	0.000179
Current policies	MN	Waste	Miscellaneous	CO2	2013	0
Current policies	MN	Waste	Miscellaneous	N2O	2013	0
Current policies	MN	Waste	Natural gas	CH4	2013	0.00001
Current policies	MN	Waste	Natural gas	CO2	2013	0.023592
Current policies	MN	Waste	Natural gas	N2O	2013	0.00012
Current policies	MN	Waste	Oil	CH4	2013	0
Current policies	MN	Waste	Oil	CO2	2013	0.002381
Current policies	MN	Waste	Oil	N2O	2013	0.000004
Current policies	MN	Waste	Propane	CH4	2013	0
Current policies	MN	Waste	Propane	CO2	2013	0.000004
Current policies	MN	Waste	Propane	N2O	2013	0
Current policies	MN	Waste	RDF	CH4	2013	0
Current policies	MN	Waste	RDF	CO2	2013	0
Current policies	MN	Waste	RDF	N2O	2013	0
Current policies	MN	Waste	RDF processing	CH4	2013	0.000004
Current policies	MN	Waste	RDF processing	CO2	2013	0.002407
Current policies	MN	Waste	RDF processing	N2O	2013	0.000019
Current policies	MN	Waste	Rural open burning	CH4	2013	0.007425
Current policies	MN	Waste	Rural open burning	CO2	2013	0.025784
Current policies	MN	Waste	Rural open burning	N2O	2013	0.002042
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2013	-0.382734

Current policies	MN	Waste	Sludge	CH4	2013	0.003662
Current policies	MN	Waste	Sludge	N2O	2013	0.001407
Current policies	MN	Waste	Waste solvent	CO2	2013	0.015112
Current policies	MN	Waste	Wastewater treatment	CH4	2013	0.248252
Current policies	MN	Waste	Wastewater treatment	N2O	2013	0.10942
Current policies	MN	Waste	Wood	CH4	2013	0
Current policies	MN	Waste	Wood	N2O	2013	0
Current policies	MN	Waste	Yard waste composting	CH4	2013	0.02
Current policies	MN	Waste	Yard waste preprocessing	CH4	2013	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2013	0.001395
Current policies	MN	Waste	Yard waste preprocessing	N2O	2013	0.000011
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2013	0.185433
Net-zero pathway	MN	Agriculture	American Bison	CH4	2013	0.007108
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2013	2.275383
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2013	0.142149
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2013	0.030802
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2013	0.000364
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2013	0.000771
Net-zero pathway	MN	Agriculture	Cereals	CH4	2013	0.008813
Net-zero pathway	MN	Agriculture	Cereals	N2O	2013	0.00293
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2013	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2013	14.977186
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2013	3.155004
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2013	0.164934
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2013	0.146069
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2013	0.063181
Net-zero pathway	MN	Agriculture	Goats	CH4	2013	0.008751
Net-zero pathway	MN	Agriculture	Goats	N2O	2013	0.000269
Net-zero pathway	MN	Agriculture	Grassland	N2O	2013	1.803111
Net-zero pathway	MN	Agriculture	Horses	CH4	2013	0.033455
Net-zero pathway	MN	Agriculture	Horses	N2O	2013	0.001869
Net-zero pathway	MN	Agriculture	Liming	CO2	2013	0.070162
Net-zero pathway	MN	Agriculture	Litter	CO2	2013	0.098427
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2013	-3.876702
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2013	0.000926
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2013	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2013	0.008587
Net-zero pathway	MN	Agriculture	Oil	CO2	2013	2.524493
Net-zero pathway	MN	Agriculture	Oil	N2O	2013	0.015466
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2013	6.532913
Net-zero pathway	MN	Agriculture	Other	CH4	2013	0.000097
Net-zero pathway	MN	Agriculture	Other	N2O	2013	0.00007
Net-zero pathway	MN	Agriculture	Poultry	CH4	2013	0.04769
Net-zero pathway	MN	Agriculture	Poultry	N2O	2013	0.059332
Net-zero pathway	MN	Agriculture	Pulses	CH4	2013	0.002117
Net-zero pathway	MN	Agriculture	Pulses	N2O	2013	0.000702
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2013	0.037051
Net-zero pathway	MN	Agriculture	Sheep	CH4	2013	0.035631
Net-zero pathway	MN	Agriculture	Sheep	N2O	2013	0.011736
Net-zero pathway	MN	Agriculture	Swine	CH4	2013	2.016556
Net-zero pathway	MN	Agriculture	Swine	N2O	2013	0.16659
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2013	0.000071
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2013	0.000048
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2013	0.467372
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2013	0.447799
Net-zero pathway	MN	Commercial	Biofuel	CO2	2013	0

Net-zero pathway	MN	Commercial	Coal	CH4	2013	0.000043
Net-zero pathway	MN	Commercial	Coal	CO2	2013	0.016733
Net-zero pathway	MN	Commercial	Coal	N2O	2013	0.000077
Net-zero pathway	MN	Commercial	Limestone use	CO2	2013	0.00012
Net-zero pathway	MN	Commercial	Medical use	N2O	2013	0.078762
Net-zero pathway	MN	Commercial	Natural gas	CH4	2013	0.013645
Net-zero pathway	MN	Commercial	Natural gas	CO2	2013	6.078607
Net-zero pathway	MN	Commercial	Natural gas	N2O	2013	0.003253
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2013	0.063867
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2013	14.921946
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2013	0.037864
Net-zero pathway	MN	Commercial	Solvent use	CO2	2013	0.07212
Net-zero pathway	MN	Electricity	Coal	CH4	2013	0.004883
Net-zero pathway	MN	Electricity	Coal	CO2	2013	27.371841
Net-zero pathway	MN	Electricity	Coal	N2O	2013	0.077524
Net-zero pathway	MN	Electricity	Coal storage	CH4	2013	0.04562
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2013	0.005097
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2013	0.005436
Net-zero pathway	MN	Electricity	Natural gas	CH4	2013	0.002882
Net-zero pathway	MN	Electricity	Natural gas	CO2	2013	3.182511
Net-zero pathway	MN	Electricity	Natural gas	N2O	2013	0.042084
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2013	0.037338
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2013	15.165389
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2013	0.095353
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2013	0.018173
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2013	0.71334
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2013	0.077022
Net-zero pathway	MN	Electricity	Transmission	SF6	2013	0.074223
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2013	0
Net-zero pathway	MN	Industry	Coal	CH4	2013	0.034009
Net-zero pathway	MN	Industry	Coal	CO2	2013	1.858621
Net-zero pathway	MN	Industry	Coal	N2O	2013	0.007773
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2013	0.013682
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2013	0.171289
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2013	0.051452
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2013	0.020594
Net-zero pathway	MN	Industry	Natural gas	CH4	2013	0.004301
Net-zero pathway	MN	Industry	Natural gas	CO2	2013	9.579969
Net-zero pathway	MN	Industry	Natural gas	N2O	2013	0.005127
Net-zero pathway	MN	Industry	Oil refining	CH4	2013	0.035601
Net-zero pathway	MN	Industry	Oil refining	CO2	2013	0.001274
Net-zero pathway	MN	Industry	Other industrial process	CO2	2013	0.009485
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2013	0.01619
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2013	0.017102
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2013	7.373207
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2013	0.031719
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2013	0.117559
Net-zero pathway	MN	Industry	Solvent	HFC	2013	0.032103
Net-zero pathway	MN	Industry	Taconite induration	CO2	2013	2.353332
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2013	0.074517
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2013	-13.90636
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2013	-2.331756
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2013	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2013	-2.551566
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2013	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2013	1.953358

Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2013	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2013	0.013203
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2013	0.008933
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2013	0
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2013	0
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2013	3.290564
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2013	-0.193598
Net-zero pathway	MN	LULUCF	Litter	CO2	2013	-0.879569
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2013	-0.603488
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2013	2.055189
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2013	0.000672
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2013	0.019489
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2013	0.000082
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2013	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2013	0.650808
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2013	0.012851
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2013	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2013	0.173
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2013	-0.830256
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2013	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2013	0.213921
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2013	0.155725
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2013	0.000033
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2013	0.030033
Net-zero pathway	MN	Residential	Coal	CH4	2013	0
Net-zero pathway	MN	Residential	Coal	CO2	2013	0
Net-zero pathway	MN	Residential	Coal	N2O	2013	0
Net-zero pathway	MN	Residential	Food additives	CO2	2013	0.020777
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2013	0.016396
Net-zero pathway	MN	Residential	Natural gas	CH4	2013	0.018722
Net-zero pathway	MN	Residential	Natural gas	CO2	2013	8.340692
Net-zero pathway	MN	Residential	Natural gas	N2O	2013	0.004463
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2013	0.004133
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2013	1.799532
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2013	0.001725
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2013	0.00192
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2013	-0.081375
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2013	0.088775
Net-zero pathway	MN	Residential	Wood	CH4	2013	0.219574
Net-zero pathway	MN	Residential	Wood	N2O	2013	0.034898
Net-zero pathway	MN	Transportation	Aviation	CH4	2013	0.003316
Net-zero pathway	MN	Transportation	Aviation	CO2	2013	3.681582
Net-zero pathway	MN	Transportation	Aviation	N2O	2013	0.034693
Net-zero pathway	MN	Transportation	Bus	CH4	2013	0.0021
Net-zero pathway	MN	Transportation	Bus	CO2	2013	0.368456
Net-zero pathway	MN	Transportation	Bus	N2O	2013	0.000573
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2013	0.006951
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2013	6.537858
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2013	0.010267
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2013	0.029494
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2013	15.222896
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2013	0.215153
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2013	0.058162
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2013	0.258751
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2013	0.28887
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2013	1.720565

Net-zero pathway	MN	Transportation	Motorcycle	CH4	2013	0.000514
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2013	0.213305
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2013	0.000827
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2013	1.10815
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2013	0.707217
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2013	0.003668
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2013	0.012111
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2013	9.041405
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2013	0.107223
Net-zero pathway	MN	Transportation	Railroad	CH4	2013	0.005341
Net-zero pathway	MN	Transportation	Railroad	CO2	2013	1.085295
Net-zero pathway	MN	Transportation	Railroad	N2O	2013	0.020373
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2013	0.0001
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2013	0.436165
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2013	0.001903
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2013	0.01512
Net-zero pathway	MN	Waste	Coal	CH4	2013	0
Net-zero pathway	MN	Waste	Coal	CO2	2013	0
Net-zero pathway	MN	Waste	Coal	N2O	2013	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2013	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2013	0.124998
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2013	0.003843
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2013	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2013	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2013	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2013	0.145415
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2013	0.017802
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2013	0.001559
Net-zero pathway	MN	Waste	Landfill operations	CH4	2013	0.000024
Net-zero pathway	MN	Waste	Landfill operations	CO2	2013	0.016106
Net-zero pathway	MN	Waste	Landfill operations	N2O	2013	0.000126
Net-zero pathway	MN	Waste	Limestone use	CO2	2013	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2013	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2013	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2013	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2013	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2013	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2013	1.774662
Net-zero pathway	MN	Waste	Mass burn	CH4	2013	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2013	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2013	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2013	0.000015
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2013	0.010108
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2013	0.000079
Net-zero pathway	MN	Waste	Medical	CO2	2013	0.00453
Net-zero pathway	MN	Waste	Medical	N2O	2013	0.000179
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2013	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2013	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2013	0.00001
Net-zero pathway	MN	Waste	Natural gas	CO2	2013	0.023592
Net-zero pathway	MN	Waste	Natural gas	N2O	2013	0.00012
Net-zero pathway	MN	Waste	Oil	CH4	2013	0
Net-zero pathway	MN	Waste	Oil	CO2	2013	0.002381
Net-zero pathway	MN	Waste	Oil	N2O	2013	0.000004
Net-zero pathway	MN	Waste	Propane	CH4	2013	0
Net-zero pathway	MN	Waste	Propane	CO2	2013	0.000004

Net-zero pathway	MN	Waste	Propane	N2O	2013	0
Net-zero pathway	MN	Waste	RDF	CH4	2013	0
Net-zero pathway	MN	Waste	RDF	CO2	2013	0
Net-zero pathway	MN	Waste	RDF	N2O	2013	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2013	0.000004
Net-zero pathway	MN	Waste	RDF processing	CO2	2013	0.002407
Net-zero pathway	MN	Waste	RDF processing	N2O	2013	0.000019
Net-zero pathway	MN	Waste	Rural open burning	CH4	2013	0.007425
Net-zero pathway	MN	Waste	Rural open burning	CO2	2013	0.025784
Net-zero pathway	MN	Waste	Rural open burning	N2O	2013	0.002042
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2013	-0.382734
Net-zero pathway	MN	Waste	Sludge	CH4	2013	0.003662
Net-zero pathway	MN	Waste	Sludge	N2O	2013	0.001407
Net-zero pathway	MN	Waste	Waste solvent	CO2	2013	0.015112
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2013	0.248252
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2013	0.10942
Net-zero pathway	MN	Waste	Wood	CH4	2013	0
Net-zero pathway	MN	Waste	Wood	N2O	2013	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2013	0.02
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2013	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2013	0.001395
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2013	0.000011
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2014	0.184949
Current policies	MN	Agriculture	American Bison	CH4	2014	0.007015
Current policies	MN	Agriculture	Beef Cattle	CH4	2014	2.185295
Current policies	MN	Agriculture	Beef Cattle	N2O	2014	0.146267
Current policies	MN	Agriculture	Belowground Biomass	CO2	2014	0.030722
Current policies	MN	Agriculture	Biofuel	CH4	2014	0.000461
Current policies	MN	Agriculture	Biofuel	N2O	2014	0.000976
Current policies	MN	Agriculture	Cereals	CH4	2014	0.008217
Current policies	MN	Agriculture	Cereals	N2O	2014	0.002746
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2014	0
Current policies	MN	Agriculture	Cropland	N2O	2014	16.071765
Current policies	MN	Agriculture	Dairy Cattle	CH4	2014	3.151251
Current policies	MN	Agriculture	Dairy Cattle	N2O	2014	0.161144
Current policies	MN	Agriculture	Dairy Heifers	N2O	2014	0.147414
Current policies	MN	Agriculture	Dead Wood	CO2	2014	0.063016
Current policies	MN	Agriculture	Goats	CH4	2014	0.008884
Current policies	MN	Agriculture	Goats	N2O	2014	0.000273
Current policies	MN	Agriculture	Grassland	N2O	2014	1.901636
Current policies	MN	Agriculture	Horses	CH4	2014	0.031366
Current policies	MN	Agriculture	Horses	N2O	2014	0.001753
Current policies	MN	Agriculture	Liming	CO2	2014	0.019066
Current policies	MN	Agriculture	Litter	CO2	2014	0.09817
Current policies	MN	Agriculture	Mineral Soil	CO2	2014	-1.362533
Current policies	MN	Agriculture	Mules and Asses	CH4	2014	0.00093
Current policies	MN	Agriculture	Mules and Asses	N2O	2014	0.000034
Current policies	MN	Agriculture	Oil	CH4	2014	0.009088
Current policies	MN	Agriculture	Oil	CO2	2014	2.717865
Current policies	MN	Agriculture	Oil	N2O	2014	0.016139
Current policies	MN	Agriculture	Organic Soil	CO2	2014	6.671477
Current policies	MN	Agriculture	Other	CH4	2014	0.000086
Current policies	MN	Agriculture	Other	N2O	2014	0.000067
Current policies	MN	Agriculture	Poultry	CH4	2014	0.048723
Current policies	MN	Agriculture	Poultry	N2O	2014	0.061004
Current policies	MN	Agriculture	Pulses	CH4	2014	0.002046

Current policies	MN	Agriculture	Pulses	N2O	2014	0.000684
Current policies	MN	Agriculture	Rice Cultivation	CH4	2014	0
Current policies	MN	Agriculture	Sheep	CH4	2014	0.035631
Current policies	MN	Agriculture	Sheep	N2O	2014	0.011736
Current policies	MN	Agriculture	Swine	CH4	2014	1.954578
Current policies	MN	Agriculture	Swine	N2O	2014	0.16568
Current policies	MN	Agriculture	Tubers and Roots	CH4	2014	0.000062
Current policies	MN	Agriculture	Tubers and Roots	N2O	2014	0.000042
Current policies	MN	Agriculture	Urea Fertilization	CO2	2014	0.484515
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2014	0.600295
Current policies	MN	Commercial	Biofuel	CO2	2014	0
Current policies	MN	Commercial	Coal	CH4	2014	0.000087
Current policies	MN	Commercial	Coal	CO2	2014	0.033668
Current policies	MN	Commercial	Coal	N2O	2014	0.000155
Current policies	MN	Commercial	Limestone use	CO2	2014	0.000287
Current policies	MN	Commercial	Medical use	N2O	2014	0.0787
Current policies	MN	Commercial	Natural gas	CH4	2014	0.01423
Current policies	MN	Commercial	Natural gas	CO2	2014	6.339226
Current policies	MN	Commercial	Natural gas	N2O	2014	0.003393
Current policies	MN	Commercial	Refined Liquids	CH4	2014	0.082347
Current policies	MN	Commercial	Refined Liquids	CO2	2014	15.144851
Current policies	MN	Commercial	Refined Liquids	N2O	2014	0.041166
Current policies	MN	Commercial	Solvent use	CO2	2014	0.064088
Current policies	MN	Electricity	Coal	CH4	2014	0.005759
Current policies	MN	Electricity	Coal	CO2	2014	32.369114
Current policies	MN	Electricity	Coal	N2O	2014	0.084294
Current policies	MN	Electricity	Coal storage	CH4	2014	0.057857
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2014	0.005224
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2014	0.006453
Current policies	MN	Electricity	Natural gas	CH4	2014	0.002783
Current policies	MN	Electricity	Natural gas	CO2	2014	2.164953
Current policies	MN	Electricity	Natural gas	N2O	2014	0.028418
Current policies	MN	Electricity	Net electricity imports	CH4	2014	0.02751
Current policies	MN	Electricity	Net electricity imports	CO2	2014	10.545976
Current policies	MN	Electricity	Net electricity imports	N2O	2014	0.05771
Current policies	MN	Electricity	Refined Liquids	CH4	2014	0.019199
Current policies	MN	Electricity	Refined Liquids	CO2	2014	0.748265
Current policies	MN	Electricity	Refined Liquids	N2O	2014	0.080391
Current policies	MN	Electricity	Transmission	SF6	2014	0.059719
Current policies	MN	Industry	Ammonia manufacture	CO2	2014	0
Current policies	MN	Industry	Coal	CH4	2014	0.028184
Current policies	MN	Industry	Coal	CO2	2014	1.700074
Current policies	MN	Industry	Coal	N2O	2014	0.007117
Current policies	MN	Industry	Industrial solvent release	CO2	2014	0.014272
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2014	0.1677
Current policies	MN	Industry	Insulating foam manufacture	HFC	2014	0.057475
Current policies	MN	Industry	Magnesium casting	SF6	2014	0.028842
Current policies	MN	Industry	Natural gas	CH4	2014	0.004689
Current policies	MN	Industry	Natural gas	CO2	2014	10.444623
Current policies	MN	Industry	Natural gas	N2O	2014	0.00559
Current policies	MN	Industry	Oil refining	CH4	2014	0.034625
Current policies	MN	Industry	Oil refining	CO2	2014	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2014	0.009627
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2014	0.014511
Current policies	MN	Industry	Refined Liquids	CH4	2014	0.016725
Current policies	MN	Industry	Refined Liquids	CO2	2014	7.209277

Current policies	MN	Industry	Refined Liquids	N2O	2014	0.029696
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2014	0.133535
Current policies	MN	Industry	Solvent	HFC	2014	0.032092
Current policies	MN	Industry	Taconite induration	CO2	2014	2.490029
Current policies	MN	Industry	VOC and toxics release	CO2	2014	0.054917
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2014	-14.037591
Current policies	MN	LULUCF	Belowground Biomass	CO2	2014	-2.354373
Current policies	MN	LULUCF	Canals and ditches	CH4	2014	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2014	-2.653531
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2014	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2014	2.027593
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2014	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2014	0.007853
Current policies	MN	LULUCF	Forest Fires	N2O	2014	0.005178
Current policies	MN	LULUCF	Grass Fires	CH4	2014	0
Current policies	MN	LULUCF	Grass Fires	N2O	2014	0
Current policies	MN	LULUCF	Lakes and ponds	CH4	2014	3.290927
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2014	-0.196105
Current policies	MN	LULUCF	Litter	CO2	2014	-0.876661
Current policies	MN	LULUCF	Mineral Soil	CO2	2014	-0.691241
Current policies	MN	LULUCF	Organic Soil	CO2	2014	2.083408
Current policies	MN	LULUCF	Peat harvesting	CH4	2014	0.000542
Current policies	MN	LULUCF	Peat harvesting	CO2	2014	0.018134
Current policies	MN	LULUCF	Peat harvesting	N2O	2014	0.000065
Current policies	MN	LULUCF	Peatland restoration	CO2	2014	0
Current policies	MN	LULUCF	Reservoirs	CH4	2014	0.650799
Current policies	MN	LULUCF	Reservoirs	CO2	2014	0.012813
Current policies	MN	LULUCF	Rivers and streams	CH4	2014	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2014	0.17745
Current policies	MN	LULUCF	Urban Trees	CO2	2014	-0.845801
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2014	0.219858
Current policies	MN	Residential	Air conditioning	HFC125	2014	0.171493
Current policies	MN	Residential	Air conditioning	HFC143a	2014	0.000031
Current policies	MN	Residential	Air conditioning	HFC32	2014	0.033074
Current policies	MN	Residential	Coal	CH4	2014	0
Current policies	MN	Residential	Coal	CO2	2014	0
Current policies	MN	Residential	Coal	N2O	2014	0
Current policies	MN	Residential	Food additives	CO2	2014	0.02077
Current policies	MN	Residential	Lawn fertilizer	N2O	2014	0.016391
Current policies	MN	Residential	Natural gas	CH4	2014	0.019822
Current policies	MN	Residential	Natural gas	CO2	2014	8.832115
Current policies	MN	Residential	Natural gas	N2O	2014	0.004726
Current policies	MN	Residential	Refined Liquids	CH4	2014	0.004506
Current policies	MN	Residential	Refined Liquids	CO2	2014	2.019998
Current policies	MN	Residential	Refined Liquids	N2O	2014	0.001758
Current policies	MN	Residential	Refrigeration	HFC134a	2014	0.001959
Current policies	MN	Residential	Sequestration in housing	CO2	2014	-0.008967
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2014	0.090631
Current policies	MN	Residential	Wood	CH4	2014	0.259116
Current policies	MN	Residential	Wood	N2O	2014	0.041182
Current policies	MN	Transportation	Aviation	CH4	2014	0.003236
Current policies	MN	Transportation	Aviation	CO2	2014	3.840434
Current policies	MN	Transportation	Aviation	N2O	2014	0.03625
Current policies	MN	Transportation	Bus	CH4	2014	0.002078
Current policies	MN	Transportation	Bus	CO2	2014	0.369328
Current policies	MN	Transportation	Bus	N2O	2014	0.00059

Current policies	MN	Transportation	Heavy-duty trucks	CH4	2014	0.008266
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2014	6.495771
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2014	0.008927
Current policies	MN	Transportation	Light-duty trucks	CH4	2014	0.0295
Current policies	MN	Transportation	Light-duty trucks	CO2	2014	15.209068
Current policies	MN	Transportation	Light-duty trucks	N2O	2014	0.20311
Current policies	MN	Transportation	Military and other off-highway	CH4	2014	0.05981
Current policies	MN	Transportation	Military and other off-highway	CO2	2014	0.264659
Current policies	MN	Transportation	Military and other off-highway	N2O	2014	0.297081
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2014	1.618711
Current policies	MN	Transportation	Motorcycle	CH4	2014	0.000518
Current policies	MN	Transportation	Motorcycle	CO2	2014	0.214719
Current policies	MN	Transportation	Motorcycle	N2O	2014	0.000829
Current policies	MN	Transportation	Natural gas transmission	CH4	2014	1.110584
Current policies	MN	Transportation	Natural gas transmission	CO2	2014	0.791815
Current policies	MN	Transportation	Natural gas transmission	N2O	2014	0.004019
Current policies	MN	Transportation	Passenger cars	CH4	2014	0.011884
Current policies	MN	Transportation	Passenger cars	CO2	2014	8.737802
Current policies	MN	Transportation	Passenger cars	N2O	2014	0.100989
Current policies	MN	Transportation	Railroad	CH4	2014	0.00543
Current policies	MN	Transportation	Railroad	CO2	2014	1.078281
Current policies	MN	Transportation	Railroad	N2O	2014	0.020712
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2014	0.000083
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2014	0.447689
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2014	0.00168
Current policies	MN	Waste	Biosolids land application	N2O	2014	0.015256
Current policies	MN	Waste	Coal	CH4	2014	0
Current policies	MN	Waste	Coal	CO2	2014	0
Current policies	MN	Waste	Coal	N2O	2014	0
Current policies	MN	Waste	Food waste prevention	CO2	2014	0
Current policies	MN	Waste	Hazardous waste	CO2	2014	0.13466
Current policies	MN	Waste	Hazardous waste	N2O	2014	0.00414
Current policies	MN	Waste	Incinerator ash disposal	CH4	2014	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2014	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2014	0
Current policies	MN	Waste	Industrial landfills	CH4	2014	0.141117
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2014	0.015405
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2014	0.00154
Current policies	MN	Waste	Landfill operations	CH4	2014	0.000026
Current policies	MN	Waste	Landfill operations	CO2	2014	0.017254
Current policies	MN	Waste	Landfill operations	N2O	2014	0.000138
Current policies	MN	Waste	Limestone use	CO2	2014	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2014	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2014	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2014	0
Current policies	MN	Waste	MMSW composting	CH4	2014	0
Current policies	MN	Waste	MMSW composting	N2O	2014	0
Current policies	MN	Waste	MMSW landfills	CH4	2014	1.683818
Current policies	MN	Waste	Mass burn	CH4	2014	0
Current policies	MN	Waste	Mass burn	CO2	2014	0
Current policies	MN	Waste	Mass burn	N2O	2014	0
Current policies	MN	Waste	Materials recovery facility	CH4	2014	0.000015
Current policies	MN	Waste	Materials recovery facility	CO2	2014	0.009842
Current policies	MN	Waste	Materials recovery facility	N2O	2014	0.000079
Current policies	MN	Waste	Medical	CO2	2014	0.004394
Current policies	MN	Waste	Medical	N2O	2014	0.000173

Current policies	MN	Waste	Miscellaneous	CO2	2014	0
Current policies	MN	Waste	Miscellaneous	N2O	2014	0
Current policies	MN	Waste	Natural gas	CH4	2014	0.00001
Current policies	MN	Waste	Natural gas	CO2	2014	0.022718
Current policies	MN	Waste	Natural gas	N2O	2014	0.000115
Current policies	MN	Waste	Oil	CH4	2014	0
Current policies	MN	Waste	Oil	CO2	2014	0.000976
Current policies	MN	Waste	Oil	N2O	2014	0.000001
Current policies	MN	Waste	Propane	CH4	2014	0
Current policies	MN	Waste	Propane	CO2	2014	0.000104
Current policies	MN	Waste	Propane	N2O	2014	0.000002
Current policies	MN	Waste	RDF	CH4	2014	0
Current policies	MN	Waste	RDF	CO2	2014	0
Current policies	MN	Waste	RDF	N2O	2014	0
Current policies	MN	Waste	RDF processing	CH4	2014	0.000003
Current policies	MN	Waste	RDF processing	CO2	2014	0.002307
Current policies	MN	Waste	RDF processing	N2O	2014	0.000018
Current policies	MN	Waste	Rural open burning	CH4	2014	0.007296
Current policies	MN	Waste	Rural open burning	CO2	2014	0.025336
Current policies	MN	Waste	Rural open burning	N2O	2014	0.002007
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2014	-0.414092
Current policies	MN	Waste	Sludge	CH4	2014	0.003793
Current policies	MN	Waste	Sludge	N2O	2014	0.001472
Current policies	MN	Waste	Waste solvent	CO2	2014	0.019861
Current policies	MN	Waste	Wastewater treatment	CH4	2014	0.249976
Current policies	MN	Waste	Wastewater treatment	N2O	2014	0.109891
Current policies	MN	Waste	Wood	CH4	2014	0
Current policies	MN	Waste	Wood	N2O	2014	0
Current policies	MN	Waste	Yard waste composting	CH4	2014	0.02
Current policies	MN	Waste	Yard waste preprocessing	CH4	2014	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2014	0.001359
Current policies	MN	Waste	Yard waste preprocessing	N2O	2014	0.000011
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2014	0.184949
Net-zero pathway	MN	Agriculture	American Bison	CH4	2014	0.007015
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2014	2.185295
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2014	0.146267
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2014	0.030722
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2014	0.000461
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2014	0.000976
Net-zero pathway	MN	Agriculture	Cereals	CH4	2014	0.008217
Net-zero pathway	MN	Agriculture	Cereals	N2O	2014	0.002746
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2014	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2014	16.071765
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2014	3.151251
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2014	0.161144
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2014	0.147414
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2014	0.063016
Net-zero pathway	MN	Agriculture	Goats	CH4	2014	0.008884
Net-zero pathway	MN	Agriculture	Goats	N2O	2014	0.000273
Net-zero pathway	MN	Agriculture	Grassland	N2O	2014	1.901636
Net-zero pathway	MN	Agriculture	Horses	CH4	2014	0.031366
Net-zero pathway	MN	Agriculture	Horses	N2O	2014	0.001753
Net-zero pathway	MN	Agriculture	Liming	CO2	2014	0.019066
Net-zero pathway	MN	Agriculture	Litter	CO2	2014	0.09817
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2014	-1.362533
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2014	0.00093

Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2014	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2014	0.009088
Net-zero pathway	MN	Agriculture	Oil	CO2	2014	2.717865
Net-zero pathway	MN	Agriculture	Oil	N2O	2014	0.016139
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2014	6.671477
Net-zero pathway	MN	Agriculture	Other	CH4	2014	0.000086
Net-zero pathway	MN	Agriculture	Other	N2O	2014	0.000067
Net-zero pathway	MN	Agriculture	Poultry	CH4	2014	0.048723
Net-zero pathway	MN	Agriculture	Poultry	N2O	2014	0.061004
Net-zero pathway	MN	Agriculture	Pulses	CH4	2014	0.002046
Net-zero pathway	MN	Agriculture	Pulses	N2O	2014	0.000684
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2014	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2014	0.035631
Net-zero pathway	MN	Agriculture	Sheep	N2O	2014	0.011736
Net-zero pathway	MN	Agriculture	Swine	CH4	2014	1.954578
Net-zero pathway	MN	Agriculture	Swine	N2O	2014	0.16568
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2014	0.000062
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2014	0.000042
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2014	0.484515
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2014	0.600295
Net-zero pathway	MN	Commercial	Biofuel	CO2	2014	0
Net-zero pathway	MN	Commercial	Coal	CH4	2014	0.000087
Net-zero pathway	MN	Commercial	Coal	CO2	2014	0.033668
Net-zero pathway	MN	Commercial	Coal	N2O	2014	0.000155
Net-zero pathway	MN	Commercial	Limestone use	CO2	2014	0.000287
Net-zero pathway	MN	Commercial	Medical use	N2O	2014	0.0787
Net-zero pathway	MN	Commercial	Natural gas	CH4	2014	0.01423
Net-zero pathway	MN	Commercial	Natural gas	CO2	2014	6.339226
Net-zero pathway	MN	Commercial	Natural gas	N2O	2014	0.003393
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2014	0.082347
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2014	15.144851
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2014	0.041166
Net-zero pathway	MN	Commercial	Solvent use	CO2	2014	0.064088
Net-zero pathway	MN	Electricity	Coal	CH4	2014	0.005759
Net-zero pathway	MN	Electricity	Coal	CO2	2014	32.369114
Net-zero pathway	MN	Electricity	Coal	N2O	2014	0.084294
Net-zero pathway	MN	Electricity	Coal storage	CH4	2014	0.057857
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2014	0.005224
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2014	0.006453
Net-zero pathway	MN	Electricity	Natural gas	CH4	2014	0.002783
Net-zero pathway	MN	Electricity	Natural gas	CO2	2014	2.164953
Net-zero pathway	MN	Electricity	Natural gas	N2O	2014	0.028418
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2014	0.02751
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2014	10.545976
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2014	0.05771
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2014	0.019199
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2014	0.748265
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2014	0.080391
Net-zero pathway	MN	Electricity	Transmission	SF6	2014	0.059719
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2014	0
Net-zero pathway	MN	Industry	Coal	CH4	2014	0.028184
Net-zero pathway	MN	Industry	Coal	CO2	2014	1.700074
Net-zero pathway	MN	Industry	Coal	N2O	2014	0.007117
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2014	0.014272
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2014	0.1677
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2014	0.057475

Net-zero pathway	MN	Industry	Magnesium casting	SF6	2014	0.028842
Net-zero pathway	MN	Industry	Natural gas	CH4	2014	0.004689
Net-zero pathway	MN	Industry	Natural gas	CO2	2014	10.444623
Net-zero pathway	MN	Industry	Natural gas	N2O	2014	0.00559
Net-zero pathway	MN	Industry	Oil refining	CH4	2014	0.034625
Net-zero pathway	MN	Industry	Oil refining	CO2	2014	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2014	0.009627
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2014	0.014511
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2014	0.016725
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2014	7.209277
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2014	0.029696
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2014	0.133535
Net-zero pathway	MN	Industry	Solvent	HFC	2014	0.032092
Net-zero pathway	MN	Industry	Taconite induration	CO2	2014	2.490029
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2014	0.054917
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2014	-14.037591
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2014	-2.354373
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2014	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2014	-2.653531
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2014	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2014	2.027593
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2014	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2014	0.007853
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2014	0.005178
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2014	0
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2014	0
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2014	3.290927
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2014	-0.196105
Net-zero pathway	MN	LULUCF	Litter	CO2	2014	-0.876661
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2014	-0.691241
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2014	2.083408
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2014	0.000542
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2014	0.018134
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2014	0.000065
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2014	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2014	0.650799
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2014	0.012813
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2014	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2014	0.17745
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2014	-0.845801
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2014	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2014	0.219858
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2014	0.171493
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2014	0.000031
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2014	0.033074
Net-zero pathway	MN	Residential	Coal	CH4	2014	0
Net-zero pathway	MN	Residential	Coal	CO2	2014	0
Net-zero pathway	MN	Residential	Coal	N2O	2014	0
Net-zero pathway	MN	Residential	Food additives	CO2	2014	0.02077
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2014	0.016391
Net-zero pathway	MN	Residential	Natural gas	CH4	2014	0.019822
Net-zero pathway	MN	Residential	Natural gas	CO2	2014	8.832115
Net-zero pathway	MN	Residential	Natural gas	N2O	2014	0.004726
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2014	0.004506
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2014	2.019998
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2014	0.001758

Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2014	0.001959
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2014	-0.008967
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2014	0.090631
Net-zero pathway	MN	Residential	Wood	CH4	2014	0.259116
Net-zero pathway	MN	Residential	Wood	N2O	2014	0.041182
Net-zero pathway	MN	Transportation	Aviation	CH4	2014	0.003236
Net-zero pathway	MN	Transportation	Aviation	CO2	2014	3.840434
Net-zero pathway	MN	Transportation	Aviation	N2O	2014	0.03625
Net-zero pathway	MN	Transportation	Bus	CH4	2014	0.002078
Net-zero pathway	MN	Transportation	Bus	CO2	2014	0.369328
Net-zero pathway	MN	Transportation	Bus	N2O	2014	0.00059
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2014	0.008266
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2014	6.495771
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2014	0.008927
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2014	0.0295
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2014	15.209068
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2014	0.20311
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2014	0.05981
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2014	0.264659
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2014	0.297081
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2014	1.618711
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2014	0.000518
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2014	0.214719
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2014	0.000829
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2014	1.110584
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2014	0.791815
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2014	0.004019
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2014	0.011884
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2014	8.737802
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2014	0.100989
Net-zero pathway	MN	Transportation	Railroad	CH4	2014	0.00543
Net-zero pathway	MN	Transportation	Railroad	CO2	2014	1.078281
Net-zero pathway	MN	Transportation	Railroad	N2O	2014	0.020712
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2014	0.000083
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2014	0.447689
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2014	0.00168
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2014	0.015256
Net-zero pathway	MN	Waste	Coal	CH4	2014	0
Net-zero pathway	MN	Waste	Coal	CO2	2014	0
Net-zero pathway	MN	Waste	Coal	N2O	2014	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2014	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2014	0.13466
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2014	0.00414
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2014	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2014	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2014	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2014	0.141117
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2014	0.015405
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2014	0.00154
Net-zero pathway	MN	Waste	Landfill operations	CH4	2014	0.000026
Net-zero pathway	MN	Waste	Landfill operations	CO2	2014	0.017254
Net-zero pathway	MN	Waste	Landfill operations	N2O	2014	0.000138
Net-zero pathway	MN	Waste	Limestone use	CO2	2014	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2014	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2014	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2014	0

Net-zero pathway	MN	Waste	MMSW composting	CH4	2014	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2014	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2014	1.683818
Net-zero pathway	MN	Waste	Mass burn	CH4	2014	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2014	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2014	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2014	0.000015
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2014	0.009842
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2014	0.000079
Net-zero pathway	MN	Waste	Medical	CO2	2014	0.004394
Net-zero pathway	MN	Waste	Medical	N2O	2014	0.000173
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2014	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2014	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2014	0.00001
Net-zero pathway	MN	Waste	Natural gas	CO2	2014	0.022718
Net-zero pathway	MN	Waste	Natural gas	N2O	2014	0.000115
Net-zero pathway	MN	Waste	Oil	CH4	2014	0
Net-zero pathway	MN	Waste	Oil	CO2	2014	0.000976
Net-zero pathway	MN	Waste	Oil	N2O	2014	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2014	0
Net-zero pathway	MN	Waste	Propane	CO2	2014	0.000104
Net-zero pathway	MN	Waste	Propane	N2O	2014	0.000002
Net-zero pathway	MN	Waste	RDF	CH4	2014	0
Net-zero pathway	MN	Waste	RDF	CO2	2014	0
Net-zero pathway	MN	Waste	RDF	N2O	2014	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2014	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2014	0.002307
Net-zero pathway	MN	Waste	RDF processing	N2O	2014	0.000018
Net-zero pathway	MN	Waste	Rural open burning	CH4	2014	0.007296
Net-zero pathway	MN	Waste	Rural open burning	CO2	2014	0.025336
Net-zero pathway	MN	Waste	Rural open burning	N2O	2014	0.002007
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2014	-0.414092
Net-zero pathway	MN	Waste	Sludge	CH4	2014	0.003793
Net-zero pathway	MN	Waste	Sludge	N2O	2014	0.001472
Net-zero pathway	MN	Waste	Waste solvent	CO2	2014	0.019861
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2014	0.249976
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2014	0.109891
Net-zero pathway	MN	Waste	Wood	CH4	2014	0
Net-zero pathway	MN	Waste	Wood	N2O	2014	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2014	0.02
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2014	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2014	0.001359
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2014	0.000011
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2015	0.184282
Current policies	MN	Agriculture	American Bison	CH4	2015	0.006922
Current policies	MN	Agriculture	Beef Cattle	CH4	2015	2.234932
Current policies	MN	Agriculture	Beef Cattle	N2O	2015	0.149095
Current policies	MN	Agriculture	Belowground Biomass	CO2	2015	0.030611
Current policies	MN	Agriculture	Biofuel	CH4	2015	0.000454
Current policies	MN	Agriculture	Biofuel	N2O	2015	0.000962
Current policies	MN	Agriculture	Cereals	CH4	2015	0.0089
Current policies	MN	Agriculture	Cereals	N2O	2015	0.002974
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2015	0
Current policies	MN	Agriculture	Cropland	N2O	2015	15.91059
Current policies	MN	Agriculture	Dairy Cattle	CH4	2015	3.275329
Current policies	MN	Agriculture	Dairy Cattle	N2O	2015	0.16135

