Section	Fact	Citations and where to look for more information
The Power of Climate Change		
	Moreover, problems will grow substantially worse unless greenhouse gas (GHG) emissions are brought under control, particularly in the next 15 years, to forestall the worst effects of global warming.	Intergovernmental Panel on Climate Change. (2014). Climate Change 2014: Mitigation of Climate Change.
	In Minnesota, climate change has hit home, with three 1,000-year floods since 2004 and dozens more intense weather events—from hailstorms to tornadoes to droughts.	Heavy Rains Drench Southern Minnesota September 14-15, 2004. (n.d.). Retrieved July 2, 2014, from Minnesota Department of Natural Resources: http://www.dnr.state.mn.us/climate/journal/ff040914_15.html; Heavy Rains Fall on Southeastern Minnesota: August 18-20, 2007. (n.d.). Retrieved July 2, 2014, from Minnesota Department of Natural Resources: http://www.dnr.state.mn.us/climate/journal/ff070820.html; Ellison, C.A., Sanocki, C.A., Lorenz, D.L., Mitton, G.B., and Kruse, G.A., 2011, Floods of September 2010 in Southern Minnesota: U.S. Geological Survey Scientific Investigations Report 2011–5045, 37 p., 3 app.
	Financial impacts are just as real. In 2013, Minnesota had some of the highest weather related disaster claims in the country.	Insurance Information Institute, retrieved July 2014 http://www.iii.org/table-arch
	And, University of Minnesota economists estimate that electricity generation annually causes $2 billion in environmental and health damages, such as asthma aggravated by air pollutants.	Goodkind, A. L., & Polasky, S. (2013). Health & Environmental Costs Of Electricity Generation in Minnesota. Note: Both the estimates for criteria pollutants and GHGs are overall global damages, not just for MN. For criteria pollutants, the vast majority of the damages/impacts are in the U.S. (though a small portion are likely in Canada). These damages are mostly in MN, but not entirely. For GHGs, the estimates are for global damages, not just damages in MN and not just
	Climate change has the power to contribute to lower gross domestic products, higher food and commodity costs and greater financial risk.	For more information: (2014). Risky Business: The Economic Risks of Climate Change in the United States. Risky Business.
	Minnesotans may be surprised to hear that familiar companies, such as Coca-Cola and Chipotle, are already preparing for disruptions in water and ingredient sources.	For more information: Position Statement on Climate Protection. (n.d.). Retrieved July 2, 2014, from The Coca-Cola Company: http://www.coca-colacompany.com/position-statement-on-climate-protection#TCCC; Chipotle Mexican Grill Inc. (2013). ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the fiscal year ended December 31, 2013: Commission File Number: 1-32731 . United States Securities and Exchange Commission.
	Longer growing seasons are a blessing for farmers, but severe weather and heat-loving pests, invasive species and plant diseases could wipe out their gains. Extreme heat is another factor, which causes stress, illness and even death in livestock	Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
	Apple production was as much as 47% below normal in 2012.	Calculation by Emily Jerve, Minnesota Department of Agriculture, using U.S. Department of Agriculture and National Agricultural Statistics Service data, with "average" being the 5 year period of 2007-2011
	Summer heat and poor air quality could make it difficult for construction workers, landscapers and other outdoor workers to keep cool and breathe easily.	http://www.health.state.mn.us/divs/climatechange/climatevideo.html and Minne
	Expect more extreme heat, increasing the risk of heat-related illness or death, and more days with poor air quality, causing respiratory and cardiovascular problems.	Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
	Twin Cities' annual average hottest temp is 97°F.	State Climatologist Greg Spoden
	We expect more days with tempertures over a 100°F.	Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds., 2014: *Highlights of Climate Change Impacts in the United States: The Third National