Current policies	MN	Agriculture	Dairy Heifers	N2O	2015	0.146986
Current policies	MN	Agriculture	Dead Wood	CO2	2015	0.062788
Current policies	MN	Agriculture	Goats	CH4	2015	0.009015
Current policies	MN	Agriculture	Goats	N2O	2015	0.000277
Current policies	MN	Agriculture	Grassland	N2O	2015	1.894047
Current policies	MN	Agriculture	Horses	CH4	2015	0.029277
Current policies	MN	Agriculture	Horses	N2O	2015	0.001636
Current policies	MN	Agriculture	Liming	CO2	2015	0.043592
Current policies	MN	Agriculture	Litter	CO2	2015	0.097816
Current policies	MN	Agriculture	Mineral Soil	CO2	2015	-1.174476
Current policies	MN	Agriculture	Mules and Asses	CH4	2015	0.000936
Current policies	MN	Agriculture	Mules and Asses	N2O	2015	0.000034
Current policies	MN	Agriculture	Oil	CH4	2015	0.007291
Current policies	MN	Agriculture	Oil	CO2	2015	2.269236
Current policies	MN	Agriculture	Oil	N2O	2015	0.013373
Current policies	MN	Agriculture	Organic Soil	CO2	2015	6.670412
Current policies	MN	Agriculture	Other	CH4	2015	0.000083
Current policies	MN	Agriculture	Other	N2O	2015	0.00006
Current policies	MN	Agriculture	Poultry	CH4	2015	0.043881
Current policies	MN	Agriculture	Poultry	N2O	2015	0.055033
Current policies	MN	Agriculture	Pulses	CH4	2015	0.002059
Current policies	MN	Agriculture	Pulses	N2O	2015	0.000703
Current policies	MN	Agriculture	Rice Cultivation	CH4	2015	0
Current policies	MN	Agriculture	Sheep	CH4	2015	0.034312
Current policies	MN	Agriculture	Sheep	N2O	2015	0.011301
Current policies	MN	Agriculture	Swine	CH4	2015	2.134165
Current policies	MN	Agriculture	Swine	N2O	2015	0.17494
Current policies	MN	Agriculture	Tubers and Roots	CH4	2015	0.000063
Current policies	MN	Agriculture	Tubers and Roots	N2O	2015	0.000041
Current policies	MN	Agriculture	Urea Fertilization	CO2	2015	0.515044
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2015	0.774696
Current policies	MN	Commercial	Biofuel	CO2	2015	0
Current policies	MN	Commercial	Coal	CH4	2015	0.000072
Current policies	MN	Commercial	Coal	CO2	2015	0.0282
Current policies	MN	Commercial	Coal	N2O	2015	0.00013
Current policies	MN	Commercial	Limestone use	CO2	2015	0.000321
Current policies	MN	Commercial	Medical use	N2O	2015	0.078546
Current policies	MN	Commercial	Natural gas	CH4	2015	0.011851
Current policies	MN	Commercial	Natural gas	CO2	2015	5.279533
Current policies	MN	Commercial	Natural gas	N2O	2015	0.002825
Current policies	MN	Commercial	Refined Liquids	CH4	2015	0.076678
Current policies	MN	Commercial	Refined Liquids	CO2	2015	12.88637
Current policies	MN	Commercial	Refined Liquids	N2O	2015	0.036046
Current policies	MN	Commercial	Solvent use	CO2	2015	0.064088
Current policies	MN	Electricity	Coal	CH4	2015	0.00476
Current policies	MN	Electricity	Coal	CO2	2015	28.085142
Current policies	MN	Electricity	Coal	N2O	2015	0.073846
Current policies	MN	Electricity	Coal storage	CH4	2015	0.058355
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2015	0.004945
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2015	0.006453
Current policies	MN	Electricity	Natural gas	CH4	2015	0.003481
Current policies	MN	Electricity	Natural gas	CO2	2015	3.568724
Current policies	MN	Electricity	Natural gas	N2O	2015	0.051825
Current policies	MN	Electricity	Net electricity imports	CH4	2015	0.026937
Current policies	MN	Electricity	Net electricity imports	CO2	2015	9.36965
Current policies	MN	Electricity	Net electricity imports	N2O	2015	0.059592

Current policies	MN	Electricity	Refined Liquids	CH4	2015	0.019992
Current policies	MN	Electricity	Refined Liquids	CO2	2015	0.704515
Current policies	MN	Electricity	Refined Liquids	N2O	2015	0.080165
Current policies	MN	Electricity	Transmission	SF6	2015	0.061186
Current policies	MN	Industry	Ammonia manufacture	CO2	2015	0
Current policies	MN	Industry	Coal	CH4	2015	0.033927
Current policies	MN	Industry	Coal	CO2	2015	1.989629
Current policies	MN	Industry	Coal	N2O	2015	0.008416
Current policies	MN	Industry	Industrial solvent release	CO2	2015	0.014257
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2015	0.168925
Current policies	MN	Industry	Insulating foam manufacture	HFC	2015	0.055272
Current policies	MN	Industry	Magnesium casting	SF6	2015	0.017556
Current policies	MN	Industry	Natural gas	CH4	2015	0.004276
Current policies	MN	Industry	Natural gas	CO2	2015	9.52524
Current policies	MN	Industry	Natural gas	N2O	2015	0.005098
Current policies	MN	Industry	Oil refining	CH4	2015	0.034654
Current policies	MN	Industry	Oil refining	CO2	2015	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2015	0.009627
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2015	0.012126
Current policies	MN	Industry	Refined Liquids	CH4	2015	0.034689
Current policies	MN	Industry	Refined Liquids	CO2	2015	7.017834
Current policies	MN	Industry	Refined Liquids	N2O	2015	0.057558
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2015	0.111325
Current policies	MN	Industry	Solvent	HFC	2015	0.032039
Current policies	MN	Industry	Taconite induration	CO2	2015	1.833548
Current policies	MN	Industry	VOC and toxics release	CO2	2015	0.054328
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2015	-14.167708
Current policies	MN	LULUCF	Belowground Biomass	CO2	2015	-2.376787
Current policies	MN	LULUCF	Canals and ditches	CH4	2015	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2015	-2.755314
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2015	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2015	2.043338
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2015	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2015	0.033153
Current policies	MN	LULUCF	Forest Fires	N2O	2015	0.020925
Current policies	MN	LULUCF	Grass Fires	CH4	2015	0.000713
Current policies	MN	LULUCF	Grass Fires	N2O	2015	0.000616
Current policies	MN	LULUCF	Lakes and ponds	CH4	2015	3.298228
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2015	-0.178359
Current policies	MN	LULUCF	Litter	CO2	2015	-0.873477
Current policies	MN	LULUCF	Mineral Soil	CO2	2015	-0.785201
Current policies	MN	LULUCF	Organic Soil	CO2	2015	2.170024
Current policies	MN	LULUCF	Peat harvesting	CH4	2015	0.000655
Current policies	MN	LULUCF	Peat harvesting	CO2	2015	0.019035
Current policies	MN	LULUCF	Peat harvesting	N2O	2015	0.000079
Current policies	MN	LULUCF	Peatland restoration	CO2	2015	0
Current policies	MN	LULUCF	Reservoirs	CH4	2015	0.646681
Current policies	MN	LULUCF	Reservoirs	CO2	2015	0.013042
Current policies	MN	LULUCF	Rivers and streams	CH4	2015	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2015	0.177649
Current policies	MN	LULUCF	Urban Trees	CO2	2015	-0.844421
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2015	0.223491
Current policies	MN	Residential	Air conditioning	HFC125	2015	0.185754
Current policies	MN	Residential	Air conditioning	HFC143a	2015	0.000028
Current policies	MN	Residential	Air conditioning	HFC32	2015	0.035824
Current policies	MN	Residential	Coal	CH4	2015	0

Current policies	MN	Residential	Coal	CO2	2015	0
Current policies	MN	Residential	Coal	N2O	2015	0
Current policies	MN	Residential	Food additives	CO2	2015	0.020736
Current policies	MN	Residential	Lawn fertilizer	N2O	2015	0.015729
Current policies	MN	Residential	Natural gas	CH4	2015	0.015976
Current policies	MN	Residential	Natural gas	CO2	2015	7.117068
Current policies	MN	Residential	Natural gas	N2O	2015	0.003809
Current policies	MN	Residential	Refined Liquids	CH4	2015	0.003915
Current policies	MN	Residential	Refined Liquids	CO2	2015	1.755785
Current policies	MN	Residential	Refined Liquids	N2O	2015	0.001526
Current policies	MN	Residential	Refrigeration	HFC134a	2015	0.001969
Current policies	MN	Residential	Sequestration in housing	CO2	2015	-0.040395
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2015	0.08954
Current policies	MN	Residential	Wood	CH4	2015	0.298658
Current policies	MN	Residential	Wood	N2O	2015	0.047467
Current policies	MN	Transportation	Aviation	CH4	2015	0.003143
Current policies	MN	Transportation	Aviation	CO2	2015	3.860894
Current policies	MN	Transportation	Aviation	N2O	2015	0.036473
Current policies	MN	Transportation	Bus	CH4	2015	0.001438
Current policies	MN	Transportation	Bus	CO2	2015	0.268559
Current policies	MN	Transportation	Bus	N2O	2015	0.00042
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2015	0.010904
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2015	5.75713
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2015	0.00856
Current policies	MN	Transportation	Light-duty trucks	CH4	2015	0.024491
Current policies	MN	Transportation	Light-duty trucks	CO2	2015	15.008701
Current policies	MN	Transportation	Light-duty trucks	N2O	2015	0.186527
Current policies	MN	Transportation	Military and other off-highway	CH4	2015	0.057334
Current policies	MN	Transportation	Military and other off-highway	CO2	2015	1.075963
Current policies	MN	Transportation	Military and other off-highway	N2O	2015	0.284751
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2015	1.488696
Current policies	MN	Transportation	Motorcycle	CH4	2015	0.000487
Current policies	MN	Transportation	Motorcycle	CO2	2015	0.209605
Current policies	MN	Transportation	Motorcycle	N2O	2015	0.000805
Current policies	MN	Transportation	Natural gas transmission	CH4	2015	1.111589
Current policies	MN	Transportation	Natural gas transmission	CO2	2015	0.628946
Current policies	MN	Transportation	Natural gas transmission	N2O	2015	0.00276
Current policies	MN	Transportation	Passenger cars	CH4	2015	0.009277
Current policies	MN	Transportation	Passenger cars	CO2	2015	8.30036
Current policies	MN	Transportation	Passenger cars	N2O	2015	0.089256
Current policies	MN	Transportation	Railroad	CH4	2015	0.005037
Current policies	MN	Transportation	Railroad	CO2	2015	0.949699
Current policies	MN	Transportation	Railroad	N2O	2015	0.019214
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2015	0.000079
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2015	0.706015
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2015	0.002075
Current policies	MN	Waste	Biosolids land application	N2O	2015	0.01307
Current policies	MN	Waste	Coal	CH4	2015	0
Current policies	MN	Waste	Coal	CO2	2015	0
Current policies	MN	Waste	Coal	N2O	2015	0
Current policies	MN	Waste	Food waste prevention	CO2	2015	0
Current policies	MN	Waste	Hazardous waste	CO2	2015	0.109496
Current policies	MN	Waste	Hazardous waste	N2O	2015	0.003366
Current policies	MN	Waste	Incinerator ash disposal	CH4	2015	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2015	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2015	0

Current policies	MN	Waste	Industrial landfills	CH4	2015	0.136946
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2015	0.018336
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2015	0.001537
Current policies	MN	Waste	Landfill operations	CH4	2015	0.000023
Current policies	MN	Waste	Landfill operations	CO2	2015	0.014975
Current policies	MN	Waste	Landfill operations	N2O	2015	0.00012
Current policies	MN	Waste	Limestone use	CO2	2015	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2015	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2015	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2015	0
Current policies	MN	Waste	MMSW composting	CH4	2015	0
Current policies	MN	Waste	MMSW composting	N2O	2015	0
Current policies	MN	Waste	MMSW landfills	CH4	2015	1.742489
Current policies	MN	Waste	Mass burn	CH4	2015	0
Current policies	MN	Waste	Mass burn	CO2	2015	0
Current policies	MN	Waste	Mass burn	N2O	2015	0
Current policies	MN	Waste	Materials recovery facility	CH4	2015	0.000012
Current policies	MN	Waste	Materials recovery facility	CO2	2015	0.007817
Current policies	MN	Waste	Materials recovery facility	N2O	2015	0.000062
Current policies	MN	Waste	Medical	CO2	2015	0.004643
Current policies	MN	Waste	Medical	N2O	2015	0.000183
Current policies	MN	Waste	Miscellaneous	CO2	2015	0
Current policies	MN	Waste	Miscellaneous	N2O	2015	0
Current policies	MN	Waste	Natural gas	CH4	2015	0.000011
Current policies	MN	Waste	Natural gas	CO2	2015	0.026562
Current policies	MN	Waste	Natural gas	N2O	2015	0.000135
Current policies	MN	Waste	Oil	CH4	2015	0
Current policies	MN	Waste	Oil	CO2	2015	0.00026
Current policies	MN	Waste	Oil	N2O	2015	0.000001
Current policies	MN	Waste	Propane	CH4	2015	0
Current policies	MN	Waste	Propane	CO2	2015	0.000002
Current policies	MN	Waste	Propane	N2O	2015	0
Current policies	MN	Waste	RDF	CH4	2015	0
Current policies	MN	Waste	RDF	CO2	2015	0
Current policies	MN	Waste	RDF	N2O	2015	0
Current policies	MN	Waste	RDF processing	CH4	2015	0.000003
Current policies	MN	Waste	RDF processing	CO2	2015	0.002301
Current policies	MN	Waste	RDF processing	N2O	2015	0.000018
Current policies	MN	Waste	Rural open burning	CH4	2015	0.007061
Current policies	MN	Waste	Rural open burning	CO2	2015	0.02452
Current policies	MN	Waste	Rural open burning	N2O	2015	0.001942
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2015	-0.352849
Current policies	MN	Waste	Sludge	CH4	2015	0.004093
Current policies	MN	Waste	Sludge	N2O	2015	0.001595
Current policies	MN	Waste	Waste solvent	CO2	2015	0.00275
Current policies	MN	Waste	Wastewater treatment	CH4	2015	0.251395
Current policies	MN	Waste	Wastewater treatment	N2O	2015	0.110099
Current policies	MN	Waste	Wood	CH4	2015	0
Current policies	MN	Waste	Wood	N2O	2015	0
Current policies	MN	Waste	Yard waste composting	CH4	2015	0.020235
Current policies	MN	Waste	Yard waste preprocessing	CH4	2015	0.000002
Current policies	MN	Waste	Yard waste preprocessing	CO2	2015	0.001375
Current policies	MN	Waste	Yard waste preprocessing	N2O	2015	0.000011
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2015	0.184282
Net-zero pathway	MN	Agriculture	American Bison	CH4	2015	0.006922
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2015	2.234932

Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2015	0.149095
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2015	0.030611
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2015	0.000454
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2015	0.000962
Net-zero pathway	MN	Agriculture	Cereals	CH4	2015	0.0089
Net-zero pathway	MN	Agriculture	Cereals	N2O	2015	0.002974
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2015	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2015	15.91059
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2015	3.275329
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2015	0.16135
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2015	0.146986
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2015	0.062788
Net-zero pathway	MN	Agriculture	Goats	CH4	2015	0.009015
Net-zero pathway	MN	Agriculture	Goats	N2O	2015	0.000277
Net-zero pathway	MN	Agriculture	Grassland	N2O	2015	1.894047
Net-zero pathway	MN	Agriculture	Horses	CH4	2015	0.029277
Net-zero pathway	MN	Agriculture	Horses	N2O	2015	0.001636
Net-zero pathway	MN	Agriculture	Liming	CO2	2015	0.043592
Net-zero pathway	MN	Agriculture	Litter	CO2	2015	0.097816
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2015	-1.174476
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2015	0.000936
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2015	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2015	0.007291
Net-zero pathway	MN	Agriculture	Oil	CO2	2015	2.269236
Net-zero pathway	MN	Agriculture	Oil	N2O	2015	0.013373
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2015	6.670412
Net-zero pathway	MN	Agriculture	Other	CH4	2015	0.000083
Net-zero pathway	MN	Agriculture	Other	N2O	2015	0.00006
Net-zero pathway	MN	Agriculture	Poultry	CH4	2015	0.043881
Net-zero pathway	MN	Agriculture	Poultry	N2O	2015	0.055033
Net-zero pathway	MN	Agriculture	Pulses	CH4	2015	0.002059
Net-zero pathway	MN	Agriculture	Pulses	N2O	2015	0.000703
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2015	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2015	0.034312
Net-zero pathway	MN	Agriculture	Sheep	N2O	2015	0.011301
Net-zero pathway	MN	Agriculture	Swine	CH4	2015	2.134165
Net-zero pathway	MN	Agriculture	Swine	N2O	2015	0.17494
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2015	0.000063
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2015	0.000041
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2015	0.515044
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2015	0.774696
Net-zero pathway	MN	Commercial	Biofuel	CO2	2015	0
Net-zero pathway	MN	Commercial	Coal	CH4	2015	0.000072
Net-zero pathway	MN	Commercial	Coal	CO2	2015	0.0282
Net-zero pathway	MN	Commercial	Coal	N2O	2015	0.00013
Net-zero pathway	MN	Commercial	Limestone use	CO2	2015	0.000321
Net-zero pathway	MN	Commercial	Medical use	N2O	2015	0.078546
Net-zero pathway	MN	Commercial	Natural gas	CH4	2015	0.011851
Net-zero pathway	MN	Commercial	Natural gas	CO2	2015	5.279533
Net-zero pathway	MN	Commercial	Natural gas	N2O	2015	0.002825
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2015	0.076678
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2015	12.88637
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2015	0.036046
Net-zero pathway	MN	Commercial	Solvent use	CO2	2015	0.064088
Net-zero pathway	MN	Electricity	Coal	CH4	2015	0.00476
Net-zero pathway	MN	Electricity	Coal	CO2	2015	28.085142

Net-zero pathway	MN	Electricity	Coal	N2O	2015	0.073846
Net-zero pathway	MN	Electricity	Coal storage	CH4	2015	0.058355
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2015	0.004945
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2015	0.006453
Net-zero pathway	MN	Electricity	Natural gas	CH4	2015	0.003481
Net-zero pathway	MN	Electricity	Natural gas	CO2	2015	3.568724
Net-zero pathway	MN	Electricity	Natural gas	N2O	2015	0.051825
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2015	0.026937
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2015	9.36965
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2015	0.059592
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2015	0.019992
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2015	0.704515
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2015	0.080165
Net-zero pathway	MN	Electricity	Transmission	SF6	2015	0.061186
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2015	0
Net-zero pathway	MN	Industry	Coal	CH4	2015	0.033927
Net-zero pathway	MN	Industry	Coal	CO2	2015	1.989629
Net-zero pathway	MN	Industry	Coal	N2O	2015	0.008416
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2015	0.014257
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2015	0.168925
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2015	0.055272
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2015	0.017556
Net-zero pathway	MN	Industry	Natural gas	CH4	2015	0.004276
Net-zero pathway	MN	Industry	Natural gas	CO2	2015	9.52524
Net-zero pathway	MN	Industry	Natural gas	N2O	2015	0.005098
Net-zero pathway	MN	Industry	Oil refining	CH4	2015	0.034654
Net-zero pathway	MN	Industry	Oil refining	CO2	2015	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2015	0.009627
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2015	0.012126
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2015	0.034689
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2015	7.017834
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2015	0.057558
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2015	0.111325
Net-zero pathway	MN	Industry	Solvent	HFC	2015	0.032039
Net-zero pathway	MN	Industry	Taconite induration	CO2	2015	1.833548
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2015	0.054328
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2015	-14.167708
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2015	-2.376787
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2015	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2015	-2.755314
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2015	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2015	2.043338
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2015	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2015	0.033153
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2015	0.020925
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2015	0.000713
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2015	0.000616
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2015	3.298228
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2015	-0.178359
Net-zero pathway	MN	LULUCF	Litter	CO2	2015	-0.873477
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2015	-0.785201
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2015	2.170024
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2015	0.000655
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2015	0.019035
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2015	0.000079
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2015	0

Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2015	0.646681
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2015	0.013042
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2015	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2015	0.177649
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2015	-0.844421
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2015	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2015	0.223491
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2015	0.185754
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2015	0.000028
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2015	0.035824
Net-zero pathway	MN	Residential	Coal	CH4	2015	0
Net-zero pathway	MN	Residential	Coal	CO2	2015	0
Net-zero pathway	MN	Residential	Coal	N2O	2015	0
Net-zero pathway	MN	Residential	Food additives	CO2	2015	0.020736
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2015	0.015729
Net-zero pathway	MN	Residential	Natural gas	CH4	2015	0.015976
Net-zero pathway	MN	Residential	Natural gas	CO2	2015	7.117068
Net-zero pathway	MN	Residential	Natural gas	N2O	2015	0.003809
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2015	0.003915
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2015	1.755785
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2015	0.001526
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2015	0.001969
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2015	-0.040395
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2015	0.08954
Net-zero pathway	MN	Residential	Wood	CH4	2015	0.298658
Net-zero pathway	MN	Residential	Wood	N2O	2015	0.047467
Net-zero pathway	MN	Transportation	Aviation	CH4	2015	0.003143
Net-zero pathway	MN	Transportation	Aviation	CO2	2015	3.860894
Net-zero pathway	MN	Transportation	Aviation	N2O	2015	0.036473
Net-zero pathway	MN	Transportation	Bus	CH4	2015	0.001438
Net-zero pathway	MN	Transportation	Bus	CO2	2015	0.268559
Net-zero pathway	MN	Transportation	Bus	N2O	2015	0.00042
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2015	0.010904
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2015	5.75713
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2015	0.00856
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2015	0.024491
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2015	15.008701
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2015	0.186527
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2015	0.057334
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2015	1.075963
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2015	0.284751
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2015	1.488696
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2015	0.000487
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2015	0.209605
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2015	0.000805
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2015	1.111589
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2015	0.628946
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2015	0.00276
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2015	0.009277
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2015	8.30036
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2015	0.089256
Net-zero pathway	MN	Transportation	Railroad	CH4	2015	0.005037
Net-zero pathway	MN	Transportation	Railroad	CO2	2015	0.949699
Net-zero pathway	MN	Transportation	Railroad	N2O	2015	0.019214
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2015	0.000079
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2015	0.706015

Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2015	0.002075
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2015	0.01307
Net-zero pathway	MN	Waste	Coal	CH4	2015	0
Net-zero pathway	MN	Waste	Coal	CO2	2015	0
Net-zero pathway	MN	Waste	Coal	N2O	2015	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2015	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2015	0.109496
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2015	0.003366
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2015	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2015	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2015	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2015	0.136946
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2015	0.018336
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2015	0.001537
Net-zero pathway	MN	Waste	Landfill operations	CH4	2015	0.000023
Net-zero pathway	MN	Waste	Landfill operations	CO2	2015	0.014975
Net-zero pathway	MN	Waste	Landfill operations	N2O	2015	0.00012
Net-zero pathway	MN	Waste	Limestone use	CO2	2015	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2015	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2015	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2015	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2015	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2015	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2015	1.742489
Net-zero pathway	MN	Waste	Mass burn	CH4	2015	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2015	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2015	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2015	0.000012
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2015	0.007817
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2015	0.000062
Net-zero pathway	MN	Waste	Medical	CO2	2015	0.004643
Net-zero pathway	MN	Waste	Medical	N2O	2015	0.000183
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2015	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2015	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2015	0.000011
Net-zero pathway	MN	Waste	Natural gas	CO2	2015	0.026562
Net-zero pathway	MN	Waste	Natural gas	N2O	2015	0.000135
Net-zero pathway	MN	Waste	Oil	CH4	2015	0
Net-zero pathway	MN	Waste	Oil	CO2	2015	0.00026
Net-zero pathway	MN	Waste	Oil	N2O	2015	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2015	0
Net-zero pathway	MN	Waste	Propane	CO2	2015	0.000002
Net-zero pathway	MN	Waste	Propane	N2O	2015	0
Net-zero pathway	MN	Waste	RDF	CH4	2015	0
Net-zero pathway	MN	Waste	RDF	CO2	2015	0
Net-zero pathway	MN	Waste	RDF	N2O	2015	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2015	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2015	0.002301
Net-zero pathway	MN	Waste	RDF processing	N2O	2015	0.000018
Net-zero pathway	MN	Waste	Rural open burning	CH4	2015	0.007061
Net-zero pathway	MN	Waste	Rural open burning	CO2	2015	0.02452
Net-zero pathway	MN	Waste	Rural open burning	N2O	2015	0.001942
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2015	-0.352849
Net-zero pathway	MN	Waste	Sludge	CH4	2015	0.004093
Net-zero pathway	MN	Waste	Sludge	N2O	2015	0.001595
Net-zero pathway	MN	Waste	Waste solvent	CO2	2015	0.00275

Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2015	0.251395
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2015	0.110099
Net-zero pathway	MN	Waste	Wood	CH4	2015	0
Net-zero pathway	MN	Waste	Wood	N2O	2015	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2015	0.020235
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2015	0.000002
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2015	0.001375
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2015	0.000011
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2016	0.183614
Current policies	MN	Agriculture	American Bison	CH4	2016	0.00683
Current policies	MN	Agriculture	Beef Cattle	CH4	2016	2.395781
Current policies	MN	Agriculture	Beef Cattle	N2O	2016	0.158572
Current policies	MN	Agriculture	Belowground Biomass	CO2	2016	0.0305
Current policies	MN	Agriculture	Biofuel	CH4	2016	0.000492
Current policies	MN	Agriculture	Biofuel	N2O	2016	0.001042
Current policies	MN	Agriculture	Cereals	CH4	2016	0.008872
Current policies	MN	Agriculture	Cereals	N2O	2016	0.002971
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2016	0
Current policies	MN	Agriculture	Cropland	N2O	2016	14.959143
Current policies	MN	Agriculture	Dairy Cattle	CH4	2016	3.39129
Current policies	MN	Agriculture	Dairy Cattle	N2O	2016	0.160754
Current policies	MN	Agriculture	Dairy Heifers	N2O	2016	0.156329
Current policies	MN	Agriculture	Dead Wood	CO2	2016	0.062561
Current policies	MN	Agriculture	Goats	CH4	2016	0.009148
Current policies	MN	Agriculture	Goats	N2O	2016	0.000282
Current policies	MN	Agriculture	Grassland	N2O	2016	1.915606
Current policies	MN	Agriculture	Horses	CH4	2016	0.027189
Current policies	MN	Agriculture	Horses	N2O	2016	0.001519
Current policies	MN	Agriculture	Liming	CO2	2016	0.026145
Current policies	MN	Agriculture	Litter	CO2	2016	0.097461
Current policies	MN	Agriculture	Mineral Soil	CO2	2016	-1.507261
Current policies	MN	Agriculture	Mules and Asses	CH4	2016	0.00094
Current policies	MN	Agriculture	Mules and Asses	N2O	2016	0.000034
Current policies	MN	Agriculture	Oil	CH4	2016	0.007753
Current policies	MN	Agriculture	Oil	CO2	2016	2.348236
Current policies	MN	Agriculture	Oil	N2O	2016	0.014439
Current policies	MN	Agriculture	Organic Soil	CO2	2016	6.617361
Current policies	MN	Agriculture	Other	CH4	2016	0.000095
Current policies	MN	Agriculture	Other	N2O	2016	0.000071
Current policies	MN	Agriculture	Poultry	CH4	2016	0.047213
Current policies	MN	Agriculture	Poultry	N2O	2016	0.059699
Current policies	MN	Agriculture	Pulses	CH4	2016	0.001839
Current policies	MN	Agriculture	Pulses	N2O	2016	0.000697
Current policies	MN	Agriculture	Rice Cultivation	CH4	2016	0.021079
Current policies	MN	Agriculture	Sheep	CH4	2016	0.032992
Current policies	MN	Agriculture	Sheep	N2O	2016	0.010867
Current policies	MN	Agriculture	Swine	CH4	2016	2.246914
Current policies	MN	Agriculture	Swine	N2O	2016	0.179744
Current policies	MN	Agriculture	Tubers and Roots	CH4	2016	0.000061
Current policies	MN	Agriculture	Tubers and Roots	N2O	2016	0.00004
Current policies	MN	Agriculture	Urea Fertilization	CO2	2016	0.52954
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2016	0.914294
Current policies	MN	Commercial	Biofuel	CO2	2016	0
Current policies	MN	Commercial	Coal	CH4	2016	0.000067
Current policies	MN	Commercial	Coal	CO2	2016	0.02626
Current policies	MN	Commercial	Coal	N2O	2016	0.000121

Current policies	MN	Commercial	Limestone use	CO2	2016	0.000378
Current policies	MN	Commercial	Medical use	N2O	2016	0.078566
Current policies	MN	Commercial	Natural gas	CH4	2016	0.011587
Current policies	MN	Commercial	Natural gas	CO2	2016	5.161603
Current policies	MN	Commercial	Natural gas	N2O	2016	0.002762
Current policies	MN	Commercial	Refined Liquids	CH4	2016	0.07796
Current policies	MN	Commercial	Refined Liquids	CO2	2016	12.167809
Current policies	MN	Commercial	Refined Liquids	N2O	2016	0.03483
Current policies	MN	Commercial	Solvent use	CO2	2016	0.064088
Current policies	MN	Electricity	Coal	CH4	2016	0.004523
Current policies	MN	Electricity	Coal	CO2	2016	27.028309
Current policies	MN	Electricity	Coal	N2O	2016	0.075747
Current policies	MN	Electricity	Coal storage	CH4	2016	0.042094
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2016	0.005158
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2016	0.006453
Current policies	MN	Electricity	Natural gas	CH4	2016	0.004343
Current policies	MN	Electricity	Natural gas	CO2	2016	4.415877
Current policies	MN	Electricity	Natural gas	N2O	2016	0.061008
Current policies	MN	Electricity	Net electricity imports	CH4	2016	0.017229
Current policies	MN	Electricity	Net electricity imports	CO2	2016	7.119272
Current policies	MN	Electricity	Net electricity imports	N2O	2016	0.049592
Current policies	MN	Electricity	Refined Liquids	CH4	2016	0.020454
Current policies	MN	Electricity	Refined Liquids	CO2	2016	0.726241
Current policies	MN	Electricity	Refined Liquids	N2O	2016	0.087377
Current policies	MN	Electricity	Transmission	SF6	2016	0.026554
Current policies	MN	Industry	Ammonia manufacture	CO2	2016	0
Current policies	MN	Industry	Coal	CH4	2016	0.038916
Current policies	MN	Industry	Coal	CO2	2016	1.780119
Current policies	MN	Industry	Coal	N2O	2016	0.007387
Current policies	MN	Industry	Industrial solvent release	CO2	2016	0.014243
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2016	0.15695
Current policies	MN	Industry	Insulating foam manufacture	HFC	2016	0.055272
Current policies	MN	Industry	Magnesium casting	SF6	2016	0.01254
Current policies	MN	Industry	Natural gas	CH4	2016	0.004409
Current policies	MN	Industry	Natural gas	CO2	2016	9.821559
Current policies	MN	Industry	Natural gas	N2O	2016	0.005256
Current policies	MN	Industry	Oil refining	CH4	2016	0.035842
Current policies	MN	Industry	Oil refining	CO2	2016	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2016	0.009627
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2016	0.01263
Current policies	MN	Industry	Refined Liquids	CH4	2016	0.033308
Current policies	MN	Industry	Refined Liquids	CO2	2016	8.631545
Current policies	MN	Industry	Refined Liquids	N2O	2016	0.05517
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2016	0.067777
Current policies	MN	Industry	Solvent	HFC	2016	0.035817
Current policies	MN	Industry	Taconite induration	CO2	2016	1.744475
Current policies	MN	Industry	VOC and toxics release	CO2	2016	0.053072
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2016	-14.297824
Current policies	MN	LULUCF	Belowground Biomass	CO2	2016	-2.399197
Current policies	MN	LULUCF	Canals and ditches	CH4	2016	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2016	-2.857099
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2016	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2016	2.161056
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2016	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2016	0.009823
Current policies	MN	LULUCF	Forest Fires	N2O	2016	0.006683

Current policies	MN	LULUCF	Grass Fires	CH4	2016	0
Current policies	MN	LULUCF	Grass Fires	N2O	2016	0
Current policies	MN	LULUCF	Lakes and ponds	CH4	2016	3.298588
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2016	-0.159458
Current policies	MN	LULUCF	Litter	CO2	2016	-0.870293
Current policies	MN	LULUCF	Mineral Soil	CO2	2016	-0.741149
Current policies	MN	LULUCF	Organic Soil	CO2	2016	2.1014
Current policies	MN	LULUCF	Peat harvesting	CH4	2016	0.000807
Current policies	MN	LULUCF	Peat harvesting	CO2	2016	0.02039
Current policies	MN	LULUCF	Peat harvesting	N2O	2016	0.000096
Current policies	MN	LULUCF	Peatland restoration	CO2	2016	0
Current policies	MN	LULUCF	Reservoirs	CH4	2016	0.646654
Current policies	MN	LULUCF	Reservoirs	CO2	2016	0.012932
Current policies	MN	LULUCF	Rivers and streams	CH4	2016	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2016	0.18092
Current policies	MN	LULUCF	Urban Trees	CO2	2016	-0.849458
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2016	0.21745
Current policies	MN	Residential	Air conditioning	HFC125	2016	0.194805
Current policies	MN	Residential	Air conditioning	HFC143a	2016	0.000028
Current policies	MN	Residential	Air conditioning	HFC32	2016	0.03757
Current policies	MN	Residential	Coal	CH4	2016	0
Current policies	MN	Residential	Coal	CO2	2016	0
Current policies	MN	Residential	Coal	N2O	2016	0
Current policies	MN	Residential	Food additives	CO2	2016	0.02074
Current policies	MN	Residential	Lawn fertilizer	N2O	2016	0.013789
Current policies	MN	Residential	Natural gas	CH4	2016	0.015935
Current policies	MN	Residential	Natural gas	CO2	2016	7.100423
Current policies	MN	Residential	Natural gas	N2O	2016	0.003799
Current policies	MN	Residential	Refined Liquids	CH4	2016	0.00397
Current policies	MN	Residential	Refined Liquids	CO2	2016	1.767882
Current policies	MN	Residential	Refined Liquids	N2O	2016	0.001574
Current policies	MN	Residential	Refrigeration	HFC134a	2016	0.002002
Current policies	MN	Residential	Sequestration in housing	CO2	2016	-0.134556
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2016	0.094274
Current policies	MN	Residential	Wood	CH4	2016	0.26656
Current policies	MN	Residential	Wood	N2O	2016	0.042365
Current policies	MN	Transportation	Aviation	CH4	2016	0.003328
Current policies	MN	Transportation	Aviation	CO2	2016	3.966707
Current policies	MN	Transportation	Aviation	N2O	2016	0.037446
Current policies	MN	Transportation	Bus	CH4	2016	0.001396
Current policies	MN	Transportation	Bus	CO2	2016	0.270219
Current policies	MN	Transportation	Bus	N2O	2016	0.000415
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2016	0.012437
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2016	6.229903
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2016	0.008493
Current policies	MN	Transportation	Light-duty trucks	CH4	2016	0.022825
Current policies	MN	Transportation	Light-duty trucks	CO2	2016	15.109281
Current policies	MN	Transportation	Light-duty trucks	N2O	2016	0.169879
Current policies	MN	Transportation	Military and other off-highway	CH4	2016	0.059201
Current policies	MN	Transportation	Military and other off-highway	CO2	2016	1.107391
Current policies	MN	Transportation	Military and other off-highway	N2O	2016	0.29404
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2016	1.383478
Current policies	MN	Transportation	Motorcycle	CH4	2016	0.000457
Current policies	MN	Transportation	Motorcycle	CO2	2016	0.20571
Current policies	MN	Transportation	Motorcycle	N2O	2016	0.000778
Current policies	MN	Transportation	Natural gas transmission	CH4	2016	1.121527

Current policies	MN	Transportation	Natural gas transmission	CO2	2016	0.70267
Current policies	MN	Transportation	Natural gas transmission	N2O	2016	0.003484
Current policies	MN	Transportation	Passenger cars	CH4	2016	0.008426
Current policies	MN	Transportation	Passenger cars	CO2	2016	7.942466
Current policies	MN	Transportation	Passenger cars	N2O	2016	0.079415
Current policies	MN	Transportation	Railroad	CH4	2016	0.004864
Current policies	MN	Transportation	Railroad	CO2	2016	0.821452
Current policies	MN	Transportation	Railroad	N2O	2016	0.018554
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2016	0.000089
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2016	0.794954
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2016	0.002083
Current policies	MN	Waste	Biosolids land application	N2O	2016	0.011965
Current policies	MN	Waste	Coal	CH4	2016	0
Current policies	MN	Waste	Coal	CO2	2016	0
Current policies	MN	Waste	Coal	N2O	2016	0
Current policies	MN	Waste	Food waste prevention	CO2	2016	0
Current policies	MN	Waste	Hazardous waste	CO2	2016	0.119005
Current policies	MN	Waste	Hazardous waste	N2O	2016	0.003659
Current policies	MN	Waste	Incinerator ash disposal	CH4	2016	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2016	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2016	0
Current policies	MN	Waste	Industrial landfills	CH4	2016	0.132899
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2016	0.014975
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2016	0.001564
Current policies	MN	Waste	Landfill operations	CH4	2016	0.000003
Current policies	MN	Waste	Landfill operations	CO2	2016	0.00183
Current policies	MN	Waste	Landfill operations	N2O	2016	0.000015
Current policies	MN	Waste	Limestone use	CO2	2016	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2016	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2016	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2016	0
Current policies	MN	Waste	MMSW composting	CH4	2016	0
Current policies	MN	Waste	MMSW composting	N2O	2016	0
Current policies	MN	Waste	MMSW landfills	CH4	2016	1.628339
Current policies	MN	Waste	Mass burn	CH4	2016	0
Current policies	MN	Waste	Mass burn	CO2	2016	0
Current policies	MN	Waste	Mass burn	N2O	2016	0
Current policies	MN	Waste	Materials recovery facility	CH4	2016	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2016	0.007439
Current policies	MN	Waste	Materials recovery facility	N2O	2016	0.000059
Current policies	MN	Waste	Medical	CO2	2016	0.004206
Current policies	MN	Waste	Medical	N2O	2016	0.000166
Current policies	MN	Waste	Miscellaneous	CO2	2016	0
Current policies	MN	Waste	Miscellaneous	N2O	2016	0
Current policies	MN	Waste	Natural gas	CH4	2016	0.000007
Current policies	MN	Waste	Natural gas	CO2	2016	0.015601
Current policies	MN	Waste	Natural gas	N2O	2016	0.000079
Current policies	MN	Waste	Oil	CH4	2016	0
Current policies	MN	Waste	Oil	CO2	2016	0.000763
Current policies	MN	Waste	Oil	N2O	2016	0.000001
Current policies	MN	Waste	Propane	CH4	2016	0
Current policies	MN	Waste	Propane	CO2	2016	0.000001
Current policies	MN	Waste	Propane	N2O	2016	0
Current policies	MN	Waste	RDF	CH4	2016	0
Current policies	MN	Waste	RDF	CO2	2016	0
Current policies	MN	Waste	RDF	N2O	2016	0

Current policies	MN	Waste	RDF processing	CH4	2016	0
Current policies	MN	Waste	RDF processing	CO2	2016	0.000099
Current policies	MN	Waste	RDF processing	N2O	2016	0.000001
Current policies	MN	Waste	Rural open burning	CH4	2016	0.007201
Current policies	MN	Waste	Rural open burning	CO2	2016	0.025008
Current policies	MN	Waste	Rural open burning	N2O	2016	0.001981
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2016	-0.316092
Current policies	MN	Waste	Sludge	CH4	2016	0.004038
Current policies	MN	Waste	Sludge	N2O	2016	0.001569
Current policies	MN	Waste	Waste solvent	CO2	2016	0.008275
Current policies	MN	Waste	Wastewater treatment	CH4	2016	0.253262
Current policies	MN	Waste	Wastewater treatment	N2O	2016	0.111834
Current policies	MN	Waste	Wood	CH4	2016	0
Current policies	MN	Waste	Wood	N2O	2016	0
Current policies	MN	Waste	Yard waste composting	CH4	2016	0.029521
Current policies	MN	Waste	Yard waste preprocessing	CH4	2016	0.000003
Current policies	MN	Waste	Yard waste preprocessing	CO2	2016	0.002006
Current policies	MN	Waste	Yard waste preprocessing	N2O	2016	0.000016
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2016	0.183614
Net-zero pathway	MN	Agriculture	American Bison	CH4	2016	0.00683
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2016	2.395781
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2016	0.158572
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2016	0.0305
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2016	0.000492
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2016	0.001042
Net-zero pathway	MN	Agriculture	Cereals	CH4	2016	0.008872
Net-zero pathway	MN	Agriculture	Cereals	N2O	2016	0.002971
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2016	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2016	14.959143
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2016	3.39129
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2016	0.160754
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2016	0.156329
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2016	0.062561
Net-zero pathway	MN	Agriculture	Goats	CH4	2016	0.009148
Net-zero pathway	MN	Agriculture	Goats	N2O	2016	0.000282
Net-zero pathway	MN	Agriculture	Grassland	N2O	2016	1.915606
Net-zero pathway	MN	Agriculture	Horses	CH4	2016	0.027189
Net-zero pathway	MN	Agriculture	Horses	N2O	2016	0.001519
Net-zero pathway	MN	Agriculture	Liming	CO2	2016	0.026145
Net-zero pathway	MN	Agriculture	Litter	CO2	2016	0.097461
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2016	-1.507261
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2016	0.00094
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2016	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2016	0.007753
Net-zero pathway	MN	Agriculture	Oil	CO2	2016	2.348236
Net-zero pathway	MN	Agriculture	Oil	N2O	2016	0.014439
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2016	6.617361
Net-zero pathway	MN	Agriculture	Other	CH4	2016	0.000095
Net-zero pathway	MN	Agriculture	Other	N2O	2016	0.000071
Net-zero pathway	MN	Agriculture	Poultry	CH4	2016	0.047213
Net-zero pathway	MN	Agriculture	Poultry	N2O	2016	0.059699
Net-zero pathway	MN	Agriculture	Pulses	CH4	2016	0.001839
Net-zero pathway	MN	Agriculture	Pulses	N2O	2016	0.000697
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2016	0.021079
Net-zero pathway	MN	Agriculture	Sheep	CH4	2016	0.032992
Net-zero pathway	MN	Agriculture	Sheep	N2O	2016	0.010867

Net-zero pathway	MN	Agriculture	Swine	CH4	2016	2.246914
Net-zero pathway	MN	Agriculture	Swine	N2O	2016	0.179744
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2016	0.000061
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2016	0.00004
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2016	0.52954
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2016	0.914294
Net-zero pathway	MN	Commercial	Biofuel	CO2	2016	0
Net-zero pathway	MN	Commercial	Coal	CH4	2016	0.000067
Net-zero pathway	MN	Commercial	Coal	CO2	2016	0.02626
Net-zero pathway	MN	Commercial	Coal	N2O	2016	0.000121
Net-zero pathway	MN	Commercial	Limestone use	CO2	2016	0.000378
Net-zero pathway	MN	Commercial	Medical use	N2O	2016	0.078566
Net-zero pathway	MN	Commercial	Natural gas	CH4	2016	0.011587
Net-zero pathway	MN	Commercial	Natural gas	CO2	2016	5.161603
Net-zero pathway	MN	Commercial	Natural gas	N2O	2016	0.002762
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2016	0.07796
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2016	12.167809
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2016	0.03483
Net-zero pathway	MN	Commercial	Solvent use	CO2	2016	0.064088
Net-zero pathway	MN	Electricity	Coal	CH4	2016	0.004523
Net-zero pathway	MN	Electricity	Coal	CO2	2016	27.028309
Net-zero pathway	MN	Electricity	Coal	N2O	2016	0.075747
Net-zero pathway	MN	Electricity	Coal storage	CH4	2016	0.042094
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2016	0.005158
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2016	0.006453
Net-zero pathway	MN	Electricity	Natural gas	CH4	2016	0.004343
Net-zero pathway	MN	Electricity	Natural gas	CO2	2016	4.415877
Net-zero pathway	MN	Electricity	Natural gas	N2O	2016	0.061008
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2016	0.017229
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2016	7.119272
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2016	0.049592
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2016	0.020454
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2016	0.726241
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2016	0.087377
Net-zero pathway	MN	Electricity	Transmission	SF6	2016	0.026554
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2016	0
Net-zero pathway	MN	Industry	Coal	CH4	2016	0.038916
Net-zero pathway	MN	Industry	Coal	CO2	2016	1.780119
Net-zero pathway	MN	Industry	Coal	N2O	2016	0.007387
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2016	0.014243
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2016	0.15695
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2016	0.055272
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2016	0.01254
Net-zero pathway	MN	Industry	Natural gas	CH4	2016	0.004409
Net-zero pathway	MN	Industry	Natural gas	CO2	2016	9.821559
Net-zero pathway	MN	Industry	Natural gas	N2O	2016	0.005256
Net-zero pathway	MN	Industry	Oil refining	CH4	2016	0.035842
Net-zero pathway	MN	Industry	Oil refining	CO2	2016	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2016	0.009627
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2016	0.01263
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2016	0.033308
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2016	8.631545
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2016	0.05517
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2016	0.067777
Net-zero pathway	MN	Industry	Solvent	HFC	2016	0.035817
Net-zero pathway	MN	Industry	Taconite induration	CO2	2016	1.744475

Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2016	0.053072
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2016	-14.297824
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2016	-2.399197
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2016	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2016	-2.857099
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2016	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2016	2.161056
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2016	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2016	0.009823
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2016	0.006683
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2016	0
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2016	0
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2016	3.298588
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2016	-0.159458
Net-zero pathway	MN	LULUCF	Litter	CO2	2016	-0.870293
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2016	-0.741149
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2016	2.1014
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2016	0.000807
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2016	0.02039
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2016	0.000096
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2016	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2016	0.646654
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2016	0.012932
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2016	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2016	0.18092
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2016	-0.849458
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2016	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2016	0.21745
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2016	0.194805
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2016	0.000028
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2016	0.03757
Net-zero pathway	MN	Residential	Coal	CH4	2016	0
Net-zero pathway	MN	Residential	Coal	CO2	2016	0
Net-zero pathway	MN	Residential	Coal	N2O	2016	0
Net-zero pathway	MN	Residential	Food additives	CO2	2016	0.02074
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2016	0.013789
Net-zero pathway	MN	Residential	Natural gas	CH4	2016	0.015935
Net-zero pathway	MN	Residential	Natural gas	CO2	2016	7.100423
Net-zero pathway	MN	Residential	Natural gas	N2O	2016	0.003799
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2016	0.00397
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2016	1.767882
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2016	0.001574
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2016	0.002002
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2016	-0.134556
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2016	0.094274
Net-zero pathway	MN	Residential	Wood	CH4	2016	0.26656
Net-zero pathway	MN	Residential	Wood	N2O	2016	0.042365
Net-zero pathway	MN	Transportation	Aviation	CH4	2016	0.003328
Net-zero pathway	MN	Transportation	Aviation	CO2	2016	3.966707
Net-zero pathway	MN	Transportation	Aviation	N2O	2016	0.037446
Net-zero pathway	MN	Transportation	Bus	CH4	2016	0.001396
Net-zero pathway	MN	Transportation	Bus	CO2	2016	0.270219
Net-zero pathway	MN	Transportation	Bus	N2O	2016	0.000415
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2016	0.012437
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2016	6.229903
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2016	0.008493

Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2016	0.022825
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2016	15.109281
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2016	0.169879
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2016	0.059201
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2016	1.107391
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2016	0.29404
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2016	1.383478
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2016	0.000457
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2016	0.20571
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2016	0.000778
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2016	1.121527
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2016	0.70267
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2016	0.003484
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2016	0.008426
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2016	7.942466
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2016	0.079415
Net-zero pathway	MN	Transportation	Railroad	CH4	2016	0.004864
Net-zero pathway	MN	Transportation	Railroad	CO2	2016	0.821452
Net-zero pathway	MN	Transportation	Railroad	N2O	2016	0.018554
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2016	0.000089
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2016	0.794954
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2016	0.002083
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2016	0.011965
Net-zero pathway	MN	Waste	Coal	CH4	2016	0
Net-zero pathway	MN	Waste	Coal	CO2	2016	0
Net-zero pathway	MN	Waste	Coal	N2O	2016	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2016	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2016	0.119005
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2016	0.003659
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2016	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2016	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2016	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2016	0.132899
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2016	0.014975
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2016	0.001564
Net-zero pathway	MN	Waste	Landfill operations	CH4	2016	0.000003
Net-zero pathway	MN	Waste	Landfill operations	CO2	2016	0.00183
Net-zero pathway	MN	Waste	Landfill operations	N2O	2016	0.000015
Net-zero pathway	MN	Waste	Limestone use	CO2	2016	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2016	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2016	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2016	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2016	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2016	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2016	1.628339
Net-zero pathway	MN	Waste	Mass burn	CH4	2016	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2016	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2016	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2016	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2016	0.007439
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2016	0.000059
Net-zero pathway	MN	Waste	Medical	CO2	2016	0.004206
Net-zero pathway	MN	Waste	Medical	N2O	2016	0.000166
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2016	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2016	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2016	0.000007

Net-zero pathway	MN	Waste	Natural gas	CO2	2016	0.015601
Net-zero pathway	MN	Waste	Natural gas	N2O	2016	0.000079
Net-zero pathway	MN	Waste	Oil	CH4	2016	0
Net-zero pathway	MN	Waste	Oil	CO2	2016	0.000763
Net-zero pathway	MN	Waste	Oil	N2O	2016	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2016	0
Net-zero pathway	MN	Waste	Propane	CO2	2016	0.000001
Net-zero pathway	MN	Waste	Propane	N2O	2016	0
Net-zero pathway	MN	Waste	RDF	CH4	2016	0
Net-zero pathway	MN	Waste	RDF	CO2	2016	0
Net-zero pathway	MN	Waste	RDF	N2O	2016	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2016	0
Net-zero pathway	MN	Waste	RDF processing	CO2	2016	0.000099
Net-zero pathway	MN	Waste	RDF processing	N2O	2016	0.000001
Net-zero pathway	MN	Waste	Rural open burning	CH4	2016	0.007201
Net-zero pathway	MN	Waste	Rural open burning	CO2	2016	0.025008
Net-zero pathway	MN	Waste	Rural open burning	N2O	2016	0.001981
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2016	-0.316092
Net-zero pathway	MN	Waste	Sludge	CH4	2016	0.004038
Net-zero pathway	MN	Waste	Sludge	N2O	2016	0.001569
Net-zero pathway	MN	Waste	Waste solvent	CO2	2016	0.008275
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2016	0.253262
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2016	0.111834
Net-zero pathway	MN	Waste	Wood	CH4	2016	0
Net-zero pathway	MN	Waste	Wood	N2O	2016	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2016	0.029521
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2016	0.000003
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2016	0.002006
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2016	0.000016
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2017	0.182946
Current policies	MN	Agriculture	American Bison	CH4	2017	0.006737
Current policies	MN	Agriculture	Beef Cattle	CH4	2017	2.402273
Current policies	MN	Agriculture	Beef Cattle	N2O	2017	0.154147
Current policies	MN	Agriculture	Belowground Biomass	CO2	2017	0.030389
Current policies	MN	Agriculture	Biofuel	CH4	2017	0.000518
Current policies	MN	Agriculture	Biofuel	N2O	2017	0.001098
Current policies	MN	Agriculture	Cereals	CH4	2017	0.008868
Current policies	MN	Agriculture	Cereals	N2O	2017	0.002974
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2017	0
Current policies	MN	Agriculture	Cropland	N2O	2017	14.254485
Current policies	MN	Agriculture	Dairy Cattle	CH4	2017	3.543978
Current policies	MN	Agriculture	Dairy Cattle	N2O	2017	0.164066
Current policies	MN	Agriculture	Dairy Heifers	N2O	2017	0.154536
Current policies	MN	Agriculture	Dead Wood	CO2	2017	0.062333
Current policies	MN	Agriculture	Goats	CH4	2017	0.009281
Current policies	MN	Agriculture	Goats	N2O	2017	0.000286
Current policies	MN	Agriculture	Grassland	N2O	2017	1.81439
Current policies	MN	Agriculture	Horses	CH4	2017	0.0251
Current policies	MN	Agriculture	Horses	N2O	2017	0.001402
Current policies	MN	Agriculture	Liming	CO2	2017	0
Current policies	MN	Agriculture	Litter	CO2	2017	0.097106
Current policies	MN	Agriculture	Mineral Soil	CO2	2017	-1.603557
Current policies	MN	Agriculture	Mules and Asses	CH4	2017	0.000944
Current policies	MN	Agriculture	Mules and Asses	N2O	2017	0.000034
Current policies	MN	Agriculture	Oil	CH4	2017	0.00817
Current policies	MN	Agriculture	Oil	CO2	2017	2.478977

Current policies	MN	Agriculture	Oil	N2O	2017	0.01523
Current policies	MN	Agriculture	Organic Soil	CO2	2017	6.739798
Current policies	MN	Agriculture	Other	CH4	2017	0.000089
Current policies	MN	Agriculture	Other	N2O	2017	0.000067
Current policies	MN	Agriculture	Poultry	CH4	2017	0.047409
Current policies	MN	Agriculture	Poultry	N2O	2017	0.060542
Current policies	MN	Agriculture	Pulses	CH4	2017	0.001765
Current policies	MN	Agriculture	Pulses	N2O	2017	0.00069
Current policies	MN	Agriculture	Rice Cultivation	CH4	2017	0
Current policies	MN	Agriculture	Sheep	CH4	2017	0.034312
Current policies	MN	Agriculture	Sheep	N2O	2017	0.011301
Current policies	MN	Agriculture	Swine	CH4	2017	2.225734
Current policies	MN	Agriculture	Swine	N2O	2017	0.185502
Current policies	MN	Agriculture	Tubers and Roots	CH4	2017	0.00006
Current policies	MN	Agriculture	Tubers and Roots	N2O	2017	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2017	0.533916
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2017	0.68341
Current policies	MN	Commercial	Biofuel	CO2	2017	0
Current policies	MN	Commercial	Coal	CH4	2017	0.000066
Current policies	MN	Commercial	Coal	CO2	2017	0.025729
Current policies	MN	Commercial	Coal	N2O	2017	0.000118
Current policies	MN	Commercial	Limestone use	CO2	2017	0.00031
Current policies	MN	Commercial	Medical use	N2O	2017	0.078741
Current policies	MN	Commercial	Natural gas	CH4	2017	0.012595
Current policies	MN	Commercial	Natural gas	CO2	2017	5.610808
Current policies	MN	Commercial	Natural gas	N2O	2017	0.003003
Current policies	MN	Commercial	Refined Liquids	CH4	2017	0.08678
Current policies	MN	Commercial	Refined Liquids	CO2	2017	14.556877
Current policies	MN	Commercial	Refined Liquids	N2O	2017	0.040654
Current policies	MN	Commercial	Solvent use	CO2	2017	0.080955
Current policies	MN	Electricity	Coal	CH4	2017	0.004233
Current policies	MN	Electricity	Coal	CO2	2017	25.626677
Current policies	MN	Electricity	Coal	N2O	2017	0.07402
Current policies	MN	Electricity	Coal storage	CH4	2017	0.042584
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2017	0.004755
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2017	0.006453
Current policies	MN	Electricity	Natural gas	CH4	2017	0.003022
Current policies	MN	Electricity	Natural gas	CO2	2017	3.188778
Current policies	MN	Electricity	Natural gas	N2O	2017	0.045393
Current policies	MN	Electricity	Net electricity imports	CH4	2017	0.021128
Current policies	MN	Electricity	Net electricity imports	CO2	2017	8.747112
Current policies	MN	Electricity	Net electricity imports	N2O	2017	0.058042
Current policies	MN	Electricity	Refined Liquids	CH4	2017	0.015055
Current policies	MN	Electricity	Refined Liquids	CO2	2017	0.717441
Current policies	MN	Electricity	Refined Liquids	N2O	2017	0.076585
Current policies	MN	Electricity	Transmission	SF6	2017	0.037295
Current policies	MN	Industry	Ammonia manufacture	CO2	2017	0
Current policies	MN	Industry	Coal	CH4	2017	0.038085
Current policies	MN	Industry	Coal	CO2	2017	1.79322
Current policies	MN	Industry	Coal	N2O	2017	0.007404
Current policies	MN	Industry	Industrial solvent release	CO2	2017	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2017	0.15729
Current policies	MN	Industry	Insulating foam manufacture	HFC	2017	0.052021
Current policies	MN	Industry	Magnesium casting	SF6	2017	0
Current policies	MN	Industry	Natural gas	CH4	2017	0.004475
Current policies	MN	Industry	Natural gas	CO2	2017	9.96663

Current policies	MN	Industry	Natural gas	N2O	2017	0.005334
Current policies	MN	Industry	Oil refining	CH4	2017	0.109061
Current policies	MN	Industry	Oil refining	CO2	2017	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2017	0.009627
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2017	0.00917
Current policies	MN	Industry	Refined Liquids	CH4	2017	0.05328
Current policies	MN	Industry	Refined Liquids	CO2	2017	8.689923
Current policies	MN	Industry	Refined Liquids	N2O	2017	0.086653
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2017	0.067777
Current policies	MN	Industry	Solvent	HFC	2017	0.035872
Current policies	MN	Industry	Taconite induration	CO2	2017	2.08237
Current policies	MN	Industry	VOC and toxics release	CO2	2017	0.052062
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2017	-14.427942
Current policies	MN	LULUCF	Belowground Biomass	CO2	2017	-2.421609
Current policies	MN	LULUCF	Canals and ditches	CH4	2017	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2017	-2.958882
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2017	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2017	2.210985
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2017	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2017	0.001744
Current policies	MN	LULUCF	Forest Fires	N2O	2017	0.001232
Current policies	MN	LULUCF	Grass Fires	CH4	2017	0
Current policies	MN	LULUCF	Grass Fires	N2O	2017	0
Current policies	MN	LULUCF	Lakes and ponds	CH4	2017	3.298794
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2017	-0.221181
Current policies	MN	LULUCF	Litter	CO2	2017	-0.867108
Current policies	MN	LULUCF	Mineral Soil	CO2	2017	-0.443421
Current policies	MN	LULUCF	Organic Soil	CO2	2017	2.094172
Current policies	MN	LULUCF	Peat harvesting	CH4	2017	0.000787
Current policies	MN	LULUCF	Peat harvesting	CO2	2017	0.021698
Current policies	MN	LULUCF	Peat harvesting	N2O	2017	0.000091
Current policies	MN	LULUCF	Peatland restoration	CO2	2017	0
Current policies	MN	LULUCF	Reservoirs	CH4	2017	0.645958
Current policies	MN	LULUCF	Reservoirs	CO2	2017	0.010081
Current policies	MN	LULUCF	Rivers and streams	CH4	2017	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2017	0.182801
Current policies	MN	LULUCF	Urban Trees	CO2	2017	-0.8569
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2017	0
Current policies	MN	Residential	Air conditioning	HFC125	2017	0.184296
Current policies	MN	Residential	Air conditioning	HFC143a	2017	0.000024
Current policies	MN	Residential	Air conditioning	HFC32	2017	0.035543
Current policies	MN	Residential	Coal	CH4	2017	0
Current policies	MN	Residential	Coal	CO2	2017	0
Current policies	MN	Residential	Coal	N2O	2017	0
Current policies	MN	Residential	Food additives	CO2	2017	0.020772
Current policies	MN	Residential	Lawn fertilizer	N2O	2017	0.013876
Current policies	MN	Residential	Natural gas	CH4	2017	0.016711
Current policies	MN	Residential	Natural gas	CO2	2017	7.4444
Current policies	MN	Residential	Natural gas	N2O	2017	0.003984
Current policies	MN	Residential	Refined Liquids	CH4	2017	0.004324
Current policies	MN	Residential	Refined Liquids	CO2	2017	2.009604
Current policies	MN	Residential	Refined Liquids	N2O	2017	0.001535
Current policies	MN	Residential	Refrigeration	HFC134a	2017	0.002072
Current policies	MN	Residential	Sequestration in housing	CO2	2017	0.566317
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2017	0.096307
Current policies	MN	Residential	Wood	CH4	2017	0.234461

Current policies	MN	Residential	Wood	N2O	2017	0.037264
Current policies	MN	Transportation	Aviation	CH4	2017	0.003377
Current policies	MN	Transportation	Aviation	CO2	2017	4.045071
Current policies	MN	Transportation	Aviation	N2O	2017	0.03819
Current policies	MN	Transportation	Bus	CH4	2017	0.002734
Current policies	MN	Transportation	Bus	CO2	2017	0.334649
Current policies	MN	Transportation	Bus	N2O	2017	0.000489
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2017	0.004808
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2017	6.389845
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2017	0.011048
Current policies	MN	Transportation	Light-duty trucks	CH4	2017	0.031033
Current policies	MN	Transportation	Light-duty trucks	CO2	2017	16.05983
Current policies	MN	Transportation	Light-duty trucks	N2O	2017	0.11701
Current policies	MN	Transportation	Military and other off-highway	CH4	2017	0.05608
Current policies	MN	Transportation	Military and other off-highway	CO2	2017	0.850783
Current policies	MN	Transportation	Military and other off-highway	N2O	2017	0.278632
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2017	1.489558
Current policies	MN	Transportation	Motorcycle	CH4	2017	0.001924
Current policies	MN	Transportation	Motorcycle	CO2	2017	0.201848
Current policies	MN	Transportation	Motorcycle	N2O	2017	0.00045
Current policies	MN	Transportation	Natural gas transmission	CH4	2017	1.102163
Current policies	MN	Transportation	Natural gas transmission	CO2	2017	0.790733
Current policies	MN	Transportation	Natural gas transmission	N2O	2017	0.003938
Current policies	MN	Transportation	Passenger cars	CH4	2017	0.017626
Current policies	MN	Transportation	Passenger cars	CO2	2017	7.839952
Current policies	MN	Transportation	Passenger cars	N2O	2017	0.048583
Current policies	MN	Transportation	Railroad	CH4	2017	0.004822
Current policies	MN	Transportation	Railroad	CO2	2017	0.788367
Current policies	MN	Transportation	Railroad	N2O	2017	0.018394
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2017	0.00008
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2017	0.76527
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2017	0.001589
Current policies	MN	Waste	Biosolids land application	N2O	2017	0.011997
Current policies	MN	Waste	Coal	CH4	2017	0
Current policies	MN	Waste	Coal	CO2	2017	0
Current policies	MN	Waste	Coal	N2O	2017	0
Current policies	MN	Waste	Food waste prevention	CO2	2017	0
Current policies	MN	Waste	Hazardous waste	CO2	2017	0
Current policies	MN	Waste	Hazardous waste	N2O	2017	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2017	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2017	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2017	0
Current policies	MN	Waste	Industrial landfills	CH4	2017	0.128971
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2017	0.010423
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2017	0.001092
Current policies	MN	Waste	Landfill operations	CH4	2017	0.000026
Current policies	MN	Waste	Landfill operations	CO2	2017	0.017071
Current policies	MN	Waste	Landfill operations	N2O	2017	0.000136
Current policies	MN	Waste	Limestone use	CO2	2017	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2017	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2017	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2017	0
Current policies	MN	Waste	MMSW composting	CH4	2017	0
Current policies	MN	Waste	MMSW composting	N2O	2017	0
Current policies	MN	Waste	MMSW landfills	CH4	2017	1.745091
Current policies	MN	Waste	Mass burn	CH4	2017	0

Current policies	MN	Waste	Mass burn	CO2	2017	0
Current policies	MN	Waste	Mass burn	N2O	2017	0
Current policies	MN	Waste	Materials recovery facility	CH4	2017	0.000012
Current policies	MN	Waste	Materials recovery facility	CO2	2017	0.007975
Current policies	MN	Waste	Materials recovery facility	N2O	2017	0.000064
Current policies	MN	Waste	Medical	CO2	2017	0.004763
Current policies	MN	Waste	Medical	N2O	2017	0.000188
Current policies	MN	Waste	Miscellaneous	CO2	2017	0
Current policies	MN	Waste	Miscellaneous	N2O	2017	0
Current policies	MN	Waste	Natural gas	CH4	2017	0.000005
Current policies	MN	Waste	Natural gas	CO2	2017	0.012358
Current policies	MN	Waste	Natural gas	N2O	2017	0.000063
Current policies	MN	Waste	Oil	CH4	2017	0
Current policies	MN	Waste	Oil	CO2	2017	0.000873
Current policies	MN	Waste	Oil	N2O	2017	0.000001
Current policies	MN	Waste	Propane	CH4	2017	0
Current policies	MN	Waste	Propane	CO2	2017	0
Current policies	MN	Waste	Propane	N2O	2017	0
Current policies	MN	Waste	RDF	CH4	2017	0
Current policies	MN	Waste	RDF	CO2	2017	0
Current policies	MN	Waste	RDF	N2O	2017	0
Current policies	MN	Waste	RDF processing	CH4	2017	0.000003
Current policies	MN	Waste	RDF processing	CO2	2017	0.002211
Current policies	MN	Waste	RDF processing	N2O	2017	0.000018
Current policies	MN	Waste	Rural open burning	CH4	2017	0.006979
Current policies	MN	Waste	Rural open burning	CO2	2017	0.024237
Current policies	MN	Waste	Rural open burning	N2O	2017	0.00192
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2017	-0.486084
Current policies	MN	Waste	Sludge	CH4	2017	0.004208
Current policies	MN	Waste	Sludge	N2O	2017	0.001651
Current policies	MN	Waste	Waste solvent	CO2	2017	0
Current policies	MN	Waste	Wastewater treatment	CH4	2017	0.255256
Current policies	MN	Waste	Wastewater treatment	N2O	2017	0.112357
Current policies	MN	Waste	Wood	CH4	2017	0
Current policies	MN	Waste	Wood	N2O	2017	0
Current policies	MN	Waste	Yard waste composting	CH4	2017	0.031358
Current policies	MN	Waste	Yard waste preprocessing	CH4	2017	0.000003
Current policies	MN	Waste	Yard waste preprocessing	CO2	2017	0.00213
Current policies	MN	Waste	Yard waste preprocessing	N2O	2017	0.000017
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2017	0.182946
Net-zero pathway	MN	Agriculture	American Bison	CH4	2017	0.006737
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2017	2.402273
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2017	0.154147
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2017	0.030389
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2017	0.000518
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2017	0.001098
Net-zero pathway	MN	Agriculture	Cereals	CH4	2017	0.008868
Net-zero pathway	MN	Agriculture	Cereals	N2O	2017	0.002974
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2017	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2017	14.254485
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2017	3.543978
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2017	0.164066
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2017	0.154536
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2017	0.062333
Net-zero pathway	MN	Agriculture	Goats	CH4	2017	0.009281
Net-zero pathway	MN	Agriculture	Goats	N2O	2017	0.000286

Net-zero pathway	MN	Agriculture	Grassland	N2O	2017	1.81439
Net-zero pathway	MN	Agriculture	Horses	CH4	2017	0.0251
Net-zero pathway	MN	Agriculture	Horses	N2O	2017	0.001402
Net-zero pathway	MN	Agriculture	Liming	CO2	2017	0
Net-zero pathway	MN	Agriculture	Litter	CO2	2017	0.097106
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2017	-1.603557
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2017	0.000944
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2017	0.000034
Net-zero pathway	MN	Agriculture	Oil	CH4	2017	0.00817
Net-zero pathway	MN	Agriculture	Oil	CO2	2017	2.478977
Net-zero pathway	MN	Agriculture	Oil	N2O	2017	0.01523
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2017	6.739798
Net-zero pathway	MN	Agriculture	Other	CH4	2017	0.000089
Net-zero pathway	MN	Agriculture	Other	N2O	2017	0.000067
Net-zero pathway	MN	Agriculture	Poultry	CH4	2017	0.047409
Net-zero pathway	MN	Agriculture	Poultry	N2O	2017	0.060542
Net-zero pathway	MN	Agriculture	Pulses	CH4	2017	0.001765
Net-zero pathway	MN	Agriculture	Pulses	N2O	2017	0.00069
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2017	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2017	0.034312
Net-zero pathway	MN	Agriculture	Sheep	N2O	2017	0.011301
Net-zero pathway	MN	Agriculture	Swine	CH4	2017	2.225734
Net-zero pathway	MN	Agriculture	Swine	N2O	2017	0.185502
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2017	0.00006
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2017	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2017	0.533916
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2017	0.68341
Net-zero pathway	MN	Commercial	Biofuel	CO2	2017	0
Net-zero pathway	MN	Commercial	Coal	CH4	2017	0.000066
Net-zero pathway	MN	Commercial	Coal	CO2	2017	0.025729
Net-zero pathway	MN	Commercial	Coal	N2O	2017	0.000118
Net-zero pathway	MN	Commercial	Limestone use	CO2	2017	0.00031
Net-zero pathway	MN	Commercial	Medical use	N2O	2017	0.078741
Net-zero pathway	MN	Commercial	Natural gas	CH4	2017	0.012595
Net-zero pathway	MN	Commercial	Natural gas	CO2	2017	5.610808
Net-zero pathway	MN	Commercial	Natural gas	N2O	2017	0.003003
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2017	0.08678
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2017	14.556877
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2017	0.040654
Net-zero pathway	MN	Commercial	Solvent use	CO2	2017	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2017	0.004233
Net-zero pathway	MN	Electricity	Coal	CO2	2017	25.626677
Net-zero pathway	MN	Electricity	Coal	N2O	2017	0.07402
Net-zero pathway	MN	Electricity	Coal storage	CH4	2017	0.042584
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2017	0.004755
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2017	0.006453
Net-zero pathway	MN	Electricity	Natural gas	CH4	2017	0.003022
Net-zero pathway	MN	Electricity	Natural gas	CO2	2017	3.188778
Net-zero pathway	MN	Electricity	Natural gas	N2O	2017	0.045393
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2017	0.021128
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2017	8.747112
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2017	0.058042
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2017	0.015055
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2017	0.717441
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2017	0.076585
Net-zero pathway	MN	Electricity	Transmission	SF6	2017	0.037295

Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2017	0
Net-zero pathway	MN	Industry	Coal	CH4	2017	0.038085
Net-zero pathway	MN	Industry	Coal	CO2	2017	1.79322
Net-zero pathway	MN	Industry	Coal	N2O	2017	0.007404
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2017	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2017	0.15729
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2017	0.052021
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2017	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2017	0.004475
Net-zero pathway	MN	Industry	Natural gas	CO2	2017	9.96663
Net-zero pathway	MN	Industry	Natural gas	N2O	2017	0.005334
Net-zero pathway	MN	Industry	Oil refining	CH4	2017	0.109061
Net-zero pathway	MN	Industry	Oil refining	CO2	2017	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2017	0.009627
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2017	0.00917
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2017	0.05328
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2017	8.689923
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2017	0.086653
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2017	0.067777
Net-zero pathway	MN	Industry	Solvent	HFC	2017	0.035872
Net-zero pathway	MN	Industry	Taconite induration	CO2	2017	2.08237
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2017	0.052062
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2017	-14.427942
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2017	-2.421609
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2017	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2017	-2.958882
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2017	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2017	2.210985
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2017	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2017	0.001744
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2017	0.001232
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2017	0
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2017	0
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2017	3.298794
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2017	-0.221181
Net-zero pathway	MN	LULUCF	Litter	CO2	2017	-0.867108
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2017	-0.443421
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2017	2.094172
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2017	0.000787
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2017	0.021698
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2017	0.000091
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2017	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2017	0.645958
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2017	0.010081
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2017	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2017	0.182801
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2017	-0.8569
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2017	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2017	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2017	0.184296
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2017	0.000024
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2017	0.035543
Net-zero pathway	MN	Residential	Coal	CH4	2017	0
Net-zero pathway	MN	Residential	Coal	CO2	2017	0
Net-zero pathway	MN	Residential	Coal	N2O	2017	0
Net-zero pathway	MN	Residential	Food additives	CO2	2017	0.020772

Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2017	0.013876
Net-zero pathway	MN	Residential	Natural gas	CH4	2017	0.016711
Net-zero pathway	MN	Residential	Natural gas	CO2	2017	7.4444
Net-zero pathway	MN	Residential	Natural gas	N2O	2017	0.003984
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2017	0.004324
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2017	2.009604
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2017	0.001535
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2017	0.002072
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2017	0.566317
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2017	0.096307
Net-zero pathway	MN	Residential	Wood	CH4	2017	0.234461
Net-zero pathway	MN	Residential	Wood	N2O	2017	0.037264
Net-zero pathway	MN	Transportation	Aviation	CH4	2017	0.003377
Net-zero pathway	MN	Transportation	Aviation	CO2	2017	4.045071
Net-zero pathway	MN	Transportation	Aviation	N2O	2017	0.03819
Net-zero pathway	MN	Transportation	Bus	CH4	2017	0.002734
Net-zero pathway	MN	Transportation	Bus	CO2	2017	0.334649
Net-zero pathway	MN	Transportation	Bus	N2O	2017	0.000489
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2017	0.004808
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2017	6.389845
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2017	0.011048
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2017	0.031033
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2017	16.05983
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2017	0.11701
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2017	0.05608
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2017	0.850783
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2017	0.278632
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2017	1.489558
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2017	0.001924
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2017	0.201848
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2017	0.00045
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2017	1.102163
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2017	0.790733
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2017	0.003938
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2017	0.017626
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2017	7.839952
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2017	0.048583
Net-zero pathway	MN	Transportation	Railroad	CH4	2017	0.004822
Net-zero pathway	MN	Transportation	Railroad	CO2	2017	0.788367
Net-zero pathway	MN	Transportation	Railroad	N2O	2017	0.018394
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2017	0.00008
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2017	0.76527
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2017	0.001589
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2017	0.011997
Net-zero pathway	MN	Waste	Coal	CH4	2017	0
Net-zero pathway	MN	Waste	Coal	CO2	2017	0
Net-zero pathway	MN	Waste	Coal	N2O	2017	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2017	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2017	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2017	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2017	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2017	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2017	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2017	0.128971
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2017	0.010423
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2017	0.001092

Net-zero pathway	MN	Waste	Landfill operations	CH4	2017	0.000026
Net-zero pathway	MN	Waste	Landfill operations	CO2	2017	0.017071
Net-zero pathway	MN	Waste	Landfill operations	N2O	2017	0.000136
Net-zero pathway	MN	Waste	Limestone use	CO2	2017	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2017	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2017	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2017	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2017	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2017	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2017	1.745091
Net-zero pathway	MN	Waste	Mass burn	CH4	2017	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2017	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2017	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2017	0.000012
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2017	0.007975
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2017	0.000064
Net-zero pathway	MN	Waste	Medical	CO2	2017	0.004763
Net-zero pathway	MN	Waste	Medical	N2O	2017	0.000188
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2017	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2017	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2017	0.000005
Net-zero pathway	MN	Waste	Natural gas	CO2	2017	0.012358
Net-zero pathway	MN	Waste	Natural gas	N2O	2017	0.000063
Net-zero pathway	MN	Waste	Oil	CH4	2017	0
Net-zero pathway	MN	Waste	Oil	CO2	2017	0.000873
Net-zero pathway	MN	Waste	Oil	N2O	2017	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2017	0
Net-zero pathway	MN	Waste	Propane	CO2	2017	0
Net-zero pathway	MN	Waste	Propane	N2O	2017	0
Net-zero pathway	MN	Waste	RDF	CH4	2017	0
Net-zero pathway	MN	Waste	RDF	CO2	2017	0
Net-zero pathway	MN	Waste	RDF	N2O	2017	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2017	0.000003
Net-zero pathway	MN	Waste	RDF processing	CO2	2017	0.002211
Net-zero pathway	MN	Waste	RDF processing	N2O	2017	0.000018
Net-zero pathway	MN	Waste	Rural open burning	CH4	2017	0.006979
Net-zero pathway	MN	Waste	Rural open burning	CO2	2017	0.024237
Net-zero pathway	MN	Waste	Rural open burning	N2O	2017	0.00192
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2017	-0.486084
Net-zero pathway	MN	Waste	Sludge	CH4	2017	0.004208
Net-zero pathway	MN	Waste	Sludge	N2O	2017	0.001651
Net-zero pathway	MN	Waste	Waste solvent	CO2	2017	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2017	0.255256
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2017	0.112357
Net-zero pathway	MN	Waste	Wood	CH4	2017	0
Net-zero pathway	MN	Waste	Wood	N2O	2017	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2017	0.031358
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2017	0.000003
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2017	0.00213
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2017	0.000017
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2018	0.182278
Current policies	MN	Agriculture	American Bison	CH4	2018	0.006646
Current policies	MN	Agriculture	Beef Cattle	CH4	2018	2.404838
Current policies	MN	Agriculture	Beef Cattle	N2O	2018	0.156573
Current policies	MN	Agriculture	Belowground Biomass	CO2	2018	0.030278
Current policies	MN	Agriculture	Biofuel	CH4	2018	0.000832

Current policies	MN	Agriculture	Biofuel	N2O	2018	0.001763
Current policies	MN	Agriculture	Cereals	CH4	2018	0.008872
Current policies	MN	Agriculture	Cereals	N2O	2018	0.002979
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2018	0
Current policies	MN	Agriculture	Cropland	N2O	2018	16.661066
Current policies	MN	Agriculture	Dairy Cattle	CH4	2018	3.613752
Current policies	MN	Agriculture	Dairy Cattle	N2O	2018	0.163634
Current policies	MN	Agriculture	Dairy Heifers	N2O	2018	0.151175
Current policies	MN	Agriculture	Dead Wood	CO2	2018	0.062106
Current policies	MN	Agriculture	Goats	CH4	2018	0.009413
Current policies	MN	Agriculture	Goats	N2O	2018	0.00029
Current policies	MN	Agriculture	Grassland	N2O	2018	1.893502
Current policies	MN	Agriculture	Horses	CH4	2018	0.023012
Current policies	MN	Agriculture	Horses	N2O	2018	0.001286
Current policies	MN	Agriculture	Liming	CO2	2018	0
Current policies	MN	Agriculture	Litter	CO2	2018	0.096752
Current policies	MN	Agriculture	Mineral Soil	CO2	2018	-0.984712
Current policies	MN	Agriculture	Mules and Asses	CH4	2018	0.000948
Current policies	MN	Agriculture	Mules and Asses	N2O	2018	0.000035
Current policies	MN	Agriculture	Oil	CH4	2018	0.008334
Current policies	MN	Agriculture	Oil	CO2	2018	2.550064
Current policies	MN	Agriculture	Oil	N2O	2018	0.015423
Current policies	MN	Agriculture	Organic Soil	CO2	2018	6.737701
Current policies	MN	Agriculture	Other	CH4	2018	0.000091
Current policies	MN	Agriculture	Other	N2O	2018	0.00007
Current policies	MN	Agriculture	Poultry	CH4	2018	0.047051
Current policies	MN	Agriculture	Poultry	N2O	2018	0.060846
Current policies	MN	Agriculture	Pulses	CH4	2018	0.001739
Current policies	MN	Agriculture	Pulses	N2O	2018	0.000684
Current policies	MN	Agriculture	Rice Cultivation	CH4	2018	0
Current policies	MN	Agriculture	Sheep	CH4	2018	0.034312
Current policies	MN	Agriculture	Sheep	N2O	2018	0.011301
Current policies	MN	Agriculture	Swine	CH4	2018	2.355056
Current policies	MN	Agriculture	Swine	N2O	2018	0.187492
Current policies	MN	Agriculture	Tubers and Roots	CH4	2018	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2018	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2018	0.564366
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2018	0.613428
Current policies	MN	Commercial	Biofuel	CO2	2018	0
Current policies	MN	Commercial	Coal	CH4	2018	0.000064
Current policies	MN	Commercial	Coal	CO2	2018	0.025005
Current policies	MN	Commercial	Coal	N2O	2018	0.000115
Current policies	MN	Commercial	Limestone use	CO2	2018	0.000007
Current policies	MN	Commercial	Medical use	N2O	2018	0.078814
Current policies	MN	Commercial	Natural gas	CH4	2018	0.014046
Current policies	MN	Commercial	Natural gas	CO2	2018	6.257037
Current policies	MN	Commercial	Natural gas	N2O	2018	0.003349
Current policies	MN	Commercial	Refined Liquids	CH4	2018	0.077665
Current policies	MN	Commercial	Refined Liquids	CO2	2018	10.923706
Current policies	MN	Commercial	Refined Liquids	N2O	2018	0.032221
Current policies	MN	Commercial	Solvent use	CO2	2018	0.080955
Current policies	MN	Electricity	Coal	CH4	2018	0.004392
Current policies	MN	Electricity	Coal	CO2	2018	26.378846
Current policies	MN	Electricity	Coal	N2O	2018	0.075425
Current policies	MN	Electricity	Coal storage	CH4	2018	0.043115
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2018	0.004598

Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2018	0.006453
Current policies	MN	Electricity	Natural gas	CH4	2018	0.004033
Current policies	MN	Electricity	Natural gas	CO2	2018	4.183429
Current policies	MN	Electricity	Natural gas	N2O	2018	0.059121
Current policies	MN	Electricity	Net electricity imports	CH4	2018	0.016896
Current policies	MN	Electricity	Net electricity imports	CO2	2018	7.453755
Current policies	MN	Electricity	Net electricity imports	N2O	2018	0.050046
Current policies	MN	Electricity	Refined Liquids	CH4	2018	0.012982
Current policies	MN	Electricity	Refined Liquids	CO2	2018	0.743113
Current policies	MN	Electricity	Refined Liquids	N2O	2018	0.075678
Current policies	MN	Electricity	Transmission	SF6	2018	0.031793
Current policies	MN	Industry	Ammonia manufacture	CO2	2018	0
Current policies	MN	Industry	Coal	CH4	2018	0.039904
Current policies	MN	Industry	Coal	CO2	2018	1.725487
Current policies	MN	Industry	Coal	N2O	2018	0.007066
Current policies	MN	Industry	Industrial solvent release	CO2	2018	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2018	0.145155
Current policies	MN	Industry	Insulating foam manufacture	HFC	2018	0
Current policies	MN	Industry	Magnesium casting	SF6	2018	0
Current policies	MN	Industry	Natural gas	CH4	2018	0.004381
Current policies	MN	Industry	Natural gas	CO2	2018	9.758172
Current policies	MN	Industry	Natural gas	N2O	2018	0.005222
Current policies	MN	Industry	Oil refining	CH4	2018	0.037735
Current policies	MN	Industry	Oil refining	CO2	2018	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2018	0.009627
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2018	0.011185
Current policies	MN	Industry	Refined Liquids	CH4	2018	0.055503
Current policies	MN	Industry	Refined Liquids	CO2	2018	9.031947
Current policies	MN	Industry	Refined Liquids	N2O	2018	0.090661
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2018	0.013329
Current policies	MN	Industry	Solvent	HFC	2018	0.037833
Current policies	MN	Industry	Taconite induration	CO2	2018	2.14775
Current policies	MN	Industry	VOC and toxics release	CO2	2018	0.052389
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2018	-14.558057
Current policies	MN	LULUCF	Belowground Biomass	CO2	2018	-2.44402
Current policies	MN	LULUCF	Canals and ditches	CH4	2018	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2018	-3.060666
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2018	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2018	2.25258
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2018	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2018	0.042787
Current policies	MN	LULUCF	Forest Fires	N2O	2018	0.029497
Current policies	MN	LULUCF	Grass Fires	CH4	2018	0.001945
Current policies	MN	LULUCF	Grass Fires	N2O	2018	0.00168
Current policies	MN	LULUCF	Lakes and ponds	CH4	2018	3.298792
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2018	-0.214828
Current policies	MN	LULUCF	Litter	CO2	2018	-0.863922
Current policies	MN	LULUCF	Mineral Soil	CO2	2018	-0.784748
Current policies	MN	LULUCF	Organic Soil	CO2	2018	2.076735
Current policies	MN	LULUCF	Peat harvesting	CH4	2018	0.00068
Current policies	MN	LULUCF	Peat harvesting	CO2	2018	0.017667
Current policies	MN	LULUCF	Peat harvesting	N2O	2018	0.00008
Current policies	MN	LULUCF	Peatland restoration	CO2	2018	0
Current policies	MN	LULUCF	Reservoirs	CH4	2018	0.645958
Current policies	MN	LULUCF	Reservoirs	CO2	2018	0.010081
Current policies	MN	LULUCF	Rivers and streams	CH4	2018	2.103652

Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2018	0.184093
Current policies	MN	LULUCF	Urban Trees	CO2	2018	-0.861597
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2018	0
Current policies	MN	Residential	Air conditioning	HFC125	2018	0.173777
Current policies	MN	Residential	Air conditioning	HFC143a	2018	0.00002
Current policies	MN	Residential	Air conditioning	HFC32	2018	0.033514
Current policies	MN	Residential	Coal	CH4	2018	0
Current policies	MN	Residential	Coal	CO2	2018	0
Current policies	MN	Residential	Coal	N2O	2018	0
Current policies	MN	Residential	Food additives	CO2	2018	0.020813
Current policies	MN	Residential	Lawn fertilizer	N2O	2018	0.014693
Current policies	MN	Residential	Natural gas	CH4	2018	0.019351
Current policies	MN	Residential	Natural gas	CO2	2018	8.620855
Current policies	MN	Residential	Natural gas	N2O	2018	0.004613
Current policies	MN	Residential	Refined Liquids	CH4	2018	0.004803
Current policies	MN	Residential	Refined Liquids	CO2	2018	2.243451
Current policies	MN	Residential	Refined Liquids	N2O	2018	0.001683
Current policies	MN	Residential	Refrigeration	HFC134a	2018	0.00211
Current policies	MN	Residential	Sequestration in housing	CO2	2018	1.238076
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2018	0.096495
Current policies	MN	Residential	Wood	CH4	2018	0.202362
Current policies	MN	Residential	Wood	N2O	2018	0.032162
Current policies	MN	Transportation	Aviation	CH4	2018	0.003405
Current policies	MN	Transportation	Aviation	CO2	2018	4.067441
Current policies	MN	Transportation	Aviation	N2O	2018	0.038667
Current policies	MN	Transportation	Bus	CH4	2018	0.008078
Current policies	MN	Transportation	Bus	CO2	2018	0.846669
Current policies	MN	Transportation	Bus	N2O	2018	0.001091
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2018	0.006353
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2018	10.080977
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2018	0.012762
Current policies	MN	Transportation	Light-duty trucks	CH4	2018	0.034622
Current policies	MN	Transportation	Light-duty trucks	CO2	2018	15.325066
Current policies	MN	Transportation	Light-duty trucks	N2O	2018	0.120666
Current policies	MN	Transportation	Military and other off-highway	CH4	2018	0.05537
Current policies	MN	Transportation	Military and other off-highway	CO2	2018	0.863301
Current policies	MN	Transportation	Military and other off-highway	N2O	2018	0.275106
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2018	1.619461
Current policies	MN	Transportation	Motorcycle	CH4	2018	0.001645
Current policies	MN	Transportation	Motorcycle	CO2	2018	0.174977
Current policies	MN	Transportation	Motorcycle	N2O	2018	0.000397
Current policies	MN	Transportation	Natural gas transmission	CH4	2018	1.110479
Current policies	MN	Transportation	Natural gas transmission	CO2	2018	0.844332
Current policies	MN	Transportation	Natural gas transmission	N2O	2018	0.004025
Current policies	MN	Transportation	Passenger cars	CH4	2018	0.020771
Current policies	MN	Transportation	Passenger cars	CO2	2018	7.422926
Current policies	MN	Transportation	Passenger cars	N2O	2018	0.052228
Current policies	MN	Transportation	Railroad	CH4	2018	0.004734
Current policies	MN	Transportation	Railroad	CO2	2018	0.750572
Current policies	MN	Transportation	Railroad	N2O	2018	0.018058
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2018	0.000094
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2018	0.779596
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2018	0.002724
Current policies	MN	Waste	Biosolids land application	N2O	2018	0.010271
Current policies	MN	Waste	Coal	CH4	2018	0
Current policies	MN	Waste	Coal	CO2	2018	0

Current policies	MN	Waste	Coal	N2O	2018	0
Current policies	MN	Waste	Food waste prevention	CO2	2018	0
Current policies	MN	Waste	Hazardous waste	CO2	2018	0
Current policies	MN	Waste	Hazardous waste	N2O	2018	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2018	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2018	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2018	0
Current policies	MN	Waste	Industrial landfills	CH4	2018	0.12516
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2018	0.009829
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2018	0.000661
Current policies	MN	Waste	Landfill operations	CH4	2018	0.000024
Current policies	MN	Waste	Landfill operations	CO2	2018	0.015836
Current policies	MN	Waste	Landfill operations	N2O	2018	0.000127
Current policies	MN	Waste	Limestone use	CO2	2018	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2018	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2018	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2018	0
Current policies	MN	Waste	MMSW composting	CH4	2018	0
Current policies	MN	Waste	MMSW composting	N2O	2018	0
Current policies	MN	Waste	MMSW landfills	CH4	2018	1.61845
Current policies	MN	Waste	Mass burn	CH4	2018	0
Current policies	MN	Waste	Mass burn	CO2	2018	0
Current policies	MN	Waste	Mass burn	N2O	2018	0
Current policies	MN	Waste	Materials recovery facility	CH4	2018	0.000012
Current policies	MN	Waste	Materials recovery facility	CO2	2018	0.008055
Current policies	MN	Waste	Materials recovery facility	N2O	2018	0.000064
Current policies	MN	Waste	Medical	CO2	2018	0.004935
Current policies	MN	Waste	Medical	N2O	2018	0.000195
Current policies	MN	Waste	Miscellaneous	CO2	2018	0
Current policies	MN	Waste	Miscellaneous	N2O	2018	0
Current policies	MN	Waste	Natural gas	CH4	2018	0.000006
Current policies	MN	Waste	Natural gas	CO2	2018	0.014051
Current policies	MN	Waste	Natural gas	N2O	2018	0.000071
Current policies	MN	Waste	Oil	CH4	2018	0
Current policies	MN	Waste	Oil	CO2	2018	0.000856
Current policies	MN	Waste	Oil	N2O	2018	0.000001
Current policies	MN	Waste	Propane	CH4	2018	0
Current policies	MN	Waste	Propane	CO2	2018	0
Current policies	MN	Waste	Propane	N2O	2018	0
Current policies	MN	Waste	RDF	CH4	2018	0
Current policies	MN	Waste	RDF	CO2	2018	0
Current policies	MN	Waste	RDF	N2O	2018	0
Current policies	MN	Waste	RDF processing	CH4	2018	0.000004
Current policies	MN	Waste	RDF processing	CO2	2018	0.002421
Current policies	MN	Waste	RDF processing	N2O	2018	0.000019
Current policies	MN	Waste	Rural open burning	CH4	2018	0.00686
Current policies	MN	Waste	Rural open burning	CO2	2018	0.023821
Current policies	MN	Waste	Rural open burning	N2O	2018	0.001887
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2018	-0.471322
Current policies	MN	Waste	Sludge	CH4	2018	0.004244
Current policies	MN	Waste	Sludge	N2O	2018	0.001695
Current policies	MN	Waste	Waste solvent	CO2	2018	0
Current policies	MN	Waste	Wastewater treatment	CH4	2018	0.257092
Current policies	MN	Waste	Wastewater treatment	N2O	2018	0.113908
Current policies	MN	Waste	Wood	CH4	2018	0
Current policies	MN	Waste	Wood	N2O	2018	0

Current policies	MN	Waste	Yard waste composting	CH4	2018	0.03753
Current policies	MN	Waste	Yard waste preprocessing	CH4	2018	0.000004
Current policies	MN	Waste	Yard waste preprocessing	CO2	2018	0.00255
Current policies	MN	Waste	Yard waste preprocessing	N2O	2018	0.00002
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2018	0.182278
Net-zero pathway	MN	Agriculture	American Bison	CH4	2018	0.006646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2018	2.404838
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2018	0.156573
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2018	0.030278
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2018	0.000832
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2018	0.001763
Net-zero pathway	MN	Agriculture	Cereals	CH4	2018	0.008872
Net-zero pathway	MN	Agriculture	Cereals	N2O	2018	0.002979
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2018	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2018	16.661066
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2018	3.613752
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2018	0.163634
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2018	0.151175
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2018	0.062106
Net-zero pathway	MN	Agriculture	Goats	CH4	2018	0.009413
Net-zero pathway	MN	Agriculture	Goats	N2O	2018	0.00029
Net-zero pathway	MN	Agriculture	Grassland	N2O	2018	1.893502
Net-zero pathway	MN	Agriculture	Horses	CH4	2018	0.023012
Net-zero pathway	MN	Agriculture	Horses	N2O	2018	0.001286
Net-zero pathway	MN	Agriculture	Liming	CO2	2018	0
Net-zero pathway	MN	Agriculture	Litter	CO2	2018	0.096752
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2018	-0.984712
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2018	0.000948
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2018	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2018	0.008334
Net-zero pathway	MN	Agriculture	Oil	CO2	2018	2.550064
Net-zero pathway	MN	Agriculture	Oil	N2O	2018	0.015423
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2018	6.737701
Net-zero pathway	MN	Agriculture	Other	CH4	2018	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2018	0.00007
Net-zero pathway	MN	Agriculture	Poultry	CH4	2018	0.047051
Net-zero pathway	MN	Agriculture	Poultry	N2O	2018	0.060846
Net-zero pathway	MN	Agriculture	Pulses	CH4	2018	0.001739
Net-zero pathway	MN	Agriculture	Pulses	N2O	2018	0.000684
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2018	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2018	0.034312
Net-zero pathway	MN	Agriculture	Sheep	N2O	2018	0.011301
Net-zero pathway	MN	Agriculture	Swine	CH4	2018	2.355056
Net-zero pathway	MN	Agriculture	Swine	N2O	2018	0.187492
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2018	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2018	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2018	0.564366
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2018	0.613428
Net-zero pathway	MN	Commercial	Biofuel	CO2	2018	0
Net-zero pathway	MN	Commercial	Coal	CH4	2018	0.000064
Net-zero pathway	MN	Commercial	Coal	CO2	2018	0.025005
Net-zero pathway	MN	Commercial	Coal	N2O	2018	0.000115
Net-zero pathway	MN	Commercial	Limestone use	CO2	2018	0.000007
Net-zero pathway	MN	Commercial	Medical use	N2O	2018	0.078814
Net-zero pathway	MN	Commercial	Natural gas	CH4	2018	0.014046
Net-zero pathway	MN	Commercial	Natural gas	CO2	2018	6.257037

Net-zero pathway	MN	Commercial	Natural gas	N2O	2018	0.003349
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2018	0.077665
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2018	10.923706
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2018	0.032221
Net-zero pathway	MN	Commercial	Solvent use	CO2	2018	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2018	0.004392
Net-zero pathway	MN	Electricity	Coal	CO2	2018	26.378846
Net-zero pathway	MN	Electricity	Coal	N2O	2018	0.075425
Net-zero pathway	MN	Electricity	Coal storage	CH4	2018	0.043115
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2018	0.004598
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2018	0.006453
Net-zero pathway	MN	Electricity	Natural gas	CH4	2018	0.004033
Net-zero pathway	MN	Electricity	Natural gas	CO2	2018	4.183429
Net-zero pathway	MN	Electricity	Natural gas	N2O	2018	0.059121
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2018	0.016896
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2018	7.453755
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2018	0.050046
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2018	0.012982
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2018	0.743113
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2018	0.075678
Net-zero pathway	MN	Electricity	Transmission	SF6	2018	0.031793
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2018	0
Net-zero pathway	MN	Industry	Coal	CH4	2018	0.039904
Net-zero pathway	MN	Industry	Coal	CO2	2018	1.725487
Net-zero pathway	MN	Industry	Coal	N2O	2018	0.007066
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2018	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2018	0.145155
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2018	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2018	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2018	0.004381
Net-zero pathway	MN	Industry	Natural gas	CO2	2018	9.758172
Net-zero pathway	MN	Industry	Natural gas	N2O	2018	0.005222
Net-zero pathway	MN	Industry	Oil refining	CH4	2018	0.037735
Net-zero pathway	MN	Industry	Oil refining	CO2	2018	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2018	0.009627
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2018	0.011185
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2018	0.055503
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2018	9.031947
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2018	0.090661
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2018	0.013329
Net-zero pathway	MN	Industry	Solvent	HFC	2018	0.037833
Net-zero pathway	MN	Industry	Taconite induration	CO2	2018	2.14775
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2018	0.052389
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2018	-14.558057
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2018	-2.44402
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2018	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2018	-3.060666
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2018	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2018	2.25258
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2018	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2018	0.042787
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2018	0.029497
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2018	0.001945
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2018	0.00168
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2018	3.298792
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2018	-0.214828

Net-zero pathway	MN	LULUCF	Litter	CO2	2018	-0.863922
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2018	-0.784748
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2018	2.076735
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2018	0.00068
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2018	0.017667
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2018	0.00008
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2018	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2018	0.645958
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2018	0.010081
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2018	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2018	0.184093
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2018	-0.861597
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2018	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2018	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2018	0.173777
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2018	0.00002
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2018	0.033514
Net-zero pathway	MN	Residential	Coal	CH4	2018	0
Net-zero pathway	MN	Residential	Coal	CO2	2018	0
Net-zero pathway	MN	Residential	Coal	N2O	2018	0
Net-zero pathway	MN	Residential	Food additives	CO2	2018	0.020813
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2018	0.014693
Net-zero pathway	MN	Residential	Natural gas	CH4	2018	0.019351
Net-zero pathway	MN	Residential	Natural gas	CO2	2018	8.620855
Net-zero pathway	MN	Residential	Natural gas	N2O	2018	0.004613
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2018	0.004803
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2018	2.243451
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2018	0.001683
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2018	0.00211
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2018	1.238076
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2018	0.096495
Net-zero pathway	MN	Residential	Wood	CH4	2018	0.202362
Net-zero pathway	MN	Residential	Wood	N2O	2018	0.032162
Net-zero pathway	MN	Transportation	Aviation	CH4	2018	0.003405
Net-zero pathway	MN	Transportation	Aviation	CO2	2018	4.067441
Net-zero pathway	MN	Transportation	Aviation	N2O	2018	0.038667
Net-zero pathway	MN	Transportation	Bus	CH4	2018	0.008078
Net-zero pathway	MN	Transportation	Bus	CO2	2018	0.846669
Net-zero pathway	MN	Transportation	Bus	N2O	2018	0.001091
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2018	0.006353
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2018	10.080977
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2018	0.012762
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2018	0.034622
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2018	15.325066
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2018	0.120666
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2018	0.05537
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2018	0.863301
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2018	0.275106
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2018	1.619461
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2018	0.001645
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2018	0.174977
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2018	0.000397
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2018	1.110479
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2018	0.844332
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2018	0.004025
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2018	0.020771

Net-zero pathway	MN	Transportation	Passenger cars	CO2	2018	7.422926
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2018	0.052228
Net-zero pathway	MN	Transportation	Railroad	CH4	2018	0.004734
Net-zero pathway	MN	Transportation	Railroad	CO2	2018	0.750572
Net-zero pathway	MN	Transportation	Railroad	N2O	2018	0.018058
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2018	0.000094
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2018	0.779596
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2018	0.002724
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2018	0.010271
Net-zero pathway	MN	Waste	Coal	CH4	2018	0
Net-zero pathway	MN	Waste	Coal	CO2	2018	0
Net-zero pathway	MN	Waste	Coal	N2O	2018	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2018	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2018	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2018	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2018	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2018	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2018	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2018	0.12516
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2018	0.009829
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2018	0.000661
Net-zero pathway	MN	Waste	Landfill operations	CH4	2018	0.000024
Net-zero pathway	MN	Waste	Landfill operations	CO2	2018	0.015836
Net-zero pathway	MN	Waste	Landfill operations	N2O	2018	0.000127
Net-zero pathway	MN	Waste	Limestone use	CO2	2018	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2018	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2018	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2018	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2018	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2018	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2018	1.61845
Net-zero pathway	MN	Waste	Mass burn	CH4	2018	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2018	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2018	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2018	0.000012
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2018	0.008055
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2018	0.000064
Net-zero pathway	MN	Waste	Medical	CO2	2018	0.004935
Net-zero pathway	MN	Waste	Medical	N2O	2018	0.000195
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2018	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2018	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2018	0.000006
Net-zero pathway	MN	Waste	Natural gas	CO2	2018	0.014051
Net-zero pathway	MN	Waste	Natural gas	N2O	2018	0.000071
Net-zero pathway	MN	Waste	Oil	CH4	2018	0
Net-zero pathway	MN	Waste	Oil	CO2	2018	0.000856
Net-zero pathway	MN	Waste	Oil	N2O	2018	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2018	0
Net-zero pathway	MN	Waste	Propane	CO2	2018	0
Net-zero pathway	MN	Waste	Propane	N2O	2018	0
Net-zero pathway	MN	Waste	RDF	CH4	2018	0
Net-zero pathway	MN	Waste	RDF	CO2	2018	0
Net-zero pathway	MN	Waste	RDF	N2O	2018	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2018	0.000004
Net-zero pathway	MN	Waste	RDF processing	CO2	2018	0.002421
Net-zero pathway	MN	Waste	RDF processing	N2O	2018	0.000019

Net-zero pathway	MN	Waste	Rural open burning	CH4	2018	0.00686
Net-zero pathway	MN	Waste	Rural open burning	CO2	2018	0.023821
Net-zero pathway	MN	Waste	Rural open burning	N2O	2018	0.001887
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2018	-0.471322
Net-zero pathway	MN	Waste	Sludge	CH4	2018	0.004244
Net-zero pathway	MN	Waste	Sludge	N2O	2018	0.001695
Net-zero pathway	MN	Waste	Waste solvent	CO2	2018	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2018	0.257092
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2018	0.113908
Net-zero pathway	MN	Waste	Wood	CH4	2018	0
Net-zero pathway	MN	Waste	Wood	N2O	2018	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2018	0.03753
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2018	0.000004
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2018	0.00255
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2018	0.00002
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2019	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2019	0.006553
Current policies	MN	Agriculture	Beef Cattle	CH4	2019	2.3903
Current policies	MN	Agriculture	Beef Cattle	N2O	2019	0.153908
Current policies	MN	Agriculture	Belowground Biomass	CO2	2019	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2019	0.000935
Current policies	MN	Agriculture	Biofuel	N2O	2019	0.001981
Current policies	MN	Agriculture	Cereals	CH4	2019	0.008878
Current policies	MN	Agriculture	Cereals	N2O	2019	0.002984
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2019	0
Current policies	MN	Agriculture	Cropland	N2O	2019	14.280126
Current policies	MN	Agriculture	Dairy Cattle	CH4	2019	3.523528
Current policies	MN	Agriculture	Dairy Cattle	N2O	2019	0.163368
Current policies	MN	Agriculture	Dairy Heifers	N2O	2019	0.133411
Current policies	MN	Agriculture	Dead Wood	CO2	2019	0.061878
Current policies	MN	Agriculture	Goats	CH4	2019	0.009546
Current policies	MN	Agriculture	Goats	N2O	2019	0.000294
Current policies	MN	Agriculture	Grassland	N2O	2019	1.872625
Current policies	MN	Agriculture	Horses	CH4	2019	0.020923
Current policies	MN	Agriculture	Horses	N2O	2019	0.001169
Current policies	MN	Agriculture	Liming	CO2	2019	0
Current policies	MN	Agriculture	Litter	CO2	2019	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2019	-1.799944
Current policies	MN	Agriculture	Mules and Asses	CH4	2019	0.000953
Current policies	MN	Agriculture	Mules and Asses	N2O	2019	0.000035
Current policies	MN	Agriculture	Oil	CH4	2019	0.009215
Current policies	MN	Agriculture	Oil	CO2	2019	2.898617
Current policies	MN	Agriculture	Oil	N2O	2019	0.016666
Current policies	MN	Agriculture	Organic Soil	CO2	2019	6.56219
Current policies	MN	Agriculture	Other	CH4	2019	0.00009
Current policies	MN	Agriculture	Other	N2O	2019	0.000068
Current policies	MN	Agriculture	Poultry	CH4	2019	0.044612
Current policies	MN	Agriculture	Poultry	N2O	2019	0.057118
Current policies	MN	Agriculture	Pulses	CH4	2019	0.001731
Current policies	MN	Agriculture	Pulses	N2O	2019	0.000679
Current policies	MN	Agriculture	Rice Cultivation	CH4	2019	0.021062
Current policies	MN	Agriculture	Sheep	CH4	2019	0.032992
Current policies	MN	Agriculture	Sheep	N2O	2019	0.010867
Current policies	MN	Agriculture	Swine	CH4	2019	2.330657
Current policies	MN	Agriculture	Swine	N2O	2019	0.197413
Current policies	MN	Agriculture	Tubers and Roots	CH4	2019	0.000058

Current policies	MN	Agriculture	Tubers and Roots	N2O	2019	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2019	0.582533
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2019	0.626745
Current policies	MN	Commercial	Biofuel	CO2	2019	0
Current policies	MN	Commercial	Coal	CH4	2019	0.000038
Current policies	MN	Commercial	Coal	CO2	2019	0.014852
Current policies	MN	Commercial	Coal	N2O	2019	0.000068
Current policies	MN	Commercial	Limestone use	CO2	2019	0.000105
Current policies	MN	Commercial	Medical use	N2O	2019	0.079029
Current policies	MN	Commercial	Natural gas	CH4	2019	0.013946
Current policies	MN	Commercial	Natural gas	CO2	2019	6.212672
Current policies	MN	Commercial	Natural gas	N2O	2019	0.003325
Current policies	MN	Commercial	Refined Liquids	CH4	2019	0.075781
Current policies	MN	Commercial	Refined Liquids	CO2	2019	9.868512
Current policies	MN	Commercial	Refined Liquids	N2O	2019	0.030012
Current policies	MN	Commercial	Solvent use	CO2	2019	0.080955
Current policies	MN	Electricity	Coal	CH4	2019	0.003356
Current policies	MN	Electricity	Coal	CO2	2019	19.989258
Current policies	MN	Electricity	Coal	N2O	2019	0.0537
Current policies	MN	Electricity	Coal storage	CH4	2019	0.039079
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2019	0.004346
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2019	0.006453
Current policies	MN	Electricity	Natural gas	CH4	2019	0.00357
Current policies	MN	Electricity	Natural gas	CO2	2019	5.66312
Current policies	MN	Electricity	Natural gas	N2O	2019	0.087883
Current policies	MN	Electricity	Net electricity imports	CH4	2019	0.011449
Current policies	MN	Electricity	Net electricity imports	CO2	2019	4.716939
Current policies	MN	Electricity	Net electricity imports	N2O	2019	0.035499
Current policies	MN	Electricity	Refined Liquids	CH4	2019	0.011347
Current policies	MN	Electricity	Refined Liquids	CO2	2019	0.631378
Current policies	MN	Electricity	Refined Liquids	N2O	2019	0.056256
Current policies	MN	Electricity	Transmission	SF6	2019	0.071233
Current policies	MN	Industry	Ammonia manufacture	CO2	2019	0
Current policies	MN	Industry	Coal	CH4	2019	0.023092
Current policies	MN	Industry	Coal	CO2	2019	1.209317
Current policies	MN	Industry	Coal	N2O	2019	0.004922
Current policies	MN	Industry	Industrial solvent release	CO2	2019	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2019	0.152066
Current policies	MN	Industry	Insulating foam manufacture	HFC	2019	0
Current policies	MN	Industry	Magnesium casting	SF6	2019	0
Current policies	MN	Industry	Natural gas	CH4	2019	0.004464
Current policies	MN	Industry	Natural gas	CO2	2019	9.943083
Current policies	MN	Industry	Natural gas	N2O	2019	0.005321
Current policies	MN	Industry	Oil refining	CH4	2019	0.038174
Current policies	MN	Industry	Oil refining	CO2	2019	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2019	0.009627
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2019	0.009405
Current policies	MN	Industry	Refined Liquids	CH4	2019	0.022744
Current policies	MN	Industry	Refined Liquids	CO2	2019	8.560548
Current policies	MN	Industry	Refined Liquids	N2O	2019	0.038486
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2019	0.009852
Current policies	MN	Industry	Solvent	HFC	2019	0.037878
Current policies	MN	Industry	Taconite induration	CO2	2019	1.987702
Current policies	MN	Industry	VOC and toxics release	CO2	2019	0.052158
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2019	-14.524922
Current policies	MN	LULUCF	Belowground Biomass	CO2	2019	-2.442219

Current policies	MN	LULUCF	Canals and ditches	CH4	2019	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2019	-3.099429
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2019	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2019	2.269307
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2019	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2019	0.005546
Current policies	MN	LULUCF	Forest Fires	N2O	2019	0.003862
Current policies	MN	LULUCF	Grass Fires	CH4	2019	0
Current policies	MN	LULUCF	Grass Fires	N2O	2019	0
Current policies	MN	LULUCF	Lakes and ponds	CH4	2019	3.298788
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2019	-0.209383
Current policies	MN	LULUCF	Litter	CO2	2019	-0.864141
Current policies	MN	LULUCF	Mineral Soil	CO2	2019	-0.553327
Current policies	MN	LULUCF	Organic Soil	CO2	2019	2.095924
Current policies	MN	LULUCF	Peat harvesting	CH4	2019	0.000373
Current policies	MN	LULUCF	Peat harvesting	CO2	2019	0.013627
Current policies	MN	LULUCF	Peat harvesting	N2O	2019	0.000046
Current policies	MN	LULUCF	Peatland restoration	CO2	2019	0
Current policies	MN	LULUCF	Reservoirs	CH4	2019	0.645933
Current policies	MN	LULUCF	Reservoirs	CO2	2019	0.009974
Current policies	MN	LULUCF	Rivers and streams	CH4	2019	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2019	0.185132
Current policies	MN	LULUCF	Urban Trees	CO2	2019	-0.862203
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2019	0
Current policies	MN	Residential	Air conditioning	HFC125	2019	0.146097
Current policies	MN	Residential	Air conditioning	HFC143a	2019	0.000013
Current policies	MN	Residential	Air conditioning	HFC32	2019	0.028176
Current policies	MN	Residential	Coal	CH4	2019	0
Current policies	MN	Residential	Coal	CO2	2019	0
Current policies	MN	Residential	Coal	N2O	2019	0
Current policies	MN	Residential	Food additives	CO2	2019	0.020837
Current policies	MN	Residential	Lawn fertilizer	N2O	2019	0.014881
Current policies	MN	Residential	Natural gas	CH4	2019	0.019888
Current policies	MN	Residential	Natural gas	CO2	2019	8.862915
Current policies	MN	Residential	Natural gas	N2O	2019	0.004741
Current policies	MN	Residential	Refined Liquids	CH4	2019	0.00497
Current policies	MN	Residential	Refined Liquids	CO2	2019	2.375959
Current policies	MN	Residential	Refined Liquids	N2O	2019	0.001625
Current policies	MN	Residential	Refrigeration	HFC134a	2019	0.002153
Current policies	MN	Residential	Sequestration in housing	CO2	2019	-1.104336
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2019	0.09661
Current policies	MN	Residential	Wood	CH4	2019	0.202362
Current policies	MN	Residential	Wood	N2O	2019	0.032162
Current policies	MN	Transportation	Aviation	CH4	2019	0.003384
Current policies	MN	Transportation	Aviation	CO2	2019	4.068353
Current policies	MN	Transportation	Aviation	N2O	2019	0.038672
Current policies	MN	Transportation	Bus	CH4	2019	0.005478
Current policies	MN	Transportation	Bus	CO2	2019	0.687358
Current policies	MN	Transportation	Bus	N2O	2019	0.000865
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2019	0.019331
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2019	8.2092
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2019	0.011666
Current policies	MN	Transportation	Light-duty trucks	CH4	2019	0.034498
Current policies	MN	Transportation	Light-duty trucks	CO2	2019	15.661266
Current policies	MN	Transportation	Light-duty trucks	N2O	2019	0.117698
Current policies	MN	Transportation	Military and other off-highway	CH4	2019	0.055571

Current policies	MN	Transportation	Military and other off-highway	CO2	2019	0.892464
Current policies	MN	Transportation	Military and other off-highway	N2O	2019	0.276102
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2019	1.721401
Current policies	MN	Transportation	Motorcycle	CH4	2019	0.001687
Current policies	MN	Transportation	Motorcycle	CO2	2019	0.178852
Current policies	MN	Transportation	Motorcycle	N2O	2019	0.0004
Current policies	MN	Transportation	Natural gas transmission	CH4	2019	1.113093
Current policies	MN	Transportation	Natural gas transmission	CO2	2019	0.796384
Current policies	MN	Transportation	Natural gas transmission	N2O	2019	0.003595
Current policies	MN	Transportation	Passenger cars	CH4	2019	0.021713
Current policies	MN	Transportation	Passenger cars	CO2	2019	7.536012
Current policies	MN	Transportation	Passenger cars	N2O	2019	0.05322
Current policies	MN	Transportation	Railroad	CH4	2019	0.004867
Current policies	MN	Transportation	Railroad	CO2	2019	0.81614
Current policies	MN	Transportation	Railroad	N2O	2019	0.018564
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2019	0.00009
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2019	0.783374
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2019	0.002593
Current policies	MN	Waste	Biosolids land application	N2O	2019	0.010239
Current policies	MN	Waste	Coal	CH4	2019	0
Current policies	MN	Waste	Coal	CO2	2019	0
Current policies	MN	Waste	Coal	N2O	2019	0
Current policies	MN	Waste	Food waste prevention	CO2	2019	0
Current policies	MN	Waste	Hazardous waste	CO2	2019	0
Current policies	MN	Waste	Hazardous waste	N2O	2019	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2019	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2019	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2019	0
Current policies	MN	Waste	Industrial landfills	CH4	2019	0.121461
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2019	0.009224
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2019	0.000351
Current policies	MN	Waste	Landfill operations	CH4	2019	0.000025
Current policies	MN	Waste	Landfill operations	CO2	2019	0.016538
Current policies	MN	Waste	Landfill operations	N2O	2019	0.000132
Current policies	MN	Waste	Limestone use	CO2	2019	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2019	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2019	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2019	0
Current policies	MN	Waste	MMSW composting	CH4	2019	0
Current policies	MN	Waste	MMSW composting	N2O	2019	0
Current policies	MN	Waste	MMSW landfills	CH4	2019	1.65142
Current policies	MN	Waste	Mass burn	CH4	2019	0
Current policies	MN	Waste	Mass burn	CO2	2019	0
Current policies	MN	Waste	Mass burn	N2O	2019	0
Current policies	MN	Waste	Materials recovery facility	CH4	2019	0.000012
Current policies	MN	Waste	Materials recovery facility	CO2	2019	0.00768
Current policies	MN	Waste	Materials recovery facility	N2O	2019	0.000061
Current policies	MN	Waste	Medical	CO2	2019	0.004962
Current policies	MN	Waste	Medical	N2O	2019	0.000196
Current policies	MN	Waste	Miscellaneous	CO2	2019	0
Current policies	MN	Waste	Miscellaneous	N2O	2019	0
Current policies	MN	Waste	Natural gas	CH4	2019	0.000006
Current policies	MN	Waste	Natural gas	CO2	2019	0.013845
Current policies	MN	Waste	Natural gas	N2O	2019	0.00007
Current policies	MN	Waste	Oil	CH4	2019	0
Current policies	MN	Waste	Oil	CO2	2019	0.000869

Current policies	MN	Waste	Oil	N2O	2019	0.000001
Current policies	MN	Waste	Propane	CH4	2019	0
Current policies	MN	Waste	Propane	CO2	2019	0
Current policies	MN	Waste	Propane	N2O	2019	0
Current policies	MN	Waste	RDF	CH4	2019	0
Current policies	MN	Waste	RDF	CO2	2019	0
Current policies	MN	Waste	RDF	N2O	2019	0
Current policies	MN	Waste	RDF processing	CH4	2019	0.000002
Current policies	MN	Waste	RDF processing	CO2	2019	0.001528
Current policies	MN	Waste	RDF processing	N2O	2019	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2019	0.007344
Current policies	MN	Waste	Rural open burning	CO2	2019	0.025505
Current policies	MN	Waste	Rural open burning	N2O	2019	0.00202
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2019	-0.485984
Current policies	MN	Waste	Sludge	CH4	2019	0.004357
Current policies	MN	Waste	Sludge	N2O	2019	0.001734
Current policies	MN	Waste	Waste solvent	CO2	2019	0
Current policies	MN	Waste	Wastewater treatment	CH4	2019	0.258623
Current policies	MN	Waste	Wastewater treatment	N2O	2019	0.113929
Current policies	MN	Waste	Wood	CH4	2019	0
Current policies	MN	Waste	Wood	N2O	2019	0
Current policies	MN	Waste	Yard waste composting	CH4	2019	0.037058
Current policies	MN	Waste	Yard waste preprocessing	CH4	2019	0.000004
Current policies	MN	Waste	Yard waste preprocessing	CO2	2019	0.002518
Current policies	MN	Waste	Yard waste preprocessing	N2O	2019	0.00002
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2019	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2019	0.006553
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2019	2.3903
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2019	0.153908
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2019	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2019	0.000935
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2019	0.001981
Net-zero pathway	MN	Agriculture	Cereals	CH4	2019	0.008878
Net-zero pathway	MN	Agriculture	Cereals	N2O	2019	0.002984
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2019	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2019	14.280126
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2019	3.523528
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2019	0.163368
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2019	0.133411
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2019	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2019	0.009546
Net-zero pathway	MN	Agriculture	Goats	N2O	2019	0.000294
Net-zero pathway	MN	Agriculture	Grassland	N2O	2019	1.872625
Net-zero pathway	MN	Agriculture	Horses	CH4	2019	0.020923
Net-zero pathway	MN	Agriculture	Horses	N2O	2019	0.001169
Net-zero pathway	MN	Agriculture	Liming	CO2	2019	0
Net-zero pathway	MN	Agriculture	Litter	CO2	2019	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2019	-1.799944
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2019	0.000953
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2019	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2019	0.009215
Net-zero pathway	MN	Agriculture	Oil	CO2	2019	2.898617
Net-zero pathway	MN	Agriculture	Oil	N2O	2019	0.016666
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2019	6.56219
Net-zero pathway	MN	Agriculture	Other	CH4	2019	0.00009
Net-zero pathway	MN	Agriculture	Other	N2O	2019	0.000068

Net-zero pathway	MN	Agriculture	Poultry	CH4	2019	0.044612
Net-zero pathway	MN	Agriculture	Poultry	N2O	2019	0.057118
Net-zero pathway	MN	Agriculture	Pulses	CH4	2019	0.001731
Net-zero pathway	MN	Agriculture	Pulses	N2O	2019	0.000679
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2019	0.021062
Net-zero pathway	MN	Agriculture	Sheep	CH4	2019	0.032992
Net-zero pathway	MN	Agriculture	Sheep	N2O	2019	0.010867
Net-zero pathway	MN	Agriculture	Swine	CH4	2019	2.330657
Net-zero pathway	MN	Agriculture	Swine	N2O	2019	0.197413
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2019	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2019	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2019	0.582533
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2019	0.626745
Net-zero pathway	MN	Commercial	Biofuel	CO2	2019	0
Net-zero pathway	MN	Commercial	Coal	CH4	2019	0.000038
Net-zero pathway	MN	Commercial	Coal	CO2	2019	0.014852
Net-zero pathway	MN	Commercial	Coal	N2O	2019	0.000068
Net-zero pathway	MN	Commercial	Limestone use	CO2	2019	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2019	0.079029
Net-zero pathway	MN	Commercial	Natural gas	CH4	2019	0.013946
Net-zero pathway	MN	Commercial	Natural gas	CO2	2019	6.212672
Net-zero pathway	MN	Commercial	Natural gas	N2O	2019	0.003325
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2019	0.075781
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2019	9.868512
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2019	0.030012
Net-zero pathway	MN	Commercial	Solvent use	CO2	2019	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2019	0.003356
Net-zero pathway	MN	Electricity	Coal	CO2	2019	19.989258
Net-zero pathway	MN	Electricity	Coal	N2O	2019	0.0537
Net-zero pathway	MN	Electricity	Coal storage	CH4	2019	0.039079
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2019	0.004346
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2019	0.006453
Net-zero pathway	MN	Electricity	Natural gas	CH4	2019	0.00357
Net-zero pathway	MN	Electricity	Natural gas	CO2	2019	5.66312
Net-zero pathway	MN	Electricity	Natural gas	N2O	2019	0.087883
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2019	0.011449
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2019	4.716939
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2019	0.035499
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2019	0.011347
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2019	0.631378
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2019	0.056256
Net-zero pathway	MN	Electricity	Transmission	SF6	2019	0.071233
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2019	0
Net-zero pathway	MN	Industry	Coal	CH4	2019	0.023092
Net-zero pathway	MN	Industry	Coal	CO2	2019	1.209317
Net-zero pathway	MN	Industry	Coal	N2O	2019	0.004922
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2019	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2019	0.152066
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2019	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2019	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2019	0.004464
Net-zero pathway	MN	Industry	Natural gas	CO2	2019	9.943083
Net-zero pathway	MN	Industry	Natural gas	N2O	2019	0.005321
Net-zero pathway	MN	Industry	Oil refining	CH4	2019	0.038174
Net-zero pathway	MN	Industry	Oil refining	CO2	2019	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2019	0.009627

Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2019	0.009405
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2019	0.022744
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2019	8.560548
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2019	0.038486
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2019	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2019	0.037878
Net-zero pathway	MN	Industry	Taconite induration	CO2	2019	1.987702
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2019	0.052158
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2019	-14.524922
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2019	-2.442219
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2019	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2019	-3.099429
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2019	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2019	2.269307
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2019	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2019	0.005546
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2019	0.003862
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2019	0
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2019	0
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2019	3.298788
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2019	-0.209383
Net-zero pathway	MN	LULUCF	Litter	CO2	2019	-0.864141
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2019	-0.553327
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2019	2.095924
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2019	0.000373
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2019	0.013627
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2019	0.000046
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2019	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2019	0.645933
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2019	0.009974
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2019	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2019	0.185132
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2019	-0.862203
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2019	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2019	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2019	0.146097
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2019	0.000013
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2019	0.028176
Net-zero pathway	MN	Residential	Coal	CH4	2019	0
Net-zero pathway	MN	Residential	Coal	CO2	2019	0
Net-zero pathway	MN	Residential	Coal	N2O	2019	0
Net-zero pathway	MN	Residential	Food additives	CO2	2019	0.020837
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2019	0.014881
Net-zero pathway	MN	Residential	Natural gas	CH4	2019	0.019888
Net-zero pathway	MN	Residential	Natural gas	CO2	2019	8.862915
Net-zero pathway	MN	Residential	Natural gas	N2O	2019	0.004741
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2019	0.00497
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2019	2.375959
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2019	0.001625
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2019	0.002153
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2019	-1.104336
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2019	0.09661
Net-zero pathway	MN	Residential	Wood	CH4	2019	0.202362
Net-zero pathway	MN	Residential	Wood	N2O	2019	0.032162
Net-zero pathway	MN	Transportation	Aviation	CH4	2019	0.003384
Net-zero pathway	MN	Transportation	Aviation	CO2	2019	4.068353

Net-zero pathway	MN	Transportation	Aviation	N2O	2019	0.038672
Net-zero pathway	MN	Transportation	Bus	CH4	2019	0.005478
Net-zero pathway	MN	Transportation	Bus	CO2	2019	0.687358
Net-zero pathway	MN	Transportation	Bus	N2O	2019	0.000865
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2019	0.019331
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2019	8.2092
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2019	0.011666
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2019	0.034498
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2019	15.661266
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2019	0.117698
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2019	0.055571
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2019	0.892464
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2019	0.276102
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2019	1.721401
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2019	0.001687
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2019	0.178852
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2019	0.0004
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2019	1.113093
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2019	0.796384
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2019	0.003595
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2019	0.021713
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2019	7.536012
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2019	0.05322
Net-zero pathway	MN	Transportation	Railroad	CH4	2019	0.004867
Net-zero pathway	MN	Transportation	Railroad	CO2	2019	0.81614
Net-zero pathway	MN	Transportation	Railroad	N2O	2019	0.018564
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2019	0.00009
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2019	0.783374
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2019	0.002593
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2019	0.010239
Net-zero pathway	MN	Waste	Coal	CH4	2019	0
Net-zero pathway	MN	Waste	Coal	CO2	2019	0
Net-zero pathway	MN	Waste	Coal	N2O	2019	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2019	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2019	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2019	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2019	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2019	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2019	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2019	0.121461
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2019	0.009224
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2019	0.000351
Net-zero pathway	MN	Waste	Landfill operations	CH4	2019	0.000025
Net-zero pathway	MN	Waste	Landfill operations	CO2	2019	0.016538
Net-zero pathway	MN	Waste	Landfill operations	N2O	2019	0.000132
Net-zero pathway	MN	Waste	Limestone use	CO2	2019	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2019	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2019	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2019	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2019	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2019	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2019	1.65142
Net-zero pathway	MN	Waste	Mass burn	CH4	2019	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2019	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2019	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2019	0.000012

Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2019	0.00768
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2019	0.000061
Net-zero pathway	MN	Waste	Medical	CO2	2019	0.004962
Net-zero pathway	MN	Waste	Medical	N2O	2019	0.000196
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2019	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2019	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2019	0.000006
Net-zero pathway	MN	Waste	Natural gas	CO2	2019	0.013845
Net-zero pathway	MN	Waste	Natural gas	N2O	2019	0.00007
Net-zero pathway	MN	Waste	Oil	CH4	2019	0
Net-zero pathway	MN	Waste	Oil	CO2	2019	0.000869
Net-zero pathway	MN	Waste	Oil	N2O	2019	0.000001
Net-zero pathway	MN	Waste	Propane	CH4	2019	0
Net-zero pathway	MN	Waste	Propane	CO2	2019	0
Net-zero pathway	MN	Waste	Propane	N2O	2019	0
Net-zero pathway	MN	Waste	RDF	CH4	2019	0
Net-zero pathway	MN	Waste	RDF	CO2	2019	0
Net-zero pathway	MN	Waste	RDF	N2O	2019	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2019	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2019	0.001528
Net-zero pathway	MN	Waste	RDF processing	N2O	2019	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2019	0.007344
Net-zero pathway	MN	Waste	Rural open burning	CO2	2019	0.025505
Net-zero pathway	MN	Waste	Rural open burning	N2O	2019	0.00202
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2019	-0.485984
Net-zero pathway	MN	Waste	Sludge	CH4	2019	0.004357
Net-zero pathway	MN	Waste	Sludge	N2O	2019	0.001734
Net-zero pathway	MN	Waste	Waste solvent	CO2	2019	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2019	0.258623
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2019	0.113929
Net-zero pathway	MN	Waste	Wood	CH4	2019	0
Net-zero pathway	MN	Waste	Wood	N2O	2019	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2019	0.037058
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2019	0.000004
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2019	0.002518
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2019	0.00002
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2020	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2020	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2020	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2020	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2020	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2020	0.000938
Current policies	MN	Agriculture	Biofuel	N2O	2020	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2020	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2020	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2020	0
Current policies	MN	Agriculture	Cropland	N2O	2020	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2020	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2020	0.163691
Current policies	MN	Agriculture	Dairy Heifers	N2O	2020	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2020	0.061878
Current policies	MN	Agriculture	Goats	CH4	2020	0.009678
Current policies	MN	Agriculture	Goats	N2O	2020	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2020	1.82027
Current policies	MN	Agriculture	Horses	CH4	2020	0.018834
Current policies	MN	Agriculture	Horses	N2O	2020	0.001052

Current policies	MN	Agriculture	Liming	CO2	2020	0.025355
Current policies	MN	Agriculture	Litter	CO2	2020	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2020	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2020	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2020	0.000035
Current policies	MN	Agriculture	Oil	CH4	2020	0.00907
Current policies	MN	Agriculture	Oil	CO2	2020	2.819079
Current policies	MN	Agriculture	Oil	N2O	2020	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2020	6.613127
Current policies	MN	Agriculture	Other	CH4	2020	0.000091
Current policies	MN	Agriculture	Other	N2O	2020	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2020	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2020	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2020	0.001728
Current policies	MN	Agriculture	Pulses	N2O	2020	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2020	0
Current policies	MN	Agriculture	Sheep	CH4	2020	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2020	0.009997
Current policies	MN	Agriculture	Swine	CH4	2020	2.42472
Current policies	MN	Agriculture	Swine	N2O	2020	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2020	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2020	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2020	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2020	0.724538
Current policies	MN	Commercial	Biofuel	CO2	2020	0
Current policies	MN	Commercial	Coal	CH4	2020	0.000028
Current policies	MN	Commercial	Coal	CO2	2020	0.010746
Current policies	MN	Commercial	Coal	N2O	2020	0.000049
Current policies	MN	Commercial	Limestone use	CO2	2020	0.000105
Current policies	MN	Commercial	Medical use	N2O	2020	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2020	0.012583
Current policies	MN	Commercial	Natural gas	CO2	2020	5.605208
Current policies	MN	Commercial	Natural gas	N2O	2020	0.003
Current policies	MN	Commercial	Refined Liquids	CH4	2020	0.058857
Current policies	MN	Commercial	Refined Liquids	CO2	2020	8.085152
Current policies	MN	Commercial	Refined Liquids	N2O	2020	0.023922
Current policies	MN	Commercial	Solvent use	CO2	2020	0.080955
Current policies	MN	Electricity	Coal	CH4	2020	0
Current policies	MN	Electricity	Coal	CO2	2020	15.758967
Current policies	MN	Electricity	Coal	N2O	2020	0
Current policies	MN	Electricity	Coal storage	CH4	2020	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2020	0
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2020	0
Current policies	MN	Electricity	Natural gas	CH4	2020	0.003754
Current policies	MN	Electricity	Natural gas	CO2	2020	5.308841
Current policies	MN	Electricity	Natural gas	N2O	2020	0.080483
Current policies	MN	Electricity	Net electricity imports	CH4	2020	0.009871
Current policies	MN	Electricity	Net electricity imports	CO2	2020	4.224962
Current policies	MN	Electricity	Net electricity imports	N2O	2020	0.018322
Current policies	MN	Electricity	Refined Liquids	CH4	2020	0.010805
Current policies	MN	Electricity	Refined Liquids	CO2	2020	0.584672
Current policies	MN	Electricity	Refined Liquids	N2O	2020	0.051257
Current policies	MN	Electricity	Transmission	SF6	2020	0.045708
Current policies	MN	Industry	Ammonia manufacture	CO2	2020	0
Current policies	MN	Industry	Coal	CH4	2020	0.022508
Current policies	MN	Industry	Coal	CO2	2020	1.122334

Current policies	MN	Industry	Coal	N2O	2020	0.004579
Current policies	MN	Industry	Industrial solvent release	CO2	2020	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2020	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2020	0
Current policies	MN	Industry	Magnesium casting	SF6	2020	0
Current policies	MN	Industry	Natural gas	CH4	2020	0.003867
Current policies	MN	Industry	Natural gas	CO2	2020	8.612151
Current policies	MN	Industry	Natural gas	N2O	2020	0.004609
Current policies	MN	Industry	Oil refining	CH4	2020	0
Current policies	MN	Industry	Oil refining	CO2	2020	0.001256
Current policies	MN	Industry	Other industrial process	CO2	2020	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2020	0
Current policies	MN	Industry	Refined Liquids	CH4	2020	0.022208
Current policies	MN	Industry	Refined Liquids	CO2	2020	8.351979
Current policies	MN	Industry	Refined Liquids	N2O	2020	0.037394
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2020	0.009852
Current policies	MN	Industry	Solvent	HFC	2020	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2020	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2020	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2020	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2020	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2020	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2020	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2020	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2020	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2020	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2020	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2020	0.003207
Current policies	MN	LULUCF	Grass Fires	CH4	2020	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2020	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2020	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2020	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2020	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2020	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2020	2.157873
Current policies	MN	LULUCF	Peat harvesting	CH4	2020	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2020	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2020	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2020	0
Current policies	MN	LULUCF	Reservoirs	CH4	2020	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2020	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2020	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2020	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2020	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2020	0
Current policies	MN	Residential	Air conditioning	HFC125	2020	0.11422
Current policies	MN	Residential	Air conditioning	HFC143a	2020	0.000008
Current policies	MN	Residential	Air conditioning	HFC32	2020	0.022028
Current policies	MN	Residential	Coal	CH4	2020	0
Current policies	MN	Residential	Coal	CO2	2020	0
Current policies	MN	Residential	Coal	N2O	2020	0
Current policies	MN	Residential	Food additives	CO2	2020	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2020	0.015064
Current policies	MN	Residential	Natural gas	CH4	2020	0.0179
Current policies	MN	Residential	Natural gas	CO2	2020	7.974132
Current policies	MN	Residential	Natural gas	N2O	2020	0.004267

Current policies	MN	Residential	Refined Liquids	CH4	2020	0.004519
Current policies	MN	Residential	Refined Liquids	CO2	2020	2.160585
Current policies	MN	Residential	Refined Liquids	N2O	2020	0.001477
Current policies	MN	Residential	Refrigeration	HFC134a	2020	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2020	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2020	0.094907
Current policies	MN	Residential	Wood	CH4	2020	0.202362
Current policies	MN	Residential	Wood	N2O	2020	0.032162
Current policies	MN	Transportation	Aviation	CH4	2020	0
Current policies	MN	Transportation	Aviation	CO2	2020	2.243864
Current policies	MN	Transportation	Aviation	N2O	2020	0.02137
Current policies	MN	Transportation	Bus	CH4	2020	0.005053
Current policies	MN	Transportation	Bus	CO2	2020	0.589631
Current policies	MN	Transportation	Bus	N2O	2020	0.000837
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2020	0.01937
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2020	6.897262
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2020	0.010637
Current policies	MN	Transportation	Light-duty trucks	CH4	2020	0.031397
Current policies	MN	Transportation	Light-duty trucks	CO2	2020	13.302309
Current policies	MN	Transportation	Light-duty trucks	N2O	2020	0.111971
Current policies	MN	Transportation	Military and other off-highway	CH4	2020	0.04765
Current policies	MN	Transportation	Military and other off-highway	CO2	2020	0.881119
Current policies	MN	Transportation	Military and other off-highway	N2O	2020	0.236751
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2020	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2020	0.001458
Current policies	MN	Transportation	Motorcycle	CO2	2020	0.154485
Current policies	MN	Transportation	Motorcycle	N2O	2020	0.000355
Current policies	MN	Transportation	Natural gas transmission	CH4	2020	0
Current policies	MN	Transportation	Natural gas transmission	CO2	2020	0.672055
Current policies	MN	Transportation	Natural gas transmission	N2O	2020	0
Current policies	MN	Transportation	Passenger cars	CH4	2020	0.020998
Current policies	MN	Transportation	Passenger cars	CO2	2020	6.350814
Current policies	MN	Transportation	Passenger cars	N2O	2020	0.052391
Current policies	MN	Transportation	Railroad	CH4	2020	0.004149
Current policies	MN	Transportation	Railroad	CO2	2020	0.69828
Current policies	MN	Transportation	Railroad	N2O	2020	0.015828
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2020	0.000082
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2020	0.810753
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2020	0.002323
Current policies	MN	Waste	Biosolids land application	N2O	2020	0.019032
Current policies	MN	Waste	Coal	CH4	2020	0
Current policies	MN	Waste	Coal	CO2	2020	0
Current policies	MN	Waste	Coal	N2O	2020	0
Current policies	MN	Waste	Food waste prevention	CO2	2020	0
Current policies	MN	Waste	Hazardous waste	CO2	2020	0
Current policies	MN	Waste	Hazardous waste	N2O	2020	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2020	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2020	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2020	0
Current policies	MN	Waste	Industrial landfills	CH4	2020	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2020	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2020	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2020	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2020	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2020	0.000164
Current policies	MN	Waste	Limestone use	CO2	2020	0

Current policies	MN	Waste	MMSW compost preprocessing	CH4	2020	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2020	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2020	0
Current policies	MN	Waste	MMSW composting	CH4	2020	0
Current policies	MN	Waste	MMSW composting	N2O	2020	0
Current policies	MN	Waste	MMSW landfills	CH4	2020	1.524828
Current policies	MN	Waste	Mass burn	CH4	2020	0
Current policies	MN	Waste	Mass burn	CO2	2020	0
Current policies	MN	Waste	Mass burn	N2O	2020	0
Current policies	MN	Waste	Materials recovery facility	CH4	2020	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2020	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2020	0.00006
Current policies	MN	Waste	Medical	CO2	2020	0.004405
Current policies	MN	Waste	Medical	N2O	2020	0.000174
Current policies	MN	Waste	Miscellaneous	CO2	2020	0
Current policies	MN	Waste	Miscellaneous	N2O	2020	0
Current policies	MN	Waste	Natural gas	CH4	2020	0.000004
Current policies	MN	Waste	Natural gas	CO2	2020	0.009112
Current policies	MN	Waste	Natural gas	N2O	2020	0.000046
Current policies	MN	Waste	Oil	CH4	2020	0
Current policies	MN	Waste	Oil	CO2	2020	0.002004
Current policies	MN	Waste	Oil	N2O	2020	0.000002
Current policies	MN	Waste	Propane	CH4	2020	0
Current policies	MN	Waste	Propane	CO2	2020	0
Current policies	MN	Waste	Propane	N2O	2020	0
Current policies	MN	Waste	RDF	CH4	2020	0
Current policies	MN	Waste	RDF	CO2	2020	0
Current policies	MN	Waste	RDF	N2O	2020	0
Current policies	MN	Waste	RDF processing	CH4	2020	0.000002
Current policies	MN	Waste	RDF processing	CO2	2020	0.001448
Current policies	MN	Waste	RDF processing	N2O	2020	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2020	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2020	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2020	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2020	-0.903026
Current policies	MN	Waste	Sludge	CH4	2020	0.00423
Current policies	MN	Waste	Sludge	N2O	2020	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2020	0
Current policies	MN	Waste	Wastewater treatment	CH4	2020	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2020	0.112409
Current policies	MN	Waste	Wood	CH4	2020	0
Current policies	MN	Waste	Wood	N2O	2020	0
Current policies	MN	Waste	Yard waste composting	CH4	2020	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2020	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2020	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2020	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2020	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2020	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2020	2.355954
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2020	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2020	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2020	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2020	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2020	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2020	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2020	0

Net-zero pathway	MN	Agriculture	Cropland	N2O	2020	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2020	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2020	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2020	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2020	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2020	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2020	0.000298
Net-zero pathway	MN	Agriculture	Grassland	N2O	2020	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2020	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2020	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2020	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2020	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2020	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2020	0.000957
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2020	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2020	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2020	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2020	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2020	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2020	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2020	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2020	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2020	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2020	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2020	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2020	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2020	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2020	0.009997
Net-zero pathway	MN	Agriculture	Swine	CH4	2020	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2020	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2020	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2020	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2020	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2020	0.724538
Net-zero pathway	MN	Commercial	Biofuel	CO2	2020	0
Net-zero pathway	MN	Commercial	Coal	CH4	2020	0.000028
Net-zero pathway	MN	Commercial	Coal	CO2	2020	0.010746
Net-zero pathway	MN	Commercial	Coal	N2O	2020	0.000049
Net-zero pathway	MN	Commercial	Limestone use	CO2	2020	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2020	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2020	0.012583
Net-zero pathway	MN	Commercial	Natural gas	CO2	2020	5.605208
Net-zero pathway	MN	Commercial	Natural gas	N2O	2020	0.003
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2020	0.058857
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2020	8.085152
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2020	0.023922
Net-zero pathway	MN	Commercial	Solvent use	CO2	2020	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2020	0
Net-zero pathway	MN	Electricity	Coal	CO2	2020	15.758967
Net-zero pathway	MN	Electricity	Coal	N2O	2020	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2020	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2020	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2020	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2020	0.003754
Net-zero pathway	MN	Electricity	Natural gas	CO2	2020	5.308841
Net-zero pathway	MN	Electricity	Natural gas	N2O	2020	0.080483

Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2020	0.009871
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2020	4.224962
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2020	0.018322
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2020	0.010805
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2020	0.584672
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2020	0.051257
Net-zero pathway	MN	Electricity	Transmission	SF6	2020	0.045708
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2020	0
Net-zero pathway	MN	Industry	Coal	CH4	2020	0.022508
Net-zero pathway	MN	Industry	Coal	CO2	2020	1.122334
Net-zero pathway	MN	Industry	Coal	N2O	2020	0.004579
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2020	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2020	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2020	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2020	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2020	0.003867
Net-zero pathway	MN	Industry	Natural gas	CO2	2020	8.612151
Net-zero pathway	MN	Industry	Natural gas	N2O	2020	0.004609
Net-zero pathway	MN	Industry	Oil refining	CH4	2020	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2020	0.001256
Net-zero pathway	MN	Industry	Other industrial process	CO2	2020	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2020	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2020	0.022208
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2020	8.351979
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2020	0.037394
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2020	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2020	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2020	1.773177
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2020	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2020	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2020	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2020	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2020	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2020	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2020	2.28217
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2020	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2020	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2020	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2020	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2020	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2020	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2020	-0.204716
Net-zero pathway	MN	LULUCF	Litter	CO2	2020	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2020	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2020	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2020	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2020	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2020	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2020	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2020	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2020	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2020	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2020	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2020	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2020	0
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2020	0

Net-zero pathway	MN	Residential	Air conditioning	HFC125	2020	0.11422
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2020	0.000008
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2020	0.022028
Net-zero pathway	MN	Residential	Coal	CH4	2020	0
Net-zero pathway	MN	Residential	Coal	CO2	2020	0
Net-zero pathway	MN	Residential	Coal	N2O	2020	0
Net-zero pathway	MN	Residential	Food additives	CO2	2020	0.018981
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2020	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2020	0.0179
Net-zero pathway	MN	Residential	Natural gas	CO2	2020	7.974132
Net-zero pathway	MN	Residential	Natural gas	N2O	2020	0.004267
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2020	0.004519
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2020	2.160585
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2020	0.001477
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2020	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2020	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2020	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2020	0.202362
Net-zero pathway	MN	Residential	Wood	N2O	2020	0.032162
Net-zero pathway	MN	Transportation	Aviation	CH4	2020	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2020	2.243864
Net-zero pathway	MN	Transportation	Aviation	N2O	2020	0.02137
Net-zero pathway	MN	Transportation	Bus	CH4	2020	0.005053
Net-zero pathway	MN	Transportation	Bus	CO2	2020	0.589631
Net-zero pathway	MN	Transportation	Bus	N2O	2020	0.000837
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2020	0.01937
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2020	6.897262
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2020	0.010637
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2020	0.031397
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2020	13.302309
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2020	0.111971
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2020	0.04765
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2020	0.881119
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2020	0.236751
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2020	1.750327
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2020	0.001458
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2020	0.154485
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2020	0.000355
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2020	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2020	0.672055
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2020	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2020	0.020998
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2020	6.350814
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2020	0.052391
Net-zero pathway	MN	Transportation	Railroad	CH4	2020	0.004149
Net-zero pathway	MN	Transportation	Railroad	CO2	2020	0.69828
Net-zero pathway	MN	Transportation	Railroad	N2O	2020	0.015828
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2020	0.000082
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2020	0.810753
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2020	0.002323
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2020	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2020	0
Net-zero pathway	MN	Waste	Coal	CO2	2020	0
Net-zero pathway	MN	Waste	Coal	N2O	2020	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2020	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2020	0

Net-zero pathway	MN	Waste	Hazardous waste	N2O	2020	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2020	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2020	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2020	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2020	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2020	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2020	0.000242
Net-zero pathway	MN	Waste	Landfill operations	CH4	2020	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2020	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2020	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2020	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2020	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2020	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2020	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2020	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2020	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2020	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2020	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2020	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2020	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2020	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2020	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2020	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2020	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2020	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2020	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2020	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2020	0.000004
Net-zero pathway	MN	Waste	Natural gas	CO2	2020	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2020	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2020	0
Net-zero pathway	MN	Waste	Oil	CO2	2020	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2020	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2020	0
Net-zero pathway	MN	Waste	Propane	CO2	2020	0
Net-zero pathway	MN	Waste	Propane	N2O	2020	0
Net-zero pathway	MN	Waste	RDF	CH4	2020	0
Net-zero pathway	MN	Waste	RDF	CO2	2020	0
Net-zero pathway	MN	Waste	RDF	N2O	2020	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2020	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2020	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2020	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2020	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2020	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2020	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2020	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2020	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2020	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2020	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2020	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2020	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2020	0
Net-zero pathway	MN	Waste	Wood	N2O	2020	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2020	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2020	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2020	0.003127

Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2020	0.000025
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2025	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2025	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2025	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2025	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2025	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2025	0.000938
Current policies	MN	Agriculture	Biofuel	N2O	2025	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2025	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2025	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2025	0
Current policies	MN	Agriculture	Cropland	N2O	2025	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2025	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2025	0.163691
Current policies	MN	Agriculture	Dairy Heifers	N2O	2025	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2025	0.061878
Current policies	MN	Agriculture	Goats	CH4	2025	0.009678
Current policies	MN	Agriculture	Goats	N2O	2025	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2025	1.82027
Current policies	MN	Agriculture	Horses	CH4	2025	0.018834
Current policies	MN	Agriculture	Horses	N2O	2025	0.001052
Current policies	MN	Agriculture	Liming	CO2	2025	0.025355
Current policies	MN	Agriculture	Litter	CO2	2025	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2025	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2025	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2025	0.000035
Current policies	MN	Agriculture	Oil	CH4	2025	0.00907
Current policies	MN	Agriculture	Oil	CO2	2025	2.819079
Current policies	MN	Agriculture	Oil	N2O	2025	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2025	6.613127
Current policies	MN	Agriculture	Other	CH4	2025	0.000091
Current policies	MN	Agriculture	Other	N2O	2025	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2025	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2025	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2025	0.001728
Current policies	MN	Agriculture	Pulses	N2O	2025	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2025	0
Current policies	MN	Agriculture	Sheep	CH4	2025	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2025	0.009997
Current policies	MN	Agriculture	Swine	CH4	2025	2.42472
Current policies	MN	Agriculture	Swine	N2O	2025	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2025	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2025	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2025	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2025	0.7375309
Current policies	MN	Commercial	Biofuel	CO2	2025	0
Current policies	MN	Commercial	Coal	CH4	2025	2.34998E-05
Current policies	MN	Commercial	Coal	CO2	2025	0.009018868
Current policies	MN	Commercial	Coal	N2O	2025	4.11246E-05
Current policies	MN	Commercial	Limestone use	CO2	2025	0.000105
Current policies	MN	Commercial	Medical use	N2O	2025	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2025	0.011553657
Current policies	MN	Commercial	Natural gas	CO2	2025	5.363242108
Current policies	MN	Commercial	Natural gas	N2O	2025	0.00275459
Current policies	MN	Commercial	Refined Liquids	CH4	2025	0.061517793
Current policies	MN	Commercial	Refined Liquids	CO2	2025	8.573064781

Current policies	MN	Commercial	Refined Liquids	N2O	2025	0.025003443
Current policies	MN	Commercial	Solvent use	CO2	2025	0.080955
Current policies	MN	Electricity	Coal	CH4	2025	0
Current policies	MN	Electricity	Coal	CO2	2025	8.998906463
Current policies	MN	Electricity	Coal	N2O	2025	0
Current policies	MN	Electricity	Coal storage	CH4	2025	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2025	0
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2025	0
Current policies	MN	Electricity	Natural gas	CH4	2025	0.003128759
Current policies	MN	Electricity	Natural gas	CO2	2025	4.787610211
Current policies	MN	Electricity	Natural gas	N2O	2025	0.066732905
Current policies	MN	Electricity	Net electricity imports	CH4	2025	0.033757744
Current policies	MN	Electricity	Net electricity imports	CO2	2025	14.85255813
Current policies	MN	Electricity	Net electricity imports	N2O	2025	0.062605946
Current policies	MN	Electricity	Refined Liquids	CH4	2025	0.007342937
Current policies	MN	Electricity	Refined Liquids	CO2	2025	0.39732496
Current policies	MN	Electricity	Refined Liquids	N2O	2025	0.034833589
Current policies	MN	Electricity	Transmission	SF6	2025	0.046644553
Current policies	MN	Industry	Ammonia manufacture	CO2	2025	0
Current policies	MN	Industry	Coal	CH4	2025	0.023322773
Current policies	MN	Industry	Coal	CO2	2025	1.171406834
Current policies	MN	Industry	Coal	N2O	2025	0.004744734
Current policies	MN	Industry	Industrial solvent release	CO2	2025	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2025	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2025	0
Current policies	MN	Industry	Magnesium casting	SF6	2025	0
Current policies	MN	Industry	Natural gas	CH4	2025	0.003994813
Current policies	MN	Industry	Natural gas	CO2	2025	8.860021291
Current policies	MN	Industry	Natural gas	N2O	2025	0.004761352
Current policies	MN	Industry	Oil refining	CH4	2025	0
Current policies	MN	Industry	Oil refining	CO2	2025	0.001258192
Current policies	MN	Industry	Other industrial process	CO2	2025	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2025	0
Current policies	MN	Industry	Refined Liquids	CH4	2025	0.023447593
Current policies	MN	Industry	Refined Liquids	CO2	2025	8.788564061
Current policies	MN	Industry	Refined Liquids	N2O	2025	0.03948123
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2025	0.009852
Current policies	MN	Industry	Solvent	HFC	2025	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2025	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2025	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2025	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2025	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2025	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2025	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2025	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2025	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2025	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2025	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2025	0.003207
Current policies	MN	LULUCF	Grass Fires	CH4	2025	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2025	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2025	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2025	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2025	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2025	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2025	2.157873

Current policies	MN	LULUCF	Peat harvesting	CH4	2025	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2025	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2025	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2025	0
Current policies	MN	LULUCF	Reservoirs	CH4	2025	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2025	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2025	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2025	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2025	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2025	0
Current policies	MN	Residential	Air conditioning	HFC125	2025	0.114688858
Current policies	MN	Residential	Air conditioning	HFC143a	2025	8.03285E-06
Current policies	MN	Residential	Air conditioning	HFC32	2025	0.022118467
Current policies	MN	Residential	Coal	CH4	2025	0
Current policies	MN	Residential	Coal	CO2	2025	0
Current policies	MN	Residential	Coal	N2O	2025	0
Current policies	MN	Residential	Food additives	CO2	2025	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2025	0.015064
Current policies	MN	Residential	Natural gas	CH4	2025	0.016257328
Current policies	MN	Residential	Natural gas	CO2	2025	7.249348433
Current policies	MN	Residential	Natural gas	N2O	2025	0.00387543
Current policies	MN	Residential	Refined Liquids	CH4	2025	0.004104279
Current policies	MN	Residential	Refined Liquids	CO2	2025	1.961574908
Current policies	MN	Residential	Refined Liquids	N2O	2025	0.001341454
Current policies	MN	Residential	Refrigeration	HFC134a	2025	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2025	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2025	0.094907
Current policies	MN	Residential	Wood	CH4	2025	0.183548545
Current policies	MN	Residential	Wood	N2O	2025	0.029171889
Current policies	MN	Transportation	Aviation	CH4	2025	0
Current policies	MN	Transportation	Aviation	CO2	2025	2.413696703
Current policies	MN	Transportation	Aviation	N2O	2025	0.022851382
Current policies	MN	Transportation	Bus	CH4	2025	0.004959616
Current policies	MN	Transportation	Bus	CO2	2025	0.673652399
Current policies	MN	Transportation	Bus	N2O	2025	0.000821547
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2025	0.017232614
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2025	6.577857021
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2025	0.009463257
Current policies	MN	Transportation	Light-duty trucks	CH4	2025	0.028461633
Current policies	MN	Transportation	Light-duty trucks	CO2	2025	13.81954228
Current policies	MN	Transportation	Light-duty trucks	N2O	2025	0.101502674
Current policies	MN	Transportation	Military and other off-highway	CH4	2025	0.04765
Current policies	MN	Transportation	Military and other off-highway	CO2	2025	0.881119
Current policies	MN	Transportation	Military and other off-highway	N2O	2025	0.236751
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2025	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2025	0.000958228
Current policies	MN	Transportation	Motorcycle	CO2	2025	0.101530514
Current policies	MN	Transportation	Motorcycle	N2O	2025	0.000233312
Current policies	MN	Transportation	Natural gas transmission	CH4	2025	0
Current policies	MN	Transportation	Natural gas transmission	CO2	2025	0.682769903
Current policies	MN	Transportation	Natural gas transmission	N2O	2025	0
Current policies	MN	Transportation	Passenger cars	CH4	2025	0.019372174
Current policies	MN	Transportation	Passenger cars	CO2	2025	5.93015495
Current policies	MN	Transportation	Passenger cars	N2O	2025	0.04833454
Current policies	MN	Transportation	Railroad	CH4	2025	0.003768133
Current policies	MN	Transportation	Railroad	CO2	2025	0.651464365

Current policies	MN	Transportation	Railroad	N2O	2025	0.014374963
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2025	7.38807E-05
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2025	0.803643551
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2025	0.002092986
Current policies	MN	Waste	Biosolids land application	N2O	2025	0.019032
Current policies	MN	Waste	Coal	CH4	2025	0
Current policies	MN	Waste	Coal	CO2	2025	0
Current policies	MN	Waste	Coal	N2O	2025	0
Current policies	MN	Waste	Food waste prevention	CO2	2025	0
Current policies	MN	Waste	Hazardous waste	CO2	2025	0
Current policies	MN	Waste	Hazardous waste	N2O	2025	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2025	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2025	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2025	0
Current policies	MN	Waste	Industrial landfills	CH4	2025	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2025	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2025	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2025	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2025	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2025	0.000164
Current policies	MN	Waste	Limestone use	CO2	2025	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2025	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2025	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2025	0
Current policies	MN	Waste	MMSW composting	CH4	2025	0
Current policies	MN	Waste	MMSW composting	N2O	2025	0
Current policies	MN	Waste	MMSW landfills	CH4	2025	1.524828
Current policies	MN	Waste	Mass burn	CH4	2025	0
Current policies	MN	Waste	Mass burn	CO2	2025	0
Current policies	MN	Waste	Mass burn	N2O	2025	0
Current policies	MN	Waste	Materials recovery facility	CH4	2025	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2025	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2025	0.00006
Current policies	MN	Waste	Medical	CO2	2025	0.004405
Current policies	MN	Waste	Medical	N2O	2025	0.000174
Current policies	MN	Waste	Miscellaneous	CO2	2025	0
Current policies	MN	Waste	Miscellaneous	N2O	2025	0
Current policies	MN	Waste	Natural gas	CH4	2025	0.000004
Current policies	MN	Waste	Natural gas	CO2	2025	0.009112
Current policies	MN	Waste	Natural gas	N2O	2025	0.000046
Current policies	MN	Waste	Oil	CH4	2025	0
Current policies	MN	Waste	Oil	CO2	2025	0.002004
Current policies	MN	Waste	Oil	N2O	2025	0.000002
Current policies	MN	Waste	Propane	CH4	2025	0
Current policies	MN	Waste	Propane	CO2	2025	0
Current policies	MN	Waste	Propane	N2O	2025	0
Current policies	MN	Waste	RDF	CH4	2025	0
Current policies	MN	Waste	RDF	CO2	2025	0
Current policies	MN	Waste	RDF	N2O	2025	0
Current policies	MN	Waste	RDF processing	CH4	2025	0.000002
Current policies	MN	Waste	RDF processing	CO2	2025	0.001448
Current policies	MN	Waste	RDF processing	N2O	2025	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2025	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2025	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2025	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2025	-0.903026

Current policies	MN	Waste	Sludge	CH4	2025	0.00423
Current policies	MN	Waste	Sludge	N2O	2025	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2025	0
Current policies	MN	Waste	Wastewater treatment	CH4	2025	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2025	0.112409
Current policies	MN	Waste	Wood	CH4	2025	0
Current policies	MN	Waste	Wood	N2O	2025	0
Current policies	MN	Waste	Yard waste composting	CH4	2025	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2025	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2025	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2025	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2025	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2025	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2025	2.355954
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2025	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2025	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2025	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2025	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2025	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2025	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2025	0
Net-zero pathway	MN	Agriculture	Cropland	N2O	2025	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2025	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2025	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2025	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2025	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2025	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2025	0.000298
Net-zero pathway	MN	Agriculture	Grassland	N2O	2025	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2025	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2025	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2025	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2025	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2025	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2025	0.000957
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2025	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2025	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2025	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2025	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2025	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2025	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2025	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2025	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2025	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2025	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2025	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2025	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2025	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2025	0.009997
Net-zero pathway	MN	Agriculture	Swine	CH4	2025	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2025	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2025	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2025	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2025	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2025	0.717183647
Net-zero pathway	MN	Commercial	Biofuel	CO2	2025	0

Net-zero pathway	MN	Commercial	Coal	CH4	2025	2.34998E-05
Net-zero pathway	MN	Commercial	Coal	CO2	2025	0.009018868
Net-zero pathway	MN	Commercial	Coal	N2O	2025	4.11246E-05
Net-zero pathway	MN	Commercial	Limestone use	CO2	2025	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2025	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2025	0.010876334
Net-zero pathway	MN	Commercial	Natural gas	CO2	2025	4.983638051
Net-zero pathway	MN	Commercial	Natural gas	N2O	2025	0.002593106
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2025	0.055153098
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2025	7.46634256
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2025	0.022416533
Net-zero pathway	MN	Commercial	Solvent use	CO2	2025	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2025	0
Net-zero pathway	MN	Electricity	Coal	CO2	2025	4.132577201
Net-zero pathway	MN	Electricity	Coal	N2O	2025	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2025	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2025	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2025	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2025	0.000175848
Net-zero pathway	MN	Electricity	Natural gas	CO2	2025	0.211864911
Net-zero pathway	MN	Electricity	Natural gas	N2O	2025	0.003213506
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2025	0.001254928
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2025	18.97783131
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2025	0.003321247
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2025	0.003588151
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2025	0.194150217
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2025	0.017021509
Net-zero pathway	MN	Electricity	Transmission	SF6	2025	0.046516691
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2025	0
Net-zero pathway	MN	Industry	Coal	CH4	2025	0.022577112
Net-zero pathway	MN	Industry	Coal	CO2	2025	1.088337018
Net-zero pathway	MN	Industry	Coal	N2O	2025	0.00459305
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2025	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2025	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2025	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2025	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2025	0.003901022
Net-zero pathway	MN	Industry	Natural gas	CO2	2025	8.673664153
Net-zero pathway	MN	Industry	Natural gas	N2O	2025	0.004649559
Net-zero pathway	MN	Industry	Oil refining	CH4	2025	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2025	0.001260122
Net-zero pathway	MN	Industry	Other industrial process	CO2	2025	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2025	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2025	0.021488824
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2025	7.975937455
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2025	0.03618297
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2025	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2025	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2025	1.773177
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2025	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2025	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2025	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2025	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2025	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2025	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2025	2.28217

Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2025	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2025	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2025	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2025	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2025	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2025	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2025	-0.204716
Net-zero pathway	MN	LULUCF	Litter	CO2	2025	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2025	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2025	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2025	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2025	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2025	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2025	0
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2025	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2025	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2025	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2025	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2025	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2025	-0.00001
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2025	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2025	0.111483677
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2025	7.80835E-06
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2025	0.021500315
Net-zero pathway	MN	Residential	Coal	CH4	2025	0
Net-zero pathway	MN	Residential	Coal	CO2	2025	0
Net-zero pathway	MN	Residential	Coal	N2O	2025	0
Net-zero pathway	MN	Residential	Food additives	CO2	2025	0.018981
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2025	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2025	0.016044278
Net-zero pathway	MN	Residential	Natural gas	CO2	2025	7.143106197
Net-zero pathway	MN	Residential	Natural gas	N2O	2025	0.003824642
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2025	0.004045668
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2025	1.936038836
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2025	0.001322296
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2025	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2025	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2025	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2025	0.183684291
Net-zero pathway	MN	Residential	Wood	N2O	2025	0.02919346
Net-zero pathway	MN	Transportation	Aviation	CH4	2025	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2025	2.266974298
Net-zero pathway	MN	Transportation	Aviation	N2O	2025	0.02151385
Net-zero pathway	MN	Transportation	Bus	CH4	2025	0.004376477
Net-zero pathway	MN	Transportation	Bus	CO2	2025	0.510686841
Net-zero pathway	MN	Transportation	Bus	N2O	2025	0.000724938
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2025	0.018069304
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2025	6.434120933
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2025	0.009922743
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2025	0.024537839
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2025	10.39618471
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2025	0.087509231
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2025	0.04765
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2025	0.881119
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2025	0.236751
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2025	1.750327

Net-zero pathway	MN	Transportation	Motorcycle	CH4	2025	0.001688561
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2025	0.178914632
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2025	0.000411139
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2025	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2025	0.678292313
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2025	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2025	0.019934816
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2025	6.093702882
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2025	0.049738233
Net-zero pathway	MN	Transportation	Railroad	CH4	2025	0.00407402
Net-zero pathway	MN	Transportation	Railroad	CO2	2025	0.6856607
Net-zero pathway	MN	Transportation	Railroad	N2O	2025	0.015541947
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2025	5.5341E-05
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2025	0.696221856
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2025	0.001567773
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2025	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2025	0
Net-zero pathway	MN	Waste	Coal	CO2	2025	0
Net-zero pathway	MN	Waste	Coal	N2O	2025	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2025	0
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2025	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2025	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2025	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2025	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2025	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2025	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2025	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2025	0.000242
Net-zero pathway	MN	Waste	Landfill operations	CH4	2025	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2025	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2025	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2025	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2025	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2025	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2025	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2025	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2025	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2025	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2025	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2025	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2025	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2025	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2025	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2025	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2025	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2025	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2025	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2025	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2025	0.000004
Net-zero pathway	MN	Waste	Natural gas	CO2	2025	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2025	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2025	0
Net-zero pathway	MN	Waste	Oil	CO2	2025	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2025	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2025	0
Net-zero pathway	MN	Waste	Propane	CO2	2025	0

Net-zero pathway	MN	Waste	Propane	N2O	2025	0
Net-zero pathway	MN	Waste	RDF	CH4	2025	0
Net-zero pathway	MN	Waste	RDF	CO2	2025	0
Net-zero pathway	MN	Waste	RDF	N2O	2025	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2025	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2025	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2025	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2025	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2025	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2025	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2025	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2025	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2025	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2025	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2025	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2025	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2025	0
Net-zero pathway	MN	Waste	Wood	N2O	2025	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2025	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2025	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2025	0.003127
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2025	0.000025
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2030	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2030	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2030	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2030	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2030	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2030	0.000938
Current policies	MN	Agriculture	Biofuel	N2O	2030	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2030	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2030	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2030	-0.201
Current policies	MN	Agriculture	Cropland	N2O	2030	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2030	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2030	0.163691
Current policies	MN	Agriculture	Dairy Heifers	N2O	2030	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2030	0.061878
Current policies	MN	Agriculture	Goats	CH4	2030	0.009678
Current policies	MN	Agriculture	Goats	N2O	2030	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2030	1.82027
Current policies	MN	Agriculture	Horses	CH4	2030	0.018834
Current policies	MN	Agriculture	Horses	N2O	2030	0.001052
Current policies	MN	Agriculture	Liming	CO2	2030	0.025355
Current policies	MN	Agriculture	Litter	CO2	2030	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2030	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2030	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2030	0.000035
Current policies	MN	Agriculture	Oil	CH4	2030	0.00907
Current policies	MN	Agriculture	Oil	CO2	2030	2.819079
Current policies	MN	Agriculture	Oil	N2O	2030	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2030	6.613127
Current policies	MN	Agriculture	Other	CH4	2030	0.000091
Current policies	MN	Agriculture	Other	N2O	2030	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2030	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2030	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2030	0.001728

Current policies	MN	Agriculture	Pulses	N2O	2030	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2030	0
Current policies	MN	Agriculture	Sheep	CH4	2030	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2030	0.009997
Current policies	MN	Agriculture	Swine	CH4	2030	2.42472
Current policies	MN	Agriculture	Swine	N2O	2030	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2030	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2030	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2030	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2030	0.741496237
Current policies	MN	Commercial	Biofuel	CO2	2030	0
Current policies	MN	Commercial	Coal	CH4	2030	1.81374E-05
Current policies	MN	Commercial	Coal	CO2	2030	0.006960859
Current policies	MN	Commercial	Coal	N2O	2030	3.17404E-05
Current policies	MN	Commercial	Limestone use	CO2	2030	0.000105
Current policies	MN	Commercial	Medical use	N2O	2030	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2030	0.010378817
Current policies	MN	Commercial	Natural gas	CO2	2030	5.115639195
Current policies	MN	Commercial	Natural gas	N2O	2030	0.002474487
Current policies	MN	Commercial	Refined Liquids	CH4	2030	0.060519914
Current policies	MN	Commercial	Refined Liquids	CO2	2030	8.966151644
Current policies	MN	Commercial	Refined Liquids	N2O	2030	0.024597786
Current policies	MN	Commercial	Solvent use	CO2	2030	0.080955
Current policies	MN	Electricity	Coal	CH4	2030	0
Current policies	MN	Electricity	Coal	CO2	2030	5.399347867
Current policies	MN	Electricity	Coal	N2O	2030	0
Current policies	MN	Electricity	Coal storage	CH4	2030	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2030	0
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2030	0
Current policies	MN	Electricity	Natural gas	CH4	2030	0.002861194
Current policies	MN	Electricity	Natural gas	CO2	2030	4.137715824
Current policies	MN	Electricity	Natural gas	N2O	2030	0.061231977
Current policies	MN	Electricity	Net electricity imports	CH4	2030	0.02760337
Current policies	MN	Electricity	Net electricity imports	CO2	2030	8.433550325
Current policies	MN	Electricity	Net electricity imports	N2O	2030	0.051397365
Current policies	MN	Electricity	Refined Liquids	CH4	2030	0.005636302
Current policies	MN	Electricity	Refined Liquids	CO2	2030	0.304977146
Current policies	MN	Electricity	Refined Liquids	N2O	2030	0.026737608
Current policies	MN	Electricity	Transmission	SF6	2030	0.048476418
Current policies	MN	Industry	Ammonia manufacture	CO2	2030	0
Current policies	MN	Industry	Coal	CH4	2030	0.024182855
Current policies	MN	Industry	Coal	CO2	2030	1.233714411
Current policies	MN	Industry	Coal	N2O	2030	0.004919731
Current policies	MN	Industry	Industrial solvent release	CO2	2030	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2030	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2030	0
Current policies	MN	Industry	Magnesium casting	SF6	2030	0
Current policies	MN	Industry	Natural gas	CH4	2030	0.004143652
Current policies	MN	Industry	Natural gas	CO2	2030	9.276419559
Current policies	MN	Industry	Natural gas	N2O	2030	0.004938746
Current policies	MN	Industry	Oil refining	CH4	2030	0
Current policies	MN	Industry	Oil refining	CO2	2030	0.001137911
Current policies	MN	Industry	Other industrial process	CO2	2030	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2030	0
Current policies	MN	Industry	Refined Liquids	CH4	2030	0.023907351
Current policies	MN	Industry	Refined Liquids	CO2	2030	8.905490922

Current policies	MN	Industry	Refined Liquids	N2O	2030	0.040255346
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2030	0.009852
Current policies	MN	Industry	Solvent	HFC	2030	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2030	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2030	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2030	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2030	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2030	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2030	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2030	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2030	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2030	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2030	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2030	0.003207
Current policies	MN	LULUCF	Grass Fires	CH4	2030	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2030	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2030	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2030	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2030	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2030	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2030	2.157873
Current policies	MN	LULUCF	Peat harvesting	CH4	2030	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2030	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2030	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2030	-0.042
Current policies	MN	LULUCF	Reservoirs	CH4	2030	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2030	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2030	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2030	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2030	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2030	0
Current policies	MN	Residential	Air conditioning	HFC125	2030	0.114850815
Current policies	MN	Residential	Air conditioning	HFC143a	2030	8.04419E-06
Current policies	MN	Residential	Air conditioning	HFC32	2030	0.022149746
Current policies	MN	Residential	Coal	CH4	2030	0
Current policies	MN	Residential	Coal	CO2	2030	0
Current policies	MN	Residential	Coal	N2O	2030	0
Current policies	MN	Residential	Food additives	CO2	2030	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2030	0.015064
Current policies	MN	Residential	Natural gas	CH4	2030	0.014045964
Current policies	MN	Residential	Natural gas	CO2	2030	6.276874601
Current policies	MN	Residential	Natural gas	N2O	2030	0.003348271
Current policies	MN	Residential	Refined Liquids	CH4	2030	0.003485519
Current policies	MN	Residential	Refined Liquids	CO2	2030	1.666239001
Current policies	MN	Residential	Refined Liquids	N2O	2030	0.001139217
Current policies	MN	Residential	Refrigeration	HFC134a	2030	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2030	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2030	0.094907
Current policies	MN	Residential	Wood	CH4	2030	0.1575771
Current policies	MN	Residential	Wood	N2O	2030	0.025044206
Current policies	MN	Transportation	Aviation	CH4	2030	0
Current policies	MN	Transportation	Aviation	CO2	2030	2.327659435
Current policies	MN	Transportation	Aviation	N2O	2030	0.02201934
Current policies	MN	Transportation	Bus	CH4	2030	0.003351706
Current policies	MN	Transportation	Bus	CO2	2030	0.549247479
Current policies	MN	Transportation	Bus	N2O	2030	0.000555195

Current policies	MN	Transportation	Heavy-duty trucks	CH4	2030	0.015244581
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2030	6.154417563
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2030	0.008371535
Current policies	MN	Transportation	Light-duty trucks	CH4	2030	0.021717062
Current policies	MN	Transportation	Light-duty trucks	CO2	2030	11.80390747
Current policies	MN	Transportation	Light-duty trucks	N2O	2030	0.077449637
Current policies	MN	Transportation	Military and other off-highway	CH4	2030	0.0462205
Current policies	MN	Transportation	Military and other off-highway	CO2	2030	0.85468543
Current policies	MN	Transportation	Military and other off-highway	N2O	2030	0.22964847
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2030	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2030	0.000688421
Current policies	MN	Transportation	Motorcycle	CO2	2030	0.072942652
Current policies	MN	Transportation	Motorcycle	N2O	2030	0.000167619
Current policies	MN	Transportation	Natural gas transmission	CH4	2030	0
Current policies	MN	Transportation	Natural gas transmission	CO2	2030	0.66317964
Current policies	MN	Transportation	Natural gas transmission	N2O	2030	0
Current policies	MN	Transportation	Passenger cars	CH4	2030	0.014592304
Current policies	MN	Transportation	Passenger cars	CO2	2030	4.527967598
Current policies	MN	Transportation	Passenger cars	N2O	2030	0.036408565
Current policies	MN	Transportation	Railroad	CH4	2030	0.002935823
Current policies	MN	Transportation	Railroad	CO2	2030	0.556079477
Current policies	MN	Transportation	Railroad	N2O	2030	0.011199841
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2030	5.43804E-05
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2030	0.763153768
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2030	0.001540559
Current policies	MN	Waste	Biosolids land application	N2O	2030	0.019032
Current policies	MN	Waste	Coal	CH4	2030	0
Current policies	MN	Waste	Coal	CO2	2030	0
Current policies	MN	Waste	Coal	N2O	2030	0
Current policies	MN	Waste	Food waste prevention	CO2	2030	-0.196
Current policies	MN	Waste	Hazardous waste	CO2	2030	0
Current policies	MN	Waste	Hazardous waste	N2O	2030	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2030	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2030	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2030	0
Current policies	MN	Waste	Industrial landfills	CH4	2030	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2030	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2030	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2030	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2030	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2030	0.000164
Current policies	MN	Waste	Limestone use	CO2	2030	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2030	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2030	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2030	0
Current policies	MN	Waste	MMSW composting	CH4	2030	0
Current policies	MN	Waste	MMSW composting	N2O	2030	0
Current policies	MN	Waste	MMSW landfills	CH4	2030	1.524828
Current policies	MN	Waste	Mass burn	CH4	2030	0
Current policies	MN	Waste	Mass burn	CO2	2030	0
Current policies	MN	Waste	Mass burn	N2O	2030	0
Current policies	MN	Waste	Materials recovery facility	CH4	2030	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2030	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2030	0.00006
Current policies	MN	Waste	Medical	CO2	2030	0.004405
Current policies	MN	Waste	Medical	N2O	2030	0.000174

Current policies	MN	Waste	Miscellaneous	CO2	2030	0
Current policies	MN	Waste	Miscellaneous	N2O	2030	0
Current policies	MN	Waste	Natural gas	CH4	2030	0.000004
Current policies	MN	Waste	Natural gas	CO2	2030	0.009112
Current policies	MN	Waste	Natural gas	N2O	2030	0.000046
Current policies	MN	Waste	Oil	CH4	2030	0
Current policies	MN	Waste	Oil	CO2	2030	0.002004
Current policies	MN	Waste	Oil	N2O	2030	0.000002
Current policies	MN	Waste	Propane	CH4	2030	0
Current policies	MN	Waste	Propane	CO2	2030	0
Current policies	MN	Waste	Propane	N2O	2030	0
Current policies	MN	Waste	RDF	CH4	2030	0
Current policies	MN	Waste	RDF	CO2	2030	0
Current policies	MN	Waste	RDF	N2O	2030	0
Current policies	MN	Waste	RDF processing	CH4	2030	0.000002
Current policies	MN	Waste	RDF processing	CO2	2030	0.001448
Current policies	MN	Waste	RDF processing	N2O	2030	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2030	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2030	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2030	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2030	-0.903026
Current policies	MN	Waste	Sludge	CH4	2030	0.00423
Current policies	MN	Waste	Sludge	N2O	2030	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2030	0
Current policies	MN	Waste	Wastewater treatment	CH4	2030	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2030	0.112409
Current policies	MN	Waste	Wood	CH4	2030	0
Current policies	MN	Waste	Wood	N2O	2030	0
Current policies	MN	Waste	Yard waste composting	CH4	2030	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2030	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2030	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2030	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2030	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2030	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2030	2.355954
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2030	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2030	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2030	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2030	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2030	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2030	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2030	-0.201
Net-zero pathway	MN	Agriculture	Cropland	N2O	2030	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2030	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2030	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2030	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2030	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2030	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2030	0.000298
Net-zero pathway	MN	Agriculture	Grassland	N2O	2030	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2030	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2030	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2030	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2030	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2030	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2030	0.000957

Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2030	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2030	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2030	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2030	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2030	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2030	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2030	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2030	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2030	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2030	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2030	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2030	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2030	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2030	0.009997
Net-zero pathway	MN	Agriculture	Swine	CH4	2030	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2030	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2030	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2030	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2030	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2030	0.644944857
Net-zero pathway	MN	Commercial	Biofuel	CO2	2030	0
Net-zero pathway	MN	Commercial	Coal	CH4	2030	1.81374E-05
Net-zero pathway	MN	Commercial	Coal	CO2	2030	0.006960859
Net-zero pathway	MN	Commercial	Coal	N2O	2030	3.17404E-05
Net-zero pathway	MN	Commercial	Limestone use	CO2	2030	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2030	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2030	0.008106479
Net-zero pathway	MN	Commercial	Natural gas	CO2	2030	3.842579134
Net-zero pathway	MN	Commercial	Natural gas	N2O	2030	0.001932725
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2030	0.041567635
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2030	5.086849402
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2030	0.016894791
Net-zero pathway	MN	Commercial	Solvent use	CO2	2030	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2030	0
Net-zero pathway	MN	Electricity	Coal	CO2	2030	0.014806655
Net-zero pathway	MN	Electricity	Coal	N2O	2030	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2030	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2030	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2030	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2030	5.84338E-05
Net-zero pathway	MN	Electricity	Natural gas	CO2	2030	0.076846722
Net-zero pathway	MN	Electricity	Natural gas	N2O	2030	0.000889828
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2030	0.001806477
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2030	26.44713778
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2030	0.004618739
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2030	2.98368E-05
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2030	0.001614458
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2030	0.00014154
Net-zero pathway	MN	Electricity	Transmission	SF6	2030	0.050179473
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2030	0
Net-zero pathway	MN	Industry	Coal	CH4	2030	0.000883078
Net-zero pathway	MN	Industry	Coal	CO2	2030	0.190201436
Net-zero pathway	MN	Industry	Coal	N2O	2030	0.000179652
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2030	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2030	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2030	0

Net-zero pathway	MN	Industry	Magnesium casting	SF6	2030	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2030	0.002216055
Net-zero pathway	MN	Industry	Natural gas	CO2	2030	4.506309154
Net-zero pathway	MN	Industry	Natural gas	N2O	2030	0.002641275
Net-zero pathway	MN	Industry	Oil refining	CH4	2030	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2030	0.000915277
Net-zero pathway	MN	Industry	Other industrial process	CO2	2030	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2030	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2030	0.002741027
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2030	0.971808944
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2030	0.00461537
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2030	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2030	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2030	1.773177
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2030	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2030	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2030	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2030	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2030	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2030	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2030	2.28217
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2030	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2030	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2030	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2030	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2030	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2030	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2030	-0.204716
Net-zero pathway	MN	LULUCF	Litter	CO2	2030	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2030	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2030	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2030	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2030	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2030	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2030	-0.042
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2030	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2030	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2030	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2030	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2030	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2030	-10.04314166
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2030	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2030	0.098770683
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2030	6.91792E-06
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2030	0.019048572
Net-zero pathway	MN	Residential	Coal	CH4	2030	0
Net-zero pathway	MN	Residential	Coal	CO2	2030	0
Net-zero pathway	MN	Residential	Coal	N2O	2030	0
Net-zero pathway	MN	Residential	Food additives	CO2	2030	0.018981
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2030	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2030	0.013079798
Net-zero pathway	MN	Residential	Natural gas	CO2	2030	5.793052378
Net-zero pathway	MN	Residential	Natural gas	N2O	2030	0.003117957
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2030	0.003283871
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2030	1.578336203
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2030	0.001073302

Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2030	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2030	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2030	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2030	0.155018874
Net-zero pathway	MN	Residential	Wood	N2O	2030	0.024637621
Net-zero pathway	MN	Transportation	Aviation	CH4	2030	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2030	1.423383736
Net-zero pathway	MN	Transportation	Aviation	N2O	2030	0.01396626
Net-zero pathway	MN	Transportation	Bus	CH4	2030	0.001640316
Net-zero pathway	MN	Transportation	Bus	CO2	2030	0.35888529
Net-zero pathway	MN	Transportation	Bus	N2O	2030	0.000271709
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2030	0.012336545
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2030	4.494681059
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2030	0.006774593
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2030	0.01457067
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2030	6.303956396
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2030	0.051963345
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2030	0.0462205
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2030	0.85468543
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2030	0.22964847
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2030	1.750327
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2030	0.000486162
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2030	0.05151225
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2030	0.000118373
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2030	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2030	0.656099926
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2030	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2030	0.013543926
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2030	4.17944838
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2030	0.0337927
Net-zero pathway	MN	Transportation	Railroad	CH4	2030	0.003435706
Net-zero pathway	MN	Transportation	Railroad	CO2	2030	0.57823182
Net-zero pathway	MN	Transportation	Railroad	N2O	2030	0.013106846
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2030	1.66839E-05
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2030	0.428951774
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2030	0.000472644
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2030	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2030	0
Net-zero pathway	MN	Waste	Coal	CO2	2030	0
Net-zero pathway	MN	Waste	Coal	N2O	2030	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2030	-0.196
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2030	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2030	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2030	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2030	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2030	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2030	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2030	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2030	0.000242
Net-zero pathway	MN	Waste	Landfill operations	CH4	2030	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2030	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2030	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2030	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2030	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2030	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2030	0

Net-zero pathway	MN	Waste	MMSW composting	CH4	2030	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2030	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2030	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2030	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2030	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2030	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2030	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2030	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2030	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2030	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2030	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2030	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2030	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2030	0.000004
Net-zero pathway	MN	Waste	Natural gas	CO2	2030	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2030	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2030	0
Net-zero pathway	MN	Waste	Oil	CO2	2030	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2030	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2030	0
Net-zero pathway	MN	Waste	Propane	CO2	2030	0
Net-zero pathway	MN	Waste	Propane	N2O	2030	0
Net-zero pathway	MN	Waste	RDF	CH4	2030	0
Net-zero pathway	MN	Waste	RDF	CO2	2030	0
Net-zero pathway	MN	Waste	RDF	N2O	2030	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2030	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2030	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2030	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2030	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2030	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2030	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2030	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2030	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2030	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2030	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2030	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2030	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2030	0
Net-zero pathway	MN	Waste	Wood	N2O	2030	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2030	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2030	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2030	0.003127
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2030	0.000025
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2035	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2035	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2035	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2035	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2035	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2035	0.000938
Current policies	MN	Agriculture	Biofuel	N2O	2035	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2035	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2035	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2035	-0.178
Current policies	MN	Agriculture	Cropland	N2O	2035	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2035	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2035	0.163691

Current policies	MN	Agriculture	Dairy Heifers	N2O	2035	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2035	0.061878
Current policies	MN	Agriculture	Goats	CH4	2035	0.009678
Current policies	MN	Agriculture	Goats	N2O	2035	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2035	1.82027
Current policies	MN	Agriculture	Horses	CH4	2035	0.018834
Current policies	MN	Agriculture	Horses	N2O	2035	0.001052
Current policies	MN	Agriculture	Liming	CO2	2035	0.025355
Current policies	MN	Agriculture	Litter	CO2	2035	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2035	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2035	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2035	0.000035
Current policies	MN	Agriculture	Oil	CH4	2035	0.00907
Current policies	MN	Agriculture	Oil	CO2	2035	2.819079
Current policies	MN	Agriculture	Oil	N2O	2035	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2035	6.613127
Current policies	MN	Agriculture	Other	CH4	2035	0.000091
Current policies	MN	Agriculture	Other	N2O	2035	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2035	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2035	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2035	0.001728
Current policies	MN	Agriculture	Pulses	N2O	2035	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2035	0
Current policies	MN	Agriculture	Sheep	CH4	2035	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2035	0.009997
Current policies	MN	Agriculture	Swine	CH4	2035	2.42472
Current policies	MN	Agriculture	Swine	N2O	2035	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2035	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2035	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2035	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2035	0.736646389
Current policies	MN	Commercial	Biofuel	CO2	2035	0
Current policies	MN	Commercial	Coal	CH4	2035	1.2775E-05
Current policies	MN	Commercial	Coal	CO2	2035	0.00490285
Current policies	MN	Commercial	Coal	N2O	2035	2.23562E-05
Current policies	MN	Commercial	Limestone use	CO2	2035	0.000105
Current policies	MN	Commercial	Medical use	N2O	2035	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2035	0.009511167
Current policies	MN	Commercial	Natural gas	CO2	2035	5.113886319
Current policies	MN	Commercial	Natural gas	N2O	2035	0.002267631
Current policies	MN	Commercial	Refined Liquids	CH4	2035	0.059191036
Current policies	MN	Commercial	Refined Liquids	CO2	2035	9.842491857
Current policies	MN	Commercial	Refined Liquids	N2O	2035	0.024057749
Current policies	MN	Commercial	Solvent use	CO2	2035	0.080955
Current policies	MN	Electricity	Coal	CH4	2035	0
Current policies	MN	Electricity	Coal	CO2	2035	2.56149E-05
Current policies	MN	Electricity	Coal	N2O	2035	0
Current policies	MN	Electricity	Coal storage	CH4	2035	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2035	0
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2035	0
Current policies	MN	Electricity	Natural gas	CH4	2035	0.002330154
Current policies	MN	Electricity	Natural gas	CO2	2035	2.226229734
Current policies	MN	Electricity	Natural gas	N2O	2035	0.05089513
Current policies	MN	Electricity	Net electricity imports	CH4	2035	0.015090423
Current policies	MN	Electricity	Net electricity imports	CO2	2035	1.745715254
Current policies	MN	Electricity	Net electricity imports	N2O	2035	0.029309859

Current policies	MN	Electricity	Refined Liquids	CH4	2035	0.00642257
Current policies	MN	Electricity	Refined Liquids	CO2	2035	0.347529002
Current policies	MN	Electricity	Refined Liquids	N2O	2035	0.030467511
Current policies	MN	Electricity	Transmission	SF6	2035	0.045246466
Current policies	MN	Industry	Ammonia manufacture	CO2	2035	0
Current policies	MN	Industry	Coal	CH4	2035	0.025498167
Current policies	MN	Industry	Coal	CO2	2035	1.30222206
Current policies	MN	Industry	Coal	N2O	2035	0.005187306
Current policies	MN	Industry	Industrial solvent release	CO2	2035	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2035	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2035	0
Current policies	MN	Industry	Magnesium casting	SF6	2035	0
Current policies	MN	Industry	Natural gas	CH4	2035	0.004360007
Current policies	MN	Industry	Natural gas	CO2	2035	9.828658483
Current policies	MN	Industry	Natural gas	N2O	2035	0.005196619
Current policies	MN	Industry	Oil refining	CH4	2035	0
Current policies	MN	Industry	Oil refining	CO2	2035	0.001026579
Current policies	MN	Industry	Other industrial process	CO2	2035	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2035	0
Current policies	MN	Industry	Refined Liquids	CH4	2035	0.025284744
Current policies	MN	Industry	Refined Liquids	CO2	2035	9.41640636
Current policies	MN	Industry	Refined Liquids	N2O	2035	0.042574589
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2035	0.009852
Current policies	MN	Industry	Solvent	HFC	2035	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2035	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2035	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2035	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2035	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2035	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2035	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2035	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2035	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2035	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2035	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2035	0.003207
Current policies	MN	LULUCF	Grass Fires	CH4	2035	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2035	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2035	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2035	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2035	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2035	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2035	2.157873
Current policies	MN	LULUCF	Peat harvesting	CH4	2035	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2035	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2035	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2035	-0.105
Current policies	MN	LULUCF	Reservoirs	CH4	2035	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2035	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2035	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2035	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2035	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2035	0
Current policies	MN	Residential	Air conditioning	HFC125	2035	0.113395911
Current policies	MN	Residential	Air conditioning	HFC143a	2035	7.94228E-06
Current policies	MN	Residential	Air conditioning	HFC32	2035	0.021869124
Current policies	MN	Residential	Coal	CH4	2035	0

Current policies	MN	Residential	Coal	CO2	2035	0
Current policies	MN	Residential	Coal	N2O	2035	0
Current policies	MN	Residential	Food additives	CO2	2035	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2035	0.015064
Current policies	MN	Residential	Natural gas	CH4	2035	0.01282905
Current policies	MN	Residential	Natural gas	CO2	2035	5.76741145
Current policies	MN	Residential	Natural gas	N2O	2035	0.003058175
Current policies	MN	Residential	Refined Liquids	CH4	2035	0.002899854
Current policies	MN	Residential	Refined Liquids	CO2	2035	1.388585839
Current policies	MN	Residential	Refined Liquids	N2O	2035	0.000947801
Current policies	MN	Residential	Refrigeration	HFC134a	2035	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2035	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2035	0.094907
Current policies	MN	Residential	Wood	CH4	2035	0.15036879
Current policies	MN	Residential	Wood	N2O	2035	0.023898588
Current policies	MN	Transportation	Aviation	CH4	2035	0
Current policies	MN	Transportation	Aviation	CO2	2035	2.305982721
Current policies	MN	Transportation	Aviation	N2O	2035	0.021802845
Current policies	MN	Transportation	Bus	CH4	2035	0.002541161
Current policies	MN	Transportation	Bus	CO2	2035	0.477940998
Current policies	MN	Transportation	Bus	N2O	2035	0.000420931
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2035	0.013581056
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2035	5.822451724
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2035	0.007458023
Current policies	MN	Transportation	Light-duty trucks	CH4	2035	0.012751924
Current policies	MN	Transportation	Light-duty trucks	CO2	2035	8.619532978
Current policies	MN	Transportation	Light-duty trucks	N2O	2035	0.045477284
Current policies	MN	Transportation	Military and other off-highway	CH4	2035	0.0452675
Current policies	MN	Transportation	Military and other off-highway	CO2	2035	0.83706305
Current policies	MN	Transportation	Military and other off-highway	N2O	2035	0.22491345
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2035	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2035	0.000775819
Current policies	MN	Transportation	Motorcycle	CO2	2035	0.08220295
Current policies	MN	Transportation	Motorcycle	N2O	2035	0.000188899
Current policies	MN	Transportation	Natural gas transmission	CH4	2035	0
Current policies	MN	Transportation	Natural gas transmission	CO2	2035	0.646143715
Current policies	MN	Transportation	Natural gas transmission	N2O	2035	0
Current policies	MN	Transportation	Passenger cars	CH4	2035	0.01136797
Current policies	MN	Transportation	Passenger cars	CO2	2035	3.582101645
Current policies	MN	Transportation	Passenger cars	N2O	2035	0.028363686
Current policies	MN	Transportation	Railroad	CH4	2035	0.001939111
Current policies	MN	Transportation	Railroad	CO2	2035	0.450618618
Current policies	MN	Transportation	Railroad	N2O	2035	0.007397471
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2035	4.16837E-05
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2035	0.768583508
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2035	0.001180867
Current policies	MN	Waste	Biosolids land application	N2O	2035	0.019032
Current policies	MN	Waste	Coal	CH4	2035	0
Current policies	MN	Waste	Coal	CO2	2035	0
Current policies	MN	Waste	Coal	N2O	2035	0
Current policies	MN	Waste	Food waste prevention	CO2	2035	-0.201
Current policies	MN	Waste	Hazardous waste	CO2	2035	0
Current policies	MN	Waste	Hazardous waste	N2O	2035	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2035	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2035	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2035	0

Current policies	MN	Waste	Industrial landfills	CH4	2035	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2035	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2035	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2035	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2035	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2035	0.000164
Current policies	MN	Waste	Limestone use	CO2	2035	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2035	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2035	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2035	0
Current policies	MN	Waste	MMSW composting	CH4	2035	0
Current policies	MN	Waste	MMSW composting	N2O	2035	0
Current policies	MN	Waste	MMSW landfills	CH4	2035	1.524828
Current policies	MN	Waste	Mass burn	CH4	2035	0
Current policies	MN	Waste	Mass burn	CO2	2035	0
Current policies	MN	Waste	Mass burn	N2O	2035	0
Current policies	MN	Waste	Materials recovery facility	CH4	2035	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2035	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2035	0.00006
Current policies	MN	Waste	Medical	CO2	2035	0.004405
Current policies	MN	Waste	Medical	N2O	2035	0.000174
Current policies	MN	Waste	Miscellaneous	CO2	2035	0
Current policies	MN	Waste	Miscellaneous	N2O	2035	0
Current policies	MN	Waste	Natural gas	CH4	2035	0.000004
Current policies	MN	Waste	Natural gas	CO2	2035	0.009112
Current policies	MN	Waste	Natural gas	N2O	2035	0.000046
Current policies	MN	Waste	Oil	CH4	2035	0
Current policies	MN	Waste	Oil	CO2	2035	0.002004
Current policies	MN	Waste	Oil	N2O	2035	0.000002
Current policies	MN	Waste	Propane	CH4	2035	0
Current policies	MN	Waste	Propane	CO2	2035	0
Current policies	MN	Waste	Propane	N2O	2035	0
Current policies	MN	Waste	RDF	CH4	2035	0
Current policies	MN	Waste	RDF	CO2	2035	0
Current policies	MN	Waste	RDF	N2O	2035	0
Current policies	MN	Waste	RDF processing	CH4	2035	0.000002
Current policies	MN	Waste	RDF processing	CO2	2035	0.001448
Current policies	MN	Waste	RDF processing	N2O	2035	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2035	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2035	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2035	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2035	-0.903026
Current policies	MN	Waste	Sludge	CH4	2035	0.00423
Current policies	MN	Waste	Sludge	N2O	2035	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2035	0
Current policies	MN	Waste	Wastewater treatment	CH4	2035	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2035	0.112409
Current policies	MN	Waste	Wood	CH4	2035	0
Current policies	MN	Waste	Wood	N2O	2035	0
Current policies	MN	Waste	Yard waste composting	CH4	2035	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2035	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2035	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2035	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2035	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2035	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2035	2.355954

Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2035	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2035	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2035	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2035	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2035	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2035	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2035	-0.178
Net-zero pathway	MN	Agriculture	Cropland	N2O	2035	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2035	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2035	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2035	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2035	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2035	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2035	0.000298
Net-zero pathway	MN	Agriculture	Grassland	N2O	2035	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2035	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2035	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2035	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2035	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2035	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2035	0.000957
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2035	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2035	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2035	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2035	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2035	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2035	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2035	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2035	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2035	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2035	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2035	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2035	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2035	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2035	0.009997
Net-zero pathway	MN	Agriculture	Swine	CH4	2035	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2035	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2035	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2035	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2035	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2035	0.532515027
Net-zero pathway	MN	Commercial	Biofuel	CO2	2035	0
Net-zero pathway	MN	Commercial	Coal	CH4	2035	1.2775E-05
Net-zero pathway	MN	Commercial	Coal	CO2	2035	0.00490285
Net-zero pathway	MN	Commercial	Coal	N2O	2035	2.23562E-05
Net-zero pathway	MN	Commercial	Limestone use	CO2	2035	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2035	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2035	0.005491091
Net-zero pathway	MN	Commercial	Natural gas	CO2	2035	2.721727656
Net-zero pathway	MN	Commercial	Natural gas	N2O	2035	0.001309174
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2035	0.028967918
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2035	3.222985816
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2035	0.011773771
Net-zero pathway	MN	Commercial	Solvent use	CO2	2035	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2035	0
Net-zero pathway	MN	Electricity	Coal	CO2	2035	0.020552622

Net-zero pathway	MN	Electricity	Coal	N2O	2035	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2035	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2035	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2035	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2035	5.81825E-05
Net-zero pathway	MN	Electricity	Natural gas	CO2	2035	0.076314499
Net-zero pathway	MN	Electricity	Natural gas	N2O	2035	0.000878537
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2035	0.001625173
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2035	0.466677042
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2035	0.004267622
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2035	4.85171E-05
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2035	0.002625248
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2035	0.000230156
Net-zero pathway	MN	Electricity	Transmission	SF6	2035	0.048106164
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2035	0
Net-zero pathway	MN	Industry	Coal	CH4	2035	0.000878589
Net-zero pathway	MN	Industry	Coal	CO2	2035	0.147838531
Net-zero pathway	MN	Industry	Coal	N2O	2035	0.000179105
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2035	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2035	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2035	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2035	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2035	0.002241016
Net-zero pathway	MN	Industry	Natural gas	CO2	2035	4.629782598
Net-zero pathway	MN	Industry	Natural gas	N2O	2035	0.002671012
Net-zero pathway	MN	Industry	Oil refining	CH4	2035	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2035	0.000837954
Net-zero pathway	MN	Industry	Other industrial process	CO2	2035	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2035	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2035	0.002023197
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2035	0.717699284
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2035	0.003406669
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2035	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2035	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2035	1.773177
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2035	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2035	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2035	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2035	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2035	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2035	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2035	2.28217
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2035	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2035	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2035	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2035	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2035	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2035	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2035	-0.204716
Net-zero pathway	MN	LULUCF	Litter	CO2	2035	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2035	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2035	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2035	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2035	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2035	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2035	-0.105

Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2035	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2035	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2035	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2035	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2035	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2035	-15.59641629
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2035	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2035	0.078668726
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2035	5.50999E-06
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2035	0.015171772
Net-zero pathway	MN	Residential	Coal	CH4	2035	0
Net-zero pathway	MN	Residential	Coal	CO2	2035	0
Net-zero pathway	MN	Residential	Coal	N2O	2035	0
Net-zero pathway	MN	Residential	Food additives	CO2	2035	0.018981
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2035	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2035	0.009577129
Net-zero pathway	MN	Residential	Natural gas	CO2	2035	4.199247208
Net-zero pathway	MN	Residential	Natural gas	N2O	2035	0.002282987
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2035	0.002403511
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2035	1.164212353
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2035	0.000785565
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2035	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2035	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2035	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2035	0.120125531
Net-zero pathway	MN	Residential	Wood	N2O	2035	0.019091935
Net-zero pathway	MN	Transportation	Aviation	CH4	2035	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2035	1.363868694
Net-zero pathway	MN	Transportation	Aviation	N2O	2035	0.013443079
Net-zero pathway	MN	Transportation	Bus	CH4	2035	0.001317599
Net-zero pathway	MN	Transportation	Bus	CO2	2035	0.29196762
Net-zero pathway	MN	Transportation	Bus	N2O	2035	0.000218253
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2035	0.006607625
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2035	2.791639645
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2035	0.003628564
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2035	0.003095962
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2035	2.072887803
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2035	0.01104113
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2035	0.0452675
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2035	0.83706305
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2035	0.22491345
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2035	1.750327
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2035	0.000501764
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2035	0.0531655
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2035	0.000122172
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2035	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2035	0.636739065
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2035	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2035	0.007642036
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2035	2.375427117
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2035	0.019067257
Net-zero pathway	MN	Transportation	Railroad	CH4	2035	0.002561389
Net-zero pathway	MN	Transportation	Railroad	CO2	2035	0.526276745
Net-zero pathway	MN	Transportation	Railroad	N2O	2035	0.009771453
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2035	9.11843E-06
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2035	0.401777133

Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2035	0.000258318
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2035	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2035	0
Net-zero pathway	MN	Waste	Coal	CO2	2035	0
Net-zero pathway	MN	Waste	Coal	N2O	2035	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2035	-0.201
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2035	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2035	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2035	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2035	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2035	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2035	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2035	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2035	0.000242
Net-zero pathway	MN	Waste	Landfill operations	CH4	2035	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2035	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2035	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2035	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2035	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2035	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2035	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2035	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2035	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2035	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2035	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2035	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2035	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2035	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2035	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2035	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2035	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2035	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2035	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2035	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2035	0.000004
Net-zero pathway	MN	Waste	Natural gas	CO2	2035	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2035	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2035	0
Net-zero pathway	MN	Waste	Oil	CO2	2035	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2035	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2035	0
Net-zero pathway	MN	Waste	Propane	CO2	2035	0
Net-zero pathway	MN	Waste	Propane	N2O	2035	0
Net-zero pathway	MN	Waste	RDF	CH4	2035	0
Net-zero pathway	MN	Waste	RDF	CO2	2035	0
Net-zero pathway	MN	Waste	RDF	N2O	2035	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2035	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2035	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2035	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2035	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2035	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2035	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2035	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2035	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2035	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2035	0

Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2035	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2035	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2035	0
Net-zero pathway	MN	Waste	Wood	N2O	2035	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2035	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2035	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2035	0.003127
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2035	0.000025
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2040	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2040	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2040	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2040	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2040	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2040	0.000938
Current policies	MN	Agriculture	Biofuel	N2O	2040	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2040	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2040	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2040	-0.178
Current policies	MN	Agriculture	Cropland	N2O	2040	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2040	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2040	0.163691
Current policies	MN	Agriculture	Dairy Heifers	N2O	2040	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2040	0.061878
Current policies	MN	Agriculture	Goats	CH4	2040	0.009678
Current policies	MN	Agriculture	Goats	N2O	2040	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2040	1.82027
Current policies	MN	Agriculture	Horses	CH4	2040	0.018834
Current policies	MN	Agriculture	Horses	N2O	2040	0.001052
Current policies	MN	Agriculture	Liming	CO2	2040	0.025355
Current policies	MN	Agriculture	Litter	CO2	2040	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2040	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2040	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2040	0.000035
Current policies	MN	Agriculture	Oil	CH4	2040	0.00907
Current policies	MN	Agriculture	Oil	CO2	2040	2.819079
Current policies	MN	Agriculture	Oil	N2O	2040	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2040	6.613127
Current policies	MN	Agriculture	Other	CH4	2040	0.000091
Current policies	MN	Agriculture	Other	N2O	2040	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2040	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2040	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2040	0.001728
Current policies	MN	Agriculture	Pulses	N2O	2040	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2040	0
Current policies	MN	Agriculture	Sheep	CH4	2040	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2040	0.009997
Current policies	MN	Agriculture	Swine	CH4	2040	2.42472
Current policies	MN	Agriculture	Swine	N2O	2040	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2040	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2040	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2040	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2040	0.721752294
Current policies	MN	Commercial	Biofuel	CO2	2040	0
Current policies	MN	Commercial	Coal	CH4	2040	8.27472E-06
Current policies	MN	Commercial	Coal	CO2	2040	0.003175714
Current policies	MN	Commercial	Coal	N2O	2040	1.44808E-05

Current policies	MN	Commercial	Limestone use	CO2	2040	0.000105
Current policies	MN	Commercial	Medical use	N2O	2040	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2040	0.009103996
Current policies	MN	Commercial	Natural gas	CO2	2040	5.291139683
Current policies	MN	Commercial	Natural gas	N2O	2040	0.002170553
Current policies	MN	Commercial	Refined Liquids	CH4	2040	0.05475195
Current policies	MN	Commercial	Refined Liquids	CO2	2040	10.29926516
Current policies	MN	Commercial	Refined Liquids	N2O	2040	0.022253452
Current policies	MN	Commercial	Solvent use	CO2	2040	0.080955
Current policies	MN	Electricity	Coal	CH4	2040	0
Current policies	MN	Electricity	Coal	CO2	2040	3.38738E-09
Current policies	MN	Electricity	Coal	N2O	2040	0
Current policies	MN	Electricity	Coal storage	CH4	2040	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2040	0
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2040	0
Current policies	MN	Electricity	Natural gas	CH4	2040	2.98272E-08
Current policies	MN	Electricity	Natural gas	CO2	2040	3.95207E-05
Current policies	MN	Electricity	Natural gas	N2O	2040	4.63098E-07
Current policies	MN	Electricity	Net electricity imports	CH4	2040	0.000231089
Current policies	MN	Electricity	Net electricity imports	CO2	2040	0.340567068
Current policies	MN	Electricity	Net electricity imports	N2O	2040	0.001779517
Current policies	MN	Electricity	Refined Liquids	CH4	2040	0.005520893
Current policies	MN	Electricity	Refined Liquids	CO2	2040	0.298740742
Current policies	MN	Electricity	Refined Liquids	N2O	2040	0.026190131
Current policies	MN	Electricity	Transmission	SF6	2040	0.041700525
Current policies	MN	Industry	Ammonia manufacture	CO2	2040	0
Current policies	MN	Industry	Coal	CH4	2040	0.028675561
Current policies	MN	Industry	Coal	CO2	2040	1.428538642
Current policies	MN	Industry	Coal	N2O	2040	0.005833712
Current policies	MN	Industry	Industrial solvent release	CO2	2040	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2040	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2040	0
Current policies	MN	Industry	Magnesium casting	SF6	2040	0
Current policies	MN	Industry	Natural gas	CH4	2040	0.004884627
Current policies	MN	Industry	Natural gas	CO2	2040	11.32369185
Current policies	MN	Industry	Natural gas	N2O	2040	0.005821903
Current policies	MN	Industry	Oil refining	CH4	2040	0
Current policies	MN	Industry	Oil refining	CO2	2040	0.000909003
Current policies	MN	Industry	Other industrial process	CO2	2040	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2040	0
Current policies	MN	Industry	Refined Liquids	CH4	2040	0.028769114
Current policies	MN	Industry	Refined Liquids	CO2	2040	10.73265765
Current policies	MN	Industry	Refined Liquids	N2O	2040	0.048441609
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2040	0.009852
Current policies	MN	Industry	Solvent	HFC	2040	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2040	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2040	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2040	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2040	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2040	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2040	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2040	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2040	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2040	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2040	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2040	0.003207

Current policies	MN	LULUCF	Grass Fires	CH4	2040	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2040	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2040	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2040	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2040	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2040	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2040	2.157873
Current policies	MN	LULUCF	Peat harvesting	CH4	2040	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2040	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2040	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2040	-0.105
Current policies	MN	LULUCF	Reservoirs	CH4	2040	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2040	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2040	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2040	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2040	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2040	0
Current policies	MN	Residential	Air conditioning	HFC125	2040	0.111617611
Current policies	MN	Residential	Air conditioning	HFC143a	2040	7.81773E-06
Current policies	MN	Residential	Air conditioning	HFC32	2040	0.021526178
Current policies	MN	Residential	Coal	CH4	2040	0
Current policies	MN	Residential	Coal	CO2	2040	0
Current policies	MN	Residential	Coal	N2O	2040	0
Current policies	MN	Residential	Food additives	CO2	2040	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2040	0.015064
Current policies	MN	Residential	Natural gas	CH4	2040	0.012619586
Current policies	MN	Residential	Natural gas	CO2	2040	5.730225476
Current policies	MN	Residential	Natural gas	N2O	2040	0.003008243
Current policies	MN	Residential	Refined Liquids	CH4	2040	0.002419339
Current policies	MN	Residential	Refined Liquids	CO2	2040	1.156300076
Current policies	MN	Residential	Refined Liquids	N2O	2040	0.000790753
Current policies	MN	Residential	Refrigeration	HFC134a	2040	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2040	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2040	0.094907
Current policies	MN	Residential	Wood	CH4	2040	0.152694809
Current policies	MN	Residential	Wood	N2O	2040	0.024268225
Current policies	MN	Transportation	Aviation	CH4	2040	0
Current policies	MN	Transportation	Aviation	CO2	2040	2.433140058
Current policies	MN	Transportation	Aviation	N2O	2040	0.023008694
Current policies	MN	Transportation	Bus	CH4	2040	0.002092724
Current policies	MN	Transportation	Bus	CO2	2040	0.406964996
Current policies	MN	Transportation	Bus	N2O	2040	0.000346638
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2040	0.012893784
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2040	5.762743724
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2040	0.007080594
Current policies	MN	Transportation	Light-duty trucks	CH4	2040	0.010021189
Current policies	MN	Transportation	Light-duty trucks	CO2	2040	7.596134288
Current policies	MN	Transportation	Light-duty trucks	N2O	2040	0.035738541
Current policies	MN	Transportation	Military and other off-highway	CH4	2040	0.042885
Current policies	MN	Transportation	Military and other off-highway	CO2	2040	0.7930071
Current policies	MN	Transportation	Military and other off-highway	N2O	2040	0.2130759
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2040	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2040	0.000864296
Current policies	MN	Transportation	Motorcycle	CO2	2040	0.091577987
Current policies	MN	Transportation	Motorcycle	N2O	2040	0.000210442
Current policies	MN	Transportation	Natural gas transmission	CH4	2040	0

Current policies	MN	Transportation	Natural gas transmission	CO2	2040	0.666551786
Current policies	MN	Transportation	Natural gas transmission	N2O	2040	0
Current policies	MN	Transportation	Passenger cars	CH4	2040	0.009193759
Current policies	MN	Transportation	Passenger cars	CO2	2040	2.948757784
Current policies	MN	Transportation	Passenger cars	N2O	2040	0.022938897
Current policies	MN	Transportation	Railroad	CH4	2040	0.001517123
Current policies	MN	Transportation	Railroad	CO2	2040	0.413102552
Current policies	MN	Transportation	Railroad	N2O	2040	0.005787635
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2040	3.79685E-05
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2040	0.794671485
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2040	0.00107562
Current policies	MN	Waste	Biosolids land application	N2O	2040	0.019032
Current policies	MN	Waste	Coal	CH4	2040	0
Current policies	MN	Waste	Coal	CO2	2040	0
Current policies	MN	Waste	Coal	N2O	2040	0
Current policies	MN	Waste	Food waste prevention	CO2	2040	-0.207
Current policies	MN	Waste	Hazardous waste	CO2	2040	0
Current policies	MN	Waste	Hazardous waste	N2O	2040	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2040	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2040	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2040	0
Current policies	MN	Waste	Industrial landfills	CH4	2040	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2040	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2040	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2040	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2040	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2040	0.000164
Current policies	MN	Waste	Limestone use	CO2	2040	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2040	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2040	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2040	0
Current policies	MN	Waste	MMSW composting	CH4	2040	0
Current policies	MN	Waste	MMSW composting	N2O	2040	0
Current policies	MN	Waste	MMSW landfills	CH4	2040	1.524828
Current policies	MN	Waste	Mass burn	CH4	2040	0
Current policies	MN	Waste	Mass burn	CO2	2040	0
Current policies	MN	Waste	Mass burn	N2O	2040	0
Current policies	MN	Waste	Materials recovery facility	CH4	2040	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2040	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2040	0.00006
Current policies	MN	Waste	Medical	CO2	2040	0.004405
Current policies	MN	Waste	Medical	N2O	2040	0.000174
Current policies	MN	Waste	Miscellaneous	CO2	2040	0
Current policies	MN	Waste	Miscellaneous	N2O	2040	0
Current policies	MN	Waste	Natural gas	CH4	2040	0.000004
Current policies	MN	Waste	Natural gas	CO2	2040	0.009112
Current policies	MN	Waste	Natural gas	N2O	2040	0.000046
Current policies	MN	Waste	Oil	CH4	2040	0
Current policies	MN	Waste	Oil	CO2	2040	0.002004
Current policies	MN	Waste	Oil	N2O	2040	0.000002
Current policies	MN	Waste	Propane	CH4	2040	0
Current policies	MN	Waste	Propane	CO2	2040	0
Current policies	MN	Waste	Propane	N2O	2040	0
Current policies	MN	Waste	RDF	CH4	2040	0
Current policies	MN	Waste	RDF	CO2	2040	0
Current policies	MN	Waste	RDF	N2O	2040	0

Current policies	MN	Waste	RDF processing	CH4	2040	0.000002
Current policies	MN	Waste	RDF processing	CO2	2040	0.001448
Current policies	MN	Waste	RDF processing	N2O	2040	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2040	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2040	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2040	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2040	-0.903026
Current policies	MN	Waste	Sludge	CH4	2040	0.00423
Current policies	MN	Waste	Sludge	N2O	2040	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2040	0
Current policies	MN	Waste	Wastewater treatment	CH4	2040	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2040	0.112409
Current policies	MN	Waste	Wood	CH4	2040	0
Current policies	MN	Waste	Wood	N2O	2040	0
Current policies	MN	Waste	Yard waste composting	CH4	2040	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2040	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2040	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2040	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2040	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2040	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2040	2.355954
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2040	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2040	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2040	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2040	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2040	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2040	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2040	-0.178
Net-zero pathway	MN	Agriculture	Cropland	N2O	2040	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2040	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2040	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2040	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2040	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2040	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2040	0.000298
Net-zero pathway	MN	Agriculture	Grassland	N2O	2040	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2040	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2040	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2040	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2040	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2040	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2040	0.000957
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2040	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2040	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2040	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2040	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2040	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2040	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2040	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2040	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2040	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2040	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2040	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2040	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2040	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2040	0.009997

Net-zero pathway	MN	Agriculture	Swine	CH4	2040	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2040	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2040	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2040	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2040	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2040	0.453008743
Net-zero pathway	MN	Commercial	Biofuel	CO2	2040	0
Net-zero pathway	MN	Commercial	Coal	CH4	2040	8.27472E-06
Net-zero pathway	MN	Commercial	Coal	CO2	2040	0.003175714
Net-zero pathway	MN	Commercial	Coal	N2O	2040	1.44808E-05
Net-zero pathway	MN	Commercial	Limestone use	CO2	2040	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2040	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2040	0.003547181
Net-zero pathway	MN	Commercial	Natural gas	CO2	2040	1.802038178
Net-zero pathway	MN	Commercial	Natural gas	N2O	2040	0.00084571
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2040	0.020011256
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2040	2.434428347
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2040	0.0081334
Net-zero pathway	MN	Commercial	Solvent use	CO2	2040	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2040	0
Net-zero pathway	MN	Electricity	Coal	CO2	2040	0.028159587
Net-zero pathway	MN	Electricity	Coal	N2O	2040	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2040	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2040	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2040	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2040	7.32601E-05
Net-zero pathway	MN	Electricity	Natural gas	CO2	2040	0.09609116
Net-zero pathway	MN	Electricity	Natural gas	N2O	2040	0.001106184
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2040	0.001467934
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2040	0.431769627
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2040	0.003882565
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2040	2.51632E-05
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2040	0.001361578
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2040	0.00011937
Net-zero pathway	MN	Electricity	Transmission	SF6	2040	0.047346004
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2040	0
Net-zero pathway	MN	Industry	Coal	CH4	2040	0.000512648
Net-zero pathway	MN	Industry	Coal	CO2	2040	0.071780387
Net-zero pathway	MN	Industry	Coal	N2O	2040	0.000104506
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2040	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2040	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2040	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2040	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2040	0.001802432
Net-zero pathway	MN	Industry	Natural gas	CO2	2040	3.7582554
Net-zero pathway	MN	Industry	Natural gas	N2O	2040	0.002148278
Net-zero pathway	MN	Industry	Oil refining	CH4	2040	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2040	0.000579099
Net-zero pathway	MN	Industry	Other industrial process	CO2	2040	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2040	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2040	0.001686478
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2040	0.598750527
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2040	0.002839707
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2040	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2040	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2040	1.773177

Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2040	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2040	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2040	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2040	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2040	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2040	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2040	2.28217
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2040	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2040	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2040	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2040	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2040	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2040	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2040	-0.204716
Net-zero pathway	MN	LULUCF	Litter	CO2	2040	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2040	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2040	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2040	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2040	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2040	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2040	-0.105
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2040	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2040	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2040	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2040	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2040	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2040	-21.14969091
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2040	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2040	0.066606916
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2040	4.66517E-06
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2040	0.012845566
Net-zero pathway	MN	Residential	Coal	CH4	2040	0
Net-zero pathway	MN	Residential	Coal	CO2	2040	0
Net-zero pathway	MN	Residential	Coal	N2O	2040	0
Net-zero pathway	MN	Residential	Food additives	CO2	2040	0.018981
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2040	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2040	0.006849254
Net-zero pathway	MN	Residential	Natural gas	CO2	2040	3.00696509
Net-zero pathway	MN	Residential	Natural gas	N2O	2040	0.00163272
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2040	0.001694887
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2040	0.822143693
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2040	0.000553988
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2040	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2040	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2040	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2040	0.084288968
Net-zero pathway	MN	Residential	Wood	N2O	2040	0.013396297
Net-zero pathway	MN	Transportation	Aviation	CH4	2040	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2040	1.294823667
Net-zero pathway	MN	Transportation	Aviation	N2O	2040	0.012896686
Net-zero pathway	MN	Transportation	Bus	CH4	2040	0.001007702
Net-zero pathway	MN	Transportation	Bus	CO2	2040	0.228122184
Net-zero pathway	MN	Transportation	Bus	N2O	2040	0.00016692
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2040	0.00431399
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2040	2.029511694
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2040	0.002369019

Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2040	0.0013163
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2040	1.569223241
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2040	0.004694321
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2040	0.042885
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2040	0.7930071
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2040	0.2130759
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2040	1.750327
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2040	0.000499403
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2040	0.052915177
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2040	0.000121597
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2040	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2040	0.657574999
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2040	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2040	0.003018288
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2040	0.955608692
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2040	0.007530766
Net-zero pathway	MN	Transportation	Railroad	CH4	2040	0.001856448
Net-zero pathway	MN	Transportation	Railroad	CO2	2040	0.452223942
Net-zero pathway	MN	Transportation	Railroad	N2O	2040	0.00708216
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2040	4.30754E-06
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2040	0.371736118
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2040	0.00012203
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2040	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2040	0
Net-zero pathway	MN	Waste	Coal	CO2	2040	0
Net-zero pathway	MN	Waste	Coal	N2O	2040	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2040	-0.207
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2040	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2040	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2040	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2040	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2040	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2040	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2040	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2040	0.000242
Net-zero pathway	MN	Waste	Landfill operations	CH4	2040	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2040	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2040	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2040	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2040	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2040	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2040	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2040	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2040	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2040	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2040	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2040	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2040	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2040	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2040	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2040	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2040	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2040	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2040	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2040	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2040	0.000004

Net-zero pathway	MN	Waste	Natural gas	CO2	2040	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2040	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2040	0
Net-zero pathway	MN	Waste	Oil	CO2	2040	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2040	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2040	0
Net-zero pathway	MN	Waste	Propane	CO2	2040	0
Net-zero pathway	MN	Waste	Propane	N2O	2040	0
Net-zero pathway	MN	Waste	RDF	CH4	2040	0
Net-zero pathway	MN	Waste	RDF	CO2	2040	0
Net-zero pathway	MN	Waste	RDF	N2O	2040	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2040	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2040	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2040	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2040	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2040	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2040	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2040	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2040	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2040	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2040	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2040	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2040	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2040	0
Net-zero pathway	MN	Waste	Wood	N2O	2040	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2040	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2040	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2040	0.003127
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2040	0.000025
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2045	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2045	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2045	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2045	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2045	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2045	0.000938
Current policies	MN	Agriculture	Biofuel	N2O	2045	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2045	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2045	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2045	-0.178
Current policies	MN	Agriculture	Cropland	N2O	2045	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2045	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2045	0.163691
Current policies	MN	Agriculture	Dairy Heifers	N2O	2045	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2045	0.061878
Current policies	MN	Agriculture	Goats	CH4	2045	0.009678
Current policies	MN	Agriculture	Goats	N2O	2045	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2045	1.82027
Current policies	MN	Agriculture	Horses	CH4	2045	0.018834
Current policies	MN	Agriculture	Horses	N2O	2045	0.001052
Current policies	MN	Agriculture	Liming	CO2	2045	0.025355
Current policies	MN	Agriculture	Litter	CO2	2045	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2045	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2045	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2045	0.000035
Current policies	MN	Agriculture	Oil	CH4	2045	0.00907
Current policies	MN	Agriculture	Oil	CO2	2045	2.819079

Current policies	MN	Agriculture	Oil	N2O	2045	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2045	6.613127
Current policies	MN	Agriculture	Other	CH4	2045	0.000091
Current policies	MN	Agriculture	Other	N2O	2045	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2045	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2045	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2045	0.001728
Current policies	MN	Agriculture	Pulses	N2O	2045	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2045	0
Current policies	MN	Agriculture	Sheep	CH4	2045	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2045	0.009997
Current policies	MN	Agriculture	Swine	CH4	2045	2.42472
Current policies	MN	Agriculture	Swine	N2O	2045	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2045	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2045	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2045	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2045	0.729505601
Current policies	MN	Commercial	Biofuel	CO2	2045	0
Current policies	MN	Commercial	Coal	CH4	2045	0
Current policies	MN	Commercial	Coal	CO2	2045	0
Current policies	MN	Commercial	Coal	N2O	2045	0
Current policies	MN	Commercial	Limestone use	CO2	2045	0.000105
Current policies	MN	Commercial	Medical use	N2O	2045	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2045	0.008173829
Current policies	MN	Commercial	Natural gas	CO2	2045	5.413058442
Current policies	MN	Commercial	Natural gas	N2O	2045	0.001948783
Current policies	MN	Commercial	Refined Liquids	CH4	2045	0.043445906
Current policies	MN	Commercial	Refined Liquids	CO2	2045	9.541667853
Current policies	MN	Commercial	Refined Liquids	N2O	2045	0.017658244
Current policies	MN	Commercial	Solvent use	CO2	2045	0.080955
Current policies	MN	Electricity	Coal	CH4	2045	0
Current policies	MN	Electricity	Coal	CO2	2045	0
Current policies	MN	Electricity	Coal	N2O	2045	0
Current policies	MN	Electricity	Coal storage	CH4	2045	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2045	0
Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2045	0
Current policies	MN	Electricity	Natural gas	CH4	2045	0
Current policies	MN	Electricity	Natural gas	CO2	2045	4.82033E-09
Current policies	MN	Electricity	Natural gas	N2O	2045	0
Current policies	MN	Electricity	Net electricity imports	CH4	2045	0.000134397
Current policies	MN	Electricity	Net electricity imports	CO2	2045	0.198430033
Current policies	MN	Electricity	Net electricity imports	N2O	2045	0.001034926
Current policies	MN	Electricity	Refined Liquids	CH4	2045	0.004094501
Current policies	MN	Electricity	Refined Liquids	CO2	2045	0.221557139
Current policies	MN	Electricity	Refined Liquids	N2O	2045	0.019423587
Current policies	MN	Electricity	Transmission	SF6	2045	0.044956833
Current policies	MN	Industry	Ammonia manufacture	CO2	2045	0
Current policies	MN	Industry	Coal	CH4	2045	0.029594035
Current policies	MN	Industry	Coal	CO2	2045	1.484422685
Current policies	MN	Industry	Coal	N2O	2045	0.006020544
Current policies	MN	Industry	Industrial solvent release	CO2	2045	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2045	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2045	0
Current policies	MN	Industry	Magnesium casting	SF6	2045	0
Current policies	MN	Industry	Natural gas	CH4	2045	0.005039066
Current policies	MN	Industry	Natural gas	CO2	2045	11.81698353

Current policies	MN	Industry	Natural gas	N2O	2045	0.006005982
Current policies	MN	Industry	Oil refining	CH4	2045	0
Current policies	MN	Industry	Oil refining	CO2	2045	0.000799091
Current policies	MN	Industry	Other industrial process	CO2	2045	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2045	0
Current policies	MN	Industry	Refined Liquids	CH4	2045	0.029671476
Current policies	MN	Industry	Refined Liquids	CO2	2045	11.05742748
Current policies	MN	Industry	Refined Liquids	N2O	2045	0.049961053
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2045	0.009852
Current policies	MN	Industry	Solvent	HFC	2045	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2045	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2045	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2045	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2045	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2045	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2045	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2045	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2045	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2045	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2045	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2045	0.003207
Current policies	MN	LULUCF	Grass Fires	CH4	2045	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2045	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2045	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2045	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2045	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2045	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2045	2.157873
Current policies	MN	LULUCF	Peat harvesting	CH4	2045	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2045	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2045	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2045	-0.105
Current policies	MN	LULUCF	Reservoirs	CH4	2045	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2045	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2045	2.103652
Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2045	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2045	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2045	0
Current policies	MN	Residential	Air conditioning	HFC125	2045	0.115287954
Current policies	MN	Residential	Air conditioning	HFC143a	2045	8.07482E-06
Current policies	MN	Residential	Air conditioning	HFC32	2045	0.02223402
Current policies	MN	Residential	Coal	CH4	2045	0
Current policies	MN	Residential	Coal	CO2	2045	0
Current policies	MN	Residential	Coal	N2O	2045	0
Current policies	MN	Residential	Food additives	CO2	2045	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2045	0.015064
Current policies	MN	Residential	Natural gas	CH4	2045	0.012823489
Current policies	MN	Residential	Natural gas	CO2	2045	5.859831607
Current policies	MN	Residential	Natural gas	N2O	2045	0.003056843
Current policies	MN	Residential	Refined Liquids	CH4	2045	0.001933419
Current policies	MN	Residential	Refined Liquids	CO2	2045	0.921648224
Current policies	MN	Residential	Refined Liquids	N2O	2045	0.000631936
Current policies	MN	Residential	Refrigeration	HFC134a	2045	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2045	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2045	0.094907
Current policies	MN	Residential	Wood	CH4	2045	0.158012998

Current policies	MN	Residential	Wood	N2O	2045	0.025113444
Current policies	MN	Transportation	Aviation	CH4	2045	0
Current policies	MN	Transportation	Aviation	CO2	2045	2.515456475
Current policies	MN	Transportation	Aviation	N2O	2045	0.023846651
Current policies	MN	Transportation	Bus	CH4	2045	0.001785494
Current policies	MN	Transportation	Bus	CO2	2045	0.354219038
Current policies	MN	Transportation	Bus	N2O	2045	0.000295742
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2045	0.012459001
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2045	5.753504287
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2045	0.00684183
Current policies	MN	Transportation	Light-duty trucks	CH4	2045	0.009115743
Current policies	MN	Transportation	Light-duty trucks	CO2	2045	7.014182056
Current policies	MN	Transportation	Light-duty trucks	N2O	2045	0.03250953
Current policies	MN	Transportation	Military and other off-highway	CH4	2045	0.0405025
Current policies	MN	Transportation	Military and other off-highway	CO2	2045	0.74895115
Current policies	MN	Transportation	Military and other off-highway	N2O	2045	0.20123835
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2045	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2045	0.000936845
Current policies	MN	Transportation	Motorcycle	CO2	2045	0.09926498
Current policies	MN	Transportation	Motorcycle	N2O	2045	0.000228107
Current policies	MN	Transportation	Natural gas transmission	CH4	2045	0
Current policies	MN	Transportation	Natural gas transmission	CO2	2045	0.690764385
Current policies	MN	Transportation	Natural gas transmission	N2O	2045	0
Current policies	MN	Transportation	Passenger cars	CH4	2045	0.008843251
Current policies	MN	Transportation	Passenger cars	CO2	2045	2.844915619
Current policies	MN	Transportation	Passenger cars	N2O	2045	0.022064353
Current policies	MN	Transportation	Railroad	CH4	2045	0.001496693
Current policies	MN	Transportation	Railroad	CO2	2045	0.429324213
Current policies	MN	Transportation	Railroad	N2O	2045	0.005709706
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2045	3.85464E-05
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2045	0.827580232
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2045	0.001091992
Current policies	MN	Waste	Biosolids land application	N2O	2045	0.019032
Current policies	MN	Waste	Coal	CH4	2045	0
Current policies	MN	Waste	Coal	CO2	2045	0
Current policies	MN	Waste	Coal	N2O	2045	0
Current policies	MN	Waste	Food waste prevention	CO2	2045	-0.214
Current policies	MN	Waste	Hazardous waste	CO2	2045	0
Current policies	MN	Waste	Hazardous waste	N2O	2045	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2045	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2045	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2045	0
Current policies	MN	Waste	Industrial landfills	CH4	2045	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2045	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2045	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2045	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2045	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2045	0.000164
Current policies	MN	Waste	Limestone use	CO2	2045	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2045	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2045	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2045	0
Current policies	MN	Waste	MMSW composting	CH4	2045	0
Current policies	MN	Waste	MMSW composting	N2O	2045	0
Current policies	MN	Waste	MMSW landfills	CH4	2045	1.524828
Current policies	MN	Waste	Mass burn	CH4	2045	0

Current policies	MN	Waste	Mass burn	CO2	2045	0
Current policies	MN	Waste	Mass burn	N2O	2045	0
Current policies	MN	Waste	Materials recovery facility	CH4	2045	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2045	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2045	0.00006
Current policies	MN	Waste	Medical	CO2	2045	0.004405
Current policies	MN	Waste	Medical	N2O	2045	0.000174
Current policies	MN	Waste	Miscellaneous	CO2	2045	0
Current policies	MN	Waste	Miscellaneous	N2O	2045	0
Current policies	MN	Waste	Natural gas	CH4	2045	0.000004
Current policies	MN	Waste	Natural gas	CO2	2045	0.009112
Current policies	MN	Waste	Natural gas	N2O	2045	0.000046
Current policies	MN	Waste	Oil	CH4	2045	0
Current policies	MN	Waste	Oil	CO2	2045	0.002004
Current policies	MN	Waste	Oil	N2O	2045	0.000002
Current policies	MN	Waste	Propane	CH4	2045	0
Current policies	MN	Waste	Propane	CO2	2045	0
Current policies	MN	Waste	Propane	N2O	2045	0
Current policies	MN	Waste	RDF	CH4	2045	0
Current policies	MN	Waste	RDF	CO2	2045	0
Current policies	MN	Waste	RDF	N2O	2045	0
Current policies	MN	Waste	RDF processing	CH4	2045	0.000002
Current policies	MN	Waste	RDF processing	CO2	2045	0.001448
Current policies	MN	Waste	RDF processing	N2O	2045	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2045	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2045	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2045	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2045	-0.903026
Current policies	MN	Waste	Sludge	CH4	2045	0.00423
Current policies	MN	Waste	Sludge	N2O	2045	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2045	0
Current policies	MN	Waste	Wastewater treatment	CH4	2045	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2045	0.112409
Current policies	MN	Waste	Wood	CH4	2045	0
Current policies	MN	Waste	Wood	N2O	2045	0
Current policies	MN	Waste	Yard waste composting	CH4	2045	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2045	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2045	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2045	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2045	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2045	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2045	2.355954
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2045	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2045	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2045	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2045	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2045	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2045	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2045	-0.178
Net-zero pathway	MN	Agriculture	Cropland	N2O	2045	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2045	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2045	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2045	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2045	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2045	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2045	0.000298

Net-zero pathway	MN	Agriculture	Grassland	N2O	2045	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2045	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2045	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2045	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2045	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2045	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2045	0.000957
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2045	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2045	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2045	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2045	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2045	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2045	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2045	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2045	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2045	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2045	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2045	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2045	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2045	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2045	0.009997
Net-zero pathway	MN	Agriculture	Swine	CH4	2045	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2045	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2045	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2045	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2045	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2045	0.256514096
Net-zero pathway	MN	Commercial	Biofuel	CO2	2045	0
Net-zero pathway	MN	Commercial	Coal	CH4	2045	0
Net-zero pathway	MN	Commercial	Coal	CO2	2045	0
Net-zero pathway	MN	Commercial	Coal	N2O	2045	0
Net-zero pathway	MN	Commercial	Limestone use	CO2	2045	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2045	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2045	0.00057052
Net-zero pathway	MN	Commercial	Natural gas	CO2	2045	0.410998527
Net-zero pathway	MN	Commercial	Natural gas	N2O	2045	0.000136022
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2045	0.006658165
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2045	1.032114911
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2045	0.002706154
Net-zero pathway	MN	Commercial	Solvent use	CO2	2045	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2045	0
Net-zero pathway	MN	Electricity	Coal	CO2	2045	0.035094485
Net-zero pathway	MN	Electricity	Coal	N2O	2045	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2045	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2045	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2045	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2045	4.37089E-05
Net-zero pathway	MN	Electricity	Natural gas	CO2	2045	0.057337687
Net-zero pathway	MN	Electricity	Natural gas	N2O	2045	0.000659825
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2045	0.001143942
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2045	0.339983321
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2045	0.003037899
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2045	0
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2045	0.000131275
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2045	0
Net-zero pathway	MN	Electricity	Transmission	SF6	2045	0.054094004

Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2045	0
Net-zero pathway	MN	Industry	Coal	CH4	2045	3.74469E-05
Net-zero pathway	MN	Industry	Coal	CO2	2045	0.025595511
Net-zero pathway	MN	Industry	Coal	N2O	2045	7.71198E-06
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2045	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2045	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2045	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2045	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2045	0.000237134
Net-zero pathway	MN	Industry	Natural gas	CO2	2045	0.619052483
Net-zero pathway	MN	Industry	Natural gas	N2O	2045	0.000282635
Net-zero pathway	MN	Industry	Oil refining	CH4	2045	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2045	0.000258759
Net-zero pathway	MN	Industry	Other industrial process	CO2	2045	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2045	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2045	0.000342905
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2045	0.121486457
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2045	0.000577385
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2045	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2045	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2045	1.773177
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2045	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2045	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2045	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2045	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2045	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2045	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2045	2.28217
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2045	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2045	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2045	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2045	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2045	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2045	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2045	-0.204716
Net-zero pathway	MN	LULUCF	Litter	CO2	2045	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2045	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2045	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2045	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2045	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2045	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2045	-0.105
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2045	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2045	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2045	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2045	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2045	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2045	-26.70296554
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2045	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2045	0.037802447
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2045	2.6477E-06
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2045	0.007290436
Net-zero pathway	MN	Residential	Coal	CH4	2045	0
Net-zero pathway	MN	Residential	Coal	CO2	2045	0
Net-zero pathway	MN	Residential	Coal	N2O	2045	0
Net-zero pathway	MN	Residential	Food additives	CO2	2045	0.018981

Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2045	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2045	0.004518936
Net-zero pathway	MN	Residential	Natural gas	CO2	2045	1.988515487
Net-zero pathway	MN	Residential	Natural gas	N2O	2045	0.001077199
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2045	0.001100128
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2045	0.533831034
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2045	0.000359609
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2045	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2045	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2045	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2045	0.053945628
Net-zero pathway	MN	Residential	Wood	N2O	2045	0.008573733
Net-zero pathway	MN	Transportation	Aviation	CH4	2045	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2045	1.074888484
Net-zero pathway	MN	Transportation	Aviation	N2O	2045	0.010952133
Net-zero pathway	MN	Transportation	Bus	CH4	2045	0.00064041
Net-zero pathway	MN	Transportation	Bus	CO2	2045	0.148885829
Net-zero pathway	MN	Transportation	Bus	N2O	2045	0.00010608
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2045	0.002050069
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2045	1.069590529
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2045	0.001125794
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2045	0.000433208
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2045	1.041454182
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2045	0.001544949
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2045	0.0405025
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2045	0.74895115
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2045	0.20123835
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2045	1.750327
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2045	0.000401645
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2045	0.04255713
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2045	9.77943E-05
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2045	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2045	0.681109885
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2045	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2045	0.001419968
Net-zero pathway	MN	Transportation	Passenger cars	CO2	2045	0.451394977
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2045	0.003542887
Net-zero pathway	MN	Transportation	Railroad	CH4	2045	0.001110434
Net-zero pathway	MN	Transportation	Railroad	CO2	2045	0.318920415
Net-zero pathway	MN	Transportation	Railroad	N2O	2045	0.004236182
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2045	9.54039E-07
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2045	0.308047369
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2045	2.70272E-05
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2045	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2045	0
Net-zero pathway	MN	Waste	Coal	CO2	2045	0
Net-zero pathway	MN	Waste	Coal	N2O	2045	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2045	-0.214
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2045	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2045	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2045	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2045	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2045	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2045	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2045	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2045	0.000242

Net-zero pathway	MN	Waste	Landfill operations	CH4	2045	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2045	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2045	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2045	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2045	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2045	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2045	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2045	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2045	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2045	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2045	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2045	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2045	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2045	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2045	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2045	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2045	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2045	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2045	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2045	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2045	0.000004
Net-zero pathway	MN	Waste	Natural gas	CO2	2045	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2045	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2045	0
Net-zero pathway	MN	Waste	Oil	CO2	2045	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2045	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2045	0
Net-zero pathway	MN	Waste	Propane	CO2	2045	0
Net-zero pathway	MN	Waste	Propane	N2O	2045	0
Net-zero pathway	MN	Waste	RDF	CH4	2045	0
Net-zero pathway	MN	Waste	RDF	CO2	2045	0
Net-zero pathway	MN	Waste	RDF	N2O	2045	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2045	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2045	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2045	0.000012
Net-zero pathway	MN	Waste	Rural open burning	CH4	2045	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2045	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2045	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2045	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2045	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2045	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2045	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2045	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2045	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2045	0
Net-zero pathway	MN	Waste	Wood	N2O	2045	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2045	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2045	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2045	0.003127
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2045	0.000025
Current policies	MN	Agriculture	Aboveground Biomass	CO2	2050	0.18161
Current policies	MN	Agriculture	American Bison	CH4	2050	0.00646
Current policies	MN	Agriculture	Beef Cattle	CH4	2050	2.355954
Current policies	MN	Agriculture	Beef Cattle	N2O	2050	0.148509
Current policies	MN	Agriculture	Belowground Biomass	CO2	2050	0.030167
Current policies	MN	Agriculture	Biofuel	CH4	2050	0.000938

Current policies	MN	Agriculture	Biofuel	N2O	2050	0.001987
Current policies	MN	Agriculture	Cereals	CH4	2050	0.008883
Current policies	MN	Agriculture	Cereals	N2O	2050	0.002987
Current policies	MN	Agriculture	Climate-friendly Ag	CO2	2050	-0.178
Current policies	MN	Agriculture	Cropland	N2O	2050	13.341924
Current policies	MN	Agriculture	Dairy Cattle	CH4	2050	3.375796
Current policies	MN	Agriculture	Dairy Cattle	N2O	2050	0.163691
Current policies	MN	Agriculture	Dairy Heifers	N2O	2050	0.122093
Current policies	MN	Agriculture	Dead Wood	CO2	2050	0.061878
Current policies	MN	Agriculture	Goats	CH4	2050	0.009678
Current policies	MN	Agriculture	Goats	N2O	2050	0.000298
Current policies	MN	Agriculture	Grassland	N2O	2050	1.82027
Current policies	MN	Agriculture	Horses	CH4	2050	0.018834
Current policies	MN	Agriculture	Horses	N2O	2050	0.001052
Current policies	MN	Agriculture	Liming	CO2	2050	0.025355
Current policies	MN	Agriculture	Litter	CO2	2050	0.096397
Current policies	MN	Agriculture	Mineral Soil	CO2	2050	-0.29883
Current policies	MN	Agriculture	Mules and Asses	CH4	2050	0.000957
Current policies	MN	Agriculture	Mules and Asses	N2O	2050	0.000035
Current policies	MN	Agriculture	Oil	CH4	2050	0.00907
Current policies	MN	Agriculture	Oil	CO2	2050	2.819079
Current policies	MN	Agriculture	Oil	N2O	2050	0.016634
Current policies	MN	Agriculture	Organic Soil	CO2	2050	6.613127
Current policies	MN	Agriculture	Other	CH4	2050	0.000091
Current policies	MN	Agriculture	Other	N2O	2050	0.000069
Current policies	MN	Agriculture	Poultry	CH4	2050	0.042266
Current policies	MN	Agriculture	Poultry	N2O	2050	0.053616
Current policies	MN	Agriculture	Pulses	CH4	2050	0.001728
Current policies	MN	Agriculture	Pulses	N2O	2050	0.000673
Current policies	MN	Agriculture	Rice Cultivation	CH4	2050	0
Current policies	MN	Agriculture	Sheep	CH4	2050	0.030353
Current policies	MN	Agriculture	Sheep	N2O	2050	0.009997
Current policies	MN	Agriculture	Swine	CH4	2050	2.42472
Current policies	MN	Agriculture	Swine	N2O	2050	0.19821
Current policies	MN	Agriculture	Tubers and Roots	CH4	2050	0.000058
Current policies	MN	Agriculture	Tubers and Roots	N2O	2050	0.000039
Current policies	MN	Agriculture	Urea Fertilization	CO2	2050	0.600699
Current policies	MN	Commercial	Air conditioning and space cooling	HFC	2050	0.74913492
Current policies	MN	Commercial	Biofuel	CO2	2050	0
Current policies	MN	Commercial	Coal	CH4	2050	0
Current policies	MN	Commercial	Coal	CO2	2050	0
Current policies	MN	Commercial	Coal	N2O	2050	0
Current policies	MN	Commercial	Limestone use	CO2	2050	0.000105
Current policies	MN	Commercial	Medical use	N2O	2050	0.079197
Current policies	MN	Commercial	Natural gas	CH4	2050	0.008584917
Current policies	MN	Commercial	Natural gas	CO2	2050	5.702112558
Current policies	MN	Commercial	Natural gas	N2O	2050	0.002046777
Current policies	MN	Commercial	Refined Liquids	CH4	2050	0.039895601
Current policies	MN	Commercial	Refined Liquids	CO2	2050	9.456465843
Current policies	MN	Commercial	Refined Liquids	N2O	2050	0.016215235
Current policies	MN	Commercial	Solvent use	CO2	2050	0.080955
Current policies	MN	Electricity	Coal	CH4	2050	0
Current policies	MN	Electricity	Coal	CO2	2050	0
Current policies	MN	Electricity	Coal	N2O	2050	0
Current policies	MN	Electricity	Coal storage	CH4	2050	0
Current policies	MN	Electricity	Flue-gas desulfurization	CO2	2050	0

Current policies	MN	Electricity	Hydroelectric reservoirs	CH4	2050	0
Current policies	MN	Electricity	Natural gas	CH4	2050	0
Current policies	MN	Electricity	Natural gas	CO2	2050	0
Current policies	MN	Electricity	Natural gas	N2O	2050	0
Current policies	MN	Electricity	Net electricity imports	CH4	2050	7.49677E-05
Current policies	MN	Electricity	Net electricity imports	CO2	2050	0.110837818
Current policies	MN	Electricity	Net electricity imports	N2O	2050	0.00057729
Current policies	MN	Electricity	Refined Liquids	CH4	2050	0.002851644
Current policies	MN	Electricity	Refined Liquids	CO2	2050	0.154304268
Current policies	MN	Electricity	Refined Liquids	N2O	2050	0.013527687
Current policies	MN	Electricity	Transmission	SF6	2050	0.04781204
Current policies	MN	Industry	Ammonia manufacture	CO2	2050	0
Current policies	MN	Industry	Coal	CH4	2050	0.030053291
Current policies	MN	Industry	Coal	CO2	2050	1.513982972
Current policies	MN	Industry	Coal	N2O	2050	0.006113992
Current policies	MN	Industry	Industrial solvent release	CO2	2050	0.014228
Current policies	MN	Industry	Industrial wastewater treatment	CH4	2050	0.147407
Current policies	MN	Industry	Insulating foam manufacture	HFC	2050	0
Current policies	MN	Industry	Magnesium casting	SF6	2050	0
Current policies	MN	Industry	Natural gas	CH4	2050	0.005114337
Current policies	MN	Industry	Natural gas	CO2	2050	12.07691016
Current policies	MN	Industry	Natural gas	N2O	2050	0.006095683
Current policies	MN	Industry	Oil refining	CH4	2050	0
Current policies	MN	Industry	Oil refining	CO2	2050	0.000727932
Current policies	MN	Industry	Other industrial process	CO2	2050	0
Current policies	MN	Industry	Paraffinic wax consumption	CO2	2050	0
Current policies	MN	Industry	Refined Liquids	CH4	2050	0.030501212
Current policies	MN	Industry	Refined Liquids	CO2	2050	11.36541367
Current policies	MN	Industry	Refined Liquids	N2O	2050	0.051358049
Current policies	MN	Industry	Semiconductor manufacture	PFCs	2050	0.009852
Current policies	MN	Industry	Solvent	HFC	2050	0.037955
Current policies	MN	Industry	Taconite induration	CO2	2050	1.773177
Current policies	MN	Industry	VOC and toxics release	CO2	2050	0.052314
Current policies	MN	LULUCF	Aboveground Biomass	CO2	2050	-14.499599
Current policies	MN	LULUCF	Belowground Biomass	CO2	2050	-2.441693
Current policies	MN	LULUCF	Canals and ditches	CH4	2050	0.13087
Current policies	MN	LULUCF	Dead Wood	CO2	2050	-3.139514
Current policies	MN	LULUCF	Drained Organic Soils	CH4	2050	0.006633
Current policies	MN	LULUCF	Drained Organic Soils	CO2	2050	2.28217
Current policies	MN	LULUCF	Drained Organic Soils	N2O	2050	0.022354
Current policies	MN	LULUCF	Forest Fires	CH4	2050	0.003563
Current policies	MN	LULUCF	Forest Fires	N2O	2050	0.003207
Current policies	MN	LULUCF	Grass Fires	CH4	2050	0.001282
Current policies	MN	LULUCF	Grass Fires	N2O	2050	0.001108
Current policies	MN	LULUCF	Lakes and ponds	CH4	2050	3.298753
Current policies	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2050	-0.204716
Current policies	MN	LULUCF	Litter	CO2	2050	-0.866013
Current policies	MN	LULUCF	Mineral Soil	CO2	2050	-0.770131
Current policies	MN	LULUCF	Organic Soil	CO2	2050	2.157873
Current policies	MN	LULUCF	Peat harvesting	CH4	2050	0.000365
Current policies	MN	LULUCF	Peat harvesting	CO2	2050	0.013174
Current policies	MN	LULUCF	Peat harvesting	N2O	2050	0.000048
Current policies	MN	LULUCF	Peatland restoration	CO2	2050	-0.105
Current policies	MN	LULUCF	Reservoirs	CH4	2050	0.645694
Current policies	MN	LULUCF	Reservoirs	CO2	2050	0.009023
Current policies	MN	LULUCF	Rivers and streams	CH4	2050	2.103652

Current policies	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2050	0.186642
Current policies	MN	LULUCF	Urban Trees	CO2	2050	-0.864974
Current policies	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2050	0
Current policies	MN	Residential	Air conditioning	HFC125	2050	0.121019187
Current policies	MN	Residential	Air conditioning	HFC143a	2050	8.47624E-06
Current policies	MN	Residential	Air conditioning	HFC32	2050	0.023339381
Current policies	MN	Residential	Coal	CH4	2050	0
Current policies	MN	Residential	Coal	CO2	2050	0
Current policies	MN	Residential	Coal	N2O	2050	0
Current policies	MN	Residential	Food additives	CO2	2050	0.018981
Current policies	MN	Residential	Lawn fertilizer	N2O	2050	0.015064
Current policies	MN	Residential	Natural gas	CH4	2050	0.013232008
Current policies	MN	Residential	Natural gas	CO2	2050	6.069148608
Current policies	MN	Residential	Natural gas	N2O	2050	0.003154226
Current policies	MN	Residential	Refined Liquids	CH4	2050	0.001485666
Current policies	MN	Residential	Refined Liquids	CO2	2050	0.706194796
Current policies	MN	Residential	Refined Liquids	N2O	2050	0.000485596
Current policies	MN	Residential	Refrigeration	HFC134a	2050	0.002159
Current policies	MN	Residential	Sequestration in housing	CO2	2050	-0.620231
Current policies	MN	Residential	Soaps, detergents, shampoos	CO2	2050	0.094907
Current policies	MN	Residential	Wood	CH4	2050	0.162717171
Current policies	MN	Residential	Wood	N2O	2050	0.025861063
Current policies	MN	Transportation	Aviation	CH4	2050	0
Current policies	MN	Transportation	Aviation	CO2	2050	2.527797157
Current policies	MN	Transportation	Aviation	N2O	2050	0.024103718
Current policies	MN	Transportation	Bus	CH4	2050	0.0015419
Current policies	MN	Transportation	Bus	CO2	2050	0.314075704
Current policies	MN	Transportation	Bus	N2O	2050	0.000255385
Current policies	MN	Transportation	Heavy-duty trucks	CH4	2050	0.012100013
Current policies	MN	Transportation	Heavy-duty trucks	CO2	2050	5.757606857
Current policies	MN	Transportation	Heavy-duty trucks	N2O	2050	0.006644694
Current policies	MN	Transportation	Light-duty trucks	CH4	2050	0.009101152
Current policies	MN	Transportation	Light-duty trucks	CO2	2050	6.980636504
Current policies	MN	Transportation	Light-duty trucks	N2O	2050	0.032457497
Current policies	MN	Transportation	Military and other off-highway	CH4	2050	0.03812
Current policies	MN	Transportation	Military and other off-highway	CO2	2050	0.7048952
Current policies	MN	Transportation	Military and other off-highway	N2O	2050	0.1894008
Current policies	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2050	1.750327
Current policies	MN	Transportation	Motorcycle	CH4	2050	0.001009927
Current policies	MN	Transportation	Motorcycle	CO2	2050	0.107008473
Current policies	MN	Transportation	Motorcycle	N2O	2050	0.000245901
Current policies	MN	Transportation	Natural gas transmission	CH4	2050	0
Current policies	MN	Transportation	Natural gas transmission	CO2	2050	0.71713468
Current policies	MN	Transportation	Natural gas transmission	N2O	2050	0
Current policies	MN	Transportation	Passenger cars	CH4	2050	0.008519107
Current policies	MN	Transportation	Passenger cars	CO2	2050	2.746604258
Current policies	MN	Transportation	Passenger cars	N2O	2050	0.021255618
Current policies	MN	Transportation	Railroad	CH4	2050	0.001574913
Current policies	MN	Transportation	Railroad	CO2	2050	0.458884563
Current policies	MN	Transportation	Railroad	N2O	2050	0.006008124
Current policies	MN	Transportation	Vessel bunkering/marine	CH4	2050	4.06376E-05
Current policies	MN	Transportation	Vessel bunkering/marine	CO2	2050	0.861881826
Current policies	MN	Transportation	Vessel bunkering/marine	N2O	2050	0.001151235
Current policies	MN	Waste	Biosolids land application	N2O	2050	0.019032
Current policies	MN	Waste	Coal	CH4	2050	0
Current policies	MN	Waste	Coal	CO2	2050	0

Current policies	MN	Waste	Coal	N2O	2050	0
Current policies	MN	Waste	Food waste prevention	CO2	2050	-0.223
Current policies	MN	Waste	Hazardous waste	CO2	2050	0
Current policies	MN	Waste	Hazardous waste	N2O	2050	0
Current policies	MN	Waste	Incinerator ash disposal	CH4	2050	0
Current policies	MN	Waste	Incinerator ash disposal	CO2	2050	0
Current policies	MN	Waste	Incinerator ash disposal	N2O	2050	0
Current policies	MN	Waste	Industrial landfills	CH4	2050	0.117871
Current policies	MN	Waste	Landfill gas combustion/flaring	CH4	2050	0.007378
Current policies	MN	Waste	Landfill gas combustion/flaring	N2O	2050	0.000242
Current policies	MN	Waste	Landfill operations	CH4	2050	0.000031
Current policies	MN	Waste	Landfill operations	CO2	2050	0.020577
Current policies	MN	Waste	Landfill operations	N2O	2050	0.000164
Current policies	MN	Waste	Limestone use	CO2	2050	0
Current policies	MN	Waste	MMSW compost preprocessing	CH4	2050	0
Current policies	MN	Waste	MMSW compost preprocessing	CO2	2050	0
Current policies	MN	Waste	MMSW compost preprocessing	N2O	2050	0
Current policies	MN	Waste	MMSW composting	CH4	2050	0
Current policies	MN	Waste	MMSW composting	N2O	2050	0
Current policies	MN	Waste	MMSW landfills	CH4	2050	1.524828
Current policies	MN	Waste	Mass burn	CH4	2050	0
Current policies	MN	Waste	Mass burn	CO2	2050	0
Current policies	MN	Waste	Mass burn	N2O	2050	0
Current policies	MN	Waste	Materials recovery facility	CH4	2050	0.000011
Current policies	MN	Waste	Materials recovery facility	CO2	2050	0.007486
Current policies	MN	Waste	Materials recovery facility	N2O	2050	0.00006
Current policies	MN	Waste	Medical	CO2	2050	0.004405
Current policies	MN	Waste	Medical	N2O	2050	0.000174
Current policies	MN	Waste	Miscellaneous	CO2	2050	0
Current policies	MN	Waste	Miscellaneous	N2O	2050	0
Current policies	MN	Waste	Natural gas	CH4	2050	0.000004
Current policies	MN	Waste	Natural gas	CO2	2050	0.009112
Current policies	MN	Waste	Natural gas	N2O	2050	0.000046
Current policies	MN	Waste	Oil	CH4	2050	0
Current policies	MN	Waste	Oil	CO2	2050	0.002004
Current policies	MN	Waste	Oil	N2O	2050	0.000002
Current policies	MN	Waste	Propane	CH4	2050	0
Current policies	MN	Waste	Propane	CO2	2050	0
Current policies	MN	Waste	Propane	N2O	2050	0
Current policies	MN	Waste	RDF	CH4	2050	0
Current policies	MN	Waste	RDF	CO2	2050	0
Current policies	MN	Waste	RDF	N2O	2050	0
Current policies	MN	Waste	RDF processing	CH4	2050	0.000002
Current policies	MN	Waste	RDF processing	CO2	2050	0.001448
Current policies	MN	Waste	RDF processing	N2O	2050	0.000012
Current policies	MN	Waste	Rural open burning	CH4	2050	0.006398
Current policies	MN	Waste	Rural open burning	CO2	2050	0.022219
Current policies	MN	Waste	Rural open burning	N2O	2050	0.00176
Current policies	MN	Waste	Sequestration in demolition/construction landfills	CO2	2050	-0.903026
Current policies	MN	Waste	Sludge	CH4	2050	0.00423
Current policies	MN	Waste	Sludge	N2O	2050	0.001677
Current policies	MN	Waste	Waste solvent	CO2	2050	0
Current policies	MN	Waste	Wastewater treatment	CH4	2050	0.261719
Current policies	MN	Waste	Wastewater treatment	N2O	2050	0.112409
Current policies	MN	Waste	Wood	CH4	2050	0
Current policies	MN	Waste	Wood	N2O	2050	0

Current policies	MN	Waste	Yard waste composting	CH4	2050	0.046035
Current policies	MN	Waste	Yard waste preprocessing	CH4	2050	0.000005
Current policies	MN	Waste	Yard waste preprocessing	CO2	2050	0.003127
Current policies	MN	Waste	Yard waste preprocessing	N2O	2050	0.000025
Net-zero pathway	MN	Agriculture	Aboveground Biomass	CO2	2050	0.18161
Net-zero pathway	MN	Agriculture	American Bison	CH4	2050	0.00646
Net-zero pathway	MN	Agriculture	Beef Cattle	CH4	2050	2.355954
Net-zero pathway	MN	Agriculture	Beef Cattle	N2O	2050	0.148509
Net-zero pathway	MN	Agriculture	Belowground Biomass	CO2	2050	0.030167
Net-zero pathway	MN	Agriculture	Biofuel	CH4	2050	0.000938
Net-zero pathway	MN	Agriculture	Biofuel	N2O	2050	0.001987
Net-zero pathway	MN	Agriculture	Cereals	CH4	2050	0.008883
Net-zero pathway	MN	Agriculture	Cereals	N2O	2050	0.002987
Net-zero pathway	MN	Agriculture	Climate-friendly Ag	CO2	2050	-0.178
Net-zero pathway	MN	Agriculture	Cropland	N2O	2050	13.341924
Net-zero pathway	MN	Agriculture	Dairy Cattle	CH4	2050	3.375796
Net-zero pathway	MN	Agriculture	Dairy Cattle	N2O	2050	0.163691
Net-zero pathway	MN	Agriculture	Dairy Heifers	N2O	2050	0.122093
Net-zero pathway	MN	Agriculture	Dead Wood	CO2	2050	0.061878
Net-zero pathway	MN	Agriculture	Goats	CH4	2050	0.009678
Net-zero pathway	MN	Agriculture	Goats	N2O	2050	0.000298
Net-zero pathway	MN	Agriculture	Grassland	N2O	2050	1.82027
Net-zero pathway	MN	Agriculture	Horses	CH4	2050	0.018834
Net-zero pathway	MN	Agriculture	Horses	N2O	2050	0.001052
Net-zero pathway	MN	Agriculture	Liming	CO2	2050	0.025355
Net-zero pathway	MN	Agriculture	Litter	CO2	2050	0.096397
Net-zero pathway	MN	Agriculture	Mineral Soil	CO2	2050	-0.29883
Net-zero pathway	MN	Agriculture	Mules and Asses	CH4	2050	0.000957
Net-zero pathway	MN	Agriculture	Mules and Asses	N2O	2050	0.000035
Net-zero pathway	MN	Agriculture	Oil	CH4	2050	0.00907
Net-zero pathway	MN	Agriculture	Oil	CO2	2050	2.819079
Net-zero pathway	MN	Agriculture	Oil	N2O	2050	0.016634
Net-zero pathway	MN	Agriculture	Organic Soil	CO2	2050	6.613127
Net-zero pathway	MN	Agriculture	Other	CH4	2050	0.000091
Net-zero pathway	MN	Agriculture	Other	N2O	2050	0.000069
Net-zero pathway	MN	Agriculture	Poultry	CH4	2050	0.042266
Net-zero pathway	MN	Agriculture	Poultry	N2O	2050	0.053616
Net-zero pathway	MN	Agriculture	Pulses	CH4	2050	0.001728
Net-zero pathway	MN	Agriculture	Pulses	N2O	2050	0.000673
Net-zero pathway	MN	Agriculture	Rice Cultivation	CH4	2050	0
Net-zero pathway	MN	Agriculture	Sheep	CH4	2050	0.030353
Net-zero pathway	MN	Agriculture	Sheep	N2O	2050	0.009997
Net-zero pathway	MN	Agriculture	Swine	CH4	2050	2.42472
Net-zero pathway	MN	Agriculture	Swine	N2O	2050	0.19821
Net-zero pathway	MN	Agriculture	Tubers and Roots	CH4	2050	0.000058
Net-zero pathway	MN	Agriculture	Tubers and Roots	N2O	2050	0.000039
Net-zero pathway	MN	Agriculture	Urea Fertilization	CO2	2050	0.600699
Net-zero pathway	MN	Commercial	Air conditioning and space cooling	HFC	2050	0.228038718
Net-zero pathway	MN	Commercial	Biofuel	CO2	2050	0
Net-zero pathway	MN	Commercial	Coal	CH4	2050	0
Net-zero pathway	MN	Commercial	Coal	CO2	2050	0
Net-zero pathway	MN	Commercial	Coal	N2O	2050	0
Net-zero pathway	MN	Commercial	Limestone use	CO2	2050	0.000105
Net-zero pathway	MN	Commercial	Medical use	N2O	2050	0.079197
Net-zero pathway	MN	Commercial	Natural gas	CH4	2050	0.000175216
Net-zero pathway	MN	Commercial	Natural gas	CO2	2050	0.166138337

Net-zero pathway	MN	Commercial	Natural gas	N2O	2050	4.17202E-05
Net-zero pathway	MN	Commercial	Refined Liquids	CH4	2050	0.001568148
Net-zero pathway	MN	Commercial	Refined Liquids	CO2	2050	0.146101978
Net-zero pathway	MN	Commercial	Refined Liquids	N2O	2050	0.000637294
Net-zero pathway	MN	Commercial	Solvent use	CO2	2050	0.080955
Net-zero pathway	MN	Electricity	Coal	CH4	2050	0
Net-zero pathway	MN	Electricity	Coal	CO2	2050	0.000770936
Net-zero pathway	MN	Electricity	Coal	N2O	2050	0
Net-zero pathway	MN	Electricity	Coal storage	CH4	2050	0
Net-zero pathway	MN	Electricity	Flue-gas desulfurization	CO2	2050	0
Net-zero pathway	MN	Electricity	Hydroelectric reservoirs	CH4	2050	0
Net-zero pathway	MN	Electricity	Natural gas	CH4	2050	3.35503E-08
Net-zero pathway	MN	Electricity	Natural gas	CO2	2050	4.72161E-05
Net-zero pathway	MN	Electricity	Natural gas	N2O	2050	5.06474E-07
Net-zero pathway	MN	Electricity	Net electricity imports	CH4	2050	0.000745478
Net-zero pathway	MN	Electricity	Net electricity imports	CO2	2050	0.223367428
Net-zero pathway	MN	Electricity	Net electricity imports	N2O	2050	0.001986166
Net-zero pathway	MN	Electricity	Refined Liquids	CH4	2050	0
Net-zero pathway	MN	Electricity	Refined Liquids	CO2	2050	0
Net-zero pathway	MN	Electricity	Refined Liquids	N2O	2050	0
Net-zero pathway	MN	Electricity	Transmission	SF6	2050	0.060423027
Net-zero pathway	MN	Industry	Ammonia manufacture	CO2	2050	0
Net-zero pathway	MN	Industry	Coal	CH4	2050	0
Net-zero pathway	MN	Industry	Coal	CO2	2050	0.000328465
Net-zero pathway	MN	Industry	Coal	N2O	2050	0
Net-zero pathway	MN	Industry	Industrial solvent release	CO2	2050	0.014228
Net-zero pathway	MN	Industry	Industrial wastewater treatment	CH4	2050	0.147407
Net-zero pathway	MN	Industry	Insulating foam manufacture	HFC	2050	0
Net-zero pathway	MN	Industry	Magnesium casting	SF6	2050	0
Net-zero pathway	MN	Industry	Natural gas	CH4	2050	0
Net-zero pathway	MN	Industry	Natural gas	CO2	2050	0.006025512
Net-zero pathway	MN	Industry	Natural gas	N2O	2050	0
Net-zero pathway	MN	Industry	Oil refining	CH4	2050	0
Net-zero pathway	MN	Industry	Oil refining	CO2	2050	2.09652E-08
Net-zero pathway	MN	Industry	Other industrial process	CO2	2050	0
Net-zero pathway	MN	Industry	Paraffinic wax consumption	CO2	2050	0
Net-zero pathway	MN	Industry	Refined Liquids	CH4	2050	3.6596E-07
Net-zero pathway	MN	Industry	Refined Liquids	CO2	2050	0.000129744
Net-zero pathway	MN	Industry	Refined Liquids	N2O	2050	6.16206E-07
Net-zero pathway	MN	Industry	Semiconductor manufacture	PFCs	2050	0.009852
Net-zero pathway	MN	Industry	Solvent	HFC	2050	0.037955
Net-zero pathway	MN	Industry	Taconite induration	CO2	2050	1.773177
Net-zero pathway	MN	Industry	VOC and toxics release	CO2	2050	0.052314
Net-zero pathway	MN	LULUCF	Aboveground Biomass	CO2	2050	-14.499599
Net-zero pathway	MN	LULUCF	Belowground Biomass	CO2	2050	-2.441693
Net-zero pathway	MN	LULUCF	Canals and ditches	CH4	2050	0.13087
Net-zero pathway	MN	LULUCF	Dead Wood	CO2	2050	-3.139514
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CH4	2050	0.006633
Net-zero pathway	MN	LULUCF	Drained Organic Soils	CO2	2050	2.28217
Net-zero pathway	MN	LULUCF	Drained Organic Soils	N2O	2050	0.022354
Net-zero pathway	MN	LULUCF	Forest Fires	CH4	2050	0.003563
Net-zero pathway	MN	LULUCF	Forest Fires	N2O	2050	0.003207
Net-zero pathway	MN	LULUCF	Grass Fires	CH4	2050	0.001282
Net-zero pathway	MN	LULUCF	Grass Fires	N2O	2050	0.001108
Net-zero pathway	MN	LULUCF	Lakes and ponds	CH4	2050	3.298753
Net-zero pathway	MN	LULUCF	Landfilled Yard Trimmings and Food Scraps	CO2	2050	-0.204716

Net-zero pathway	MN	LULUCF	Litter	CO2	2050	-0.866013
Net-zero pathway	MN	LULUCF	Mineral Soil	CO2	2050	-0.770131
Net-zero pathway	MN	LULUCF	Organic Soil	CO2	2050	2.157873
Net-zero pathway	MN	LULUCF	Peat harvesting	CH4	2050	0.000365
Net-zero pathway	MN	LULUCF	Peat harvesting	CO2	2050	0.013174
Net-zero pathway	MN	LULUCF	Peat harvesting	N2O	2050	0.000048
Net-zero pathway	MN	LULUCF	Peatland restoration	CO2	2050	-0.105
Net-zero pathway	MN	LULUCF	Reservoirs	CH4	2050	0.645694
Net-zero pathway	MN	LULUCF	Reservoirs	CO2	2050	0.009023
Net-zero pathway	MN	LULUCF	Rivers and streams	CH4	2050	2.103652
Net-zero pathway	MN	LULUCF	Settlement Soils - N2O Emissions	N2O	2050	0.186642
Net-zero pathway	MN	LULUCF	Urban Trees	CO2	2050	-0.864974
Net-zero pathway	MN	Offsets Needed	Offsets Needed	CO2e	2050	-32.25624016
Net-zero pathway	MN	Residential	Aerosols (HFC-152a/HFC-134a)	HFC	2050	0
Net-zero pathway	MN	Residential	Air conditioning	HFC125	2050	0.036727956
Net-zero pathway	MN	Residential	Air conditioning	HFC143a	2050	2.57244E-06
Net-zero pathway	MN	Residential	Air conditioning	HFC32	2050	0.007083212
Net-zero pathway	MN	Residential	Coal	CH4	2050	0
Net-zero pathway	MN	Residential	Coal	CO2	2050	0
Net-zero pathway	MN	Residential	Coal	N2O	2050	0
Net-zero pathway	MN	Residential	Food additives	CO2	2050	0.018981
Net-zero pathway	MN	Residential	Lawn fertilizer	N2O	2050	0.015064
Net-zero pathway	MN	Residential	Natural gas	CH4	2050	0.002729518
Net-zero pathway	MN	Residential	Natural gas	CO2	2050	1.199705175
Net-zero pathway	MN	Residential	Natural gas	N2O	2050	0.000650615
Net-zero pathway	MN	Residential	Refined Liquids	CH4	2050	0.000662188
Net-zero pathway	MN	Residential	Refined Liquids	CO2	2050	0.321803242
Net-zero pathway	MN	Residential	Refined Liquids	N2O	2050	0.000216444
Net-zero pathway	MN	Residential	Refrigeration	HFC134a	2050	0.002159
Net-zero pathway	MN	Residential	Sequestration in housing	CO2	2050	-0.620231
Net-zero pathway	MN	Residential	Soaps, detergents, shampoos	CO2	2050	0.094907
Net-zero pathway	MN	Residential	Wood	CH4	2050	0.032247935
Net-zero pathway	MN	Residential	Wood	N2O	2050	0.005125247
Net-zero pathway	MN	Transportation	Aviation	CH4	2050	0
Net-zero pathway	MN	Transportation	Aviation	CO2	2050	0.192750876
Net-zero pathway	MN	Transportation	Aviation	N2O	2050	0.002323761
Net-zero pathway	MN	Transportation	Bus	CH4	2050	2.29448E-06
Net-zero pathway	MN	Transportation	Bus	CO2	2050	0.000616764
Net-zero pathway	MN	Transportation	Bus	N2O	2050	3.80068E-07
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CH4	2050	0.001020934
Net-zero pathway	MN	Transportation	Heavy-duty trucks	CO2	2050	0.553297031
Net-zero pathway	MN	Transportation	Heavy-duty trucks	N2O	2050	0.000560645
Net-zero pathway	MN	Transportation	Light-duty trucks	CH4	2050	0.000256881
Net-zero pathway	MN	Transportation	Light-duty trucks	CO2	2050	0.635233491
Net-zero pathway	MN	Transportation	Light-duty trucks	N2O	2050	0.000916114
Net-zero pathway	MN	Transportation	Military and other off-highway	CH4	2050	0.03812
Net-zero pathway	MN	Transportation	Military and other off-highway	CO2	2050	0.7048952
Net-zero pathway	MN	Transportation	Military and other off-highway	N2O	2050	0.1894008
Net-zero pathway	MN	Transportation	Mobile air conditioning (HFC-134a)	HFC	2050	1.750327
Net-zero pathway	MN	Transportation	Motorcycle	CH4	2050	1.98651E-06
Net-zero pathway	MN	Transportation	Motorcycle	CO2	2050	0.000210485
Net-zero pathway	MN	Transportation	Motorcycle	N2O	2050	4.83685E-07
Net-zero pathway	MN	Transportation	Natural gas transmission	CH4	2050	0
Net-zero pathway	MN	Transportation	Natural gas transmission	CO2	2050	0.708446888
Net-zero pathway	MN	Transportation	Natural gas transmission	N2O	2050	0
Net-zero pathway	MN	Transportation	Passenger cars	CH4	2050	0.000258876

Net-zero pathway	MN	Transportation	Passenger cars	CO2	2050	0.083582768
Net-zero pathway	MN	Transportation	Passenger cars	N2O	2050	0.000645908
Net-zero pathway	MN	Transportation	Railroad	CH4	2050	2.33362E-06
Net-zero pathway	MN	Transportation	Railroad	CO2	2050	0.001381967
Net-zero pathway	MN	Transportation	Railroad	N2O	2050	8.90253E-06
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CH4	2050	0
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	CO2	2050	0.099836356
Net-zero pathway	MN	Transportation	Vessel bunkering/marine	N2O	2050	0
Net-zero pathway	MN	Waste	Biosolids land application	N2O	2050	0.019032
Net-zero pathway	MN	Waste	Coal	CH4	2050	0
Net-zero pathway	MN	Waste	Coal	CO2	2050	0
Net-zero pathway	MN	Waste	Coal	N2O	2050	0
Net-zero pathway	MN	Waste	Food waste prevention	CO2	2050	-0.223
Net-zero pathway	MN	Waste	Hazardous waste	CO2	2050	0
Net-zero pathway	MN	Waste	Hazardous waste	N2O	2050	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CH4	2050	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	CO2	2050	0
Net-zero pathway	MN	Waste	Incinerator ash disposal	N2O	2050	0
Net-zero pathway	MN	Waste	Industrial landfills	CH4	2050	0.117871
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	CH4	2050	0.007378
Net-zero pathway	MN	Waste	Landfill gas combustion/flaring	N2O	2050	0.000242
Net-zero pathway	MN	Waste	Landfill operations	CH4	2050	0.000031
Net-zero pathway	MN	Waste	Landfill operations	CO2	2050	0.020577
Net-zero pathway	MN	Waste	Landfill operations	N2O	2050	0.000164
Net-zero pathway	MN	Waste	Limestone use	CO2	2050	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CH4	2050	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	CO2	2050	0
Net-zero pathway	MN	Waste	MMSW compost preprocessing	N2O	2050	0
Net-zero pathway	MN	Waste	MMSW composting	CH4	2050	0
Net-zero pathway	MN	Waste	MMSW composting	N2O	2050	0
Net-zero pathway	MN	Waste	MMSW landfills	CH4	2050	1.524828
Net-zero pathway	MN	Waste	Mass burn	CH4	2050	0
Net-zero pathway	MN	Waste	Mass burn	CO2	2050	0
Net-zero pathway	MN	Waste	Mass burn	N2O	2050	0
Net-zero pathway	MN	Waste	Materials recovery facility	CH4	2050	0.000011
Net-zero pathway	MN	Waste	Materials recovery facility	CO2	2050	0.007486
Net-zero pathway	MN	Waste	Materials recovery facility	N2O	2050	0.00006
Net-zero pathway	MN	Waste	Medical	CO2	2050	0.004405
Net-zero pathway	MN	Waste	Medical	N2O	2050	0.000174
Net-zero pathway	MN	Waste	Miscellaneous	CO2	2050	0
Net-zero pathway	MN	Waste	Miscellaneous	N2O	2050	0
Net-zero pathway	MN	Waste	Natural gas	CH4	2050	0.000004
Net-zero pathway	MN	Waste	Natural gas	CO2	2050	0.009112
Net-zero pathway	MN	Waste	Natural gas	N2O	2050	0.000046
Net-zero pathway	MN	Waste	Oil	CH4	2050	0
Net-zero pathway	MN	Waste	Oil	CO2	2050	0.002004
Net-zero pathway	MN	Waste	Oil	N2O	2050	0.000002
Net-zero pathway	MN	Waste	Propane	CH4	2050	0
Net-zero pathway	MN	Waste	Propane	CO2	2050	0
Net-zero pathway	MN	Waste	Propane	N2O	2050	0
Net-zero pathway	MN	Waste	RDF	CH4	2050	0
Net-zero pathway	MN	Waste	RDF	CO2	2050	0
Net-zero pathway	MN	Waste	RDF	N2O	2050	0
Net-zero pathway	MN	Waste	RDF processing	CH4	2050	0.000002
Net-zero pathway	MN	Waste	RDF processing	CO2	2050	0.001448
Net-zero pathway	MN	Waste	RDF processing	N2O	2050	0.000012

Net-zero pathway	MN	Waste	Rural open burning	CH4	2050	0.006398
Net-zero pathway	MN	Waste	Rural open burning	CO2	2050	0.022219
Net-zero pathway	MN	Waste	Rural open burning	N2O	2050	0.00176
Net-zero pathway	MN	Waste	Sequestration in demolition/construction landfills	CO2	2050	-0.903026
Net-zero pathway	MN	Waste	Sludge	CH4	2050	0.00423
Net-zero pathway	MN	Waste	Sludge	N2O	2050	0.001677
Net-zero pathway	MN	Waste	Waste solvent	CO2	2050	0
Net-zero pathway	MN	Waste	Wastewater treatment	CH4	2050	0.261719
Net-zero pathway	MN	Waste	Wastewater treatment	N2O	2050	0.112409
Net-zero pathway	MN	Waste	Wood	CH4	2050	0
Net-zero pathway	MN	Waste	Wood	N2O	2050	0
Net-zero pathway	MN	Waste	Yard waste composting	CH4	2050	0.046035
Net-zero pathway	MN	Waste	Yard waste preprocessing	CH4	2050	0.000005
Net-zero pathway	MN	Waste	Yard waste preprocessing	CO2	2050	0.003127
Net-zero pathway	MN	Waste	Yard waste preprocessing	N2O	2050	0.000025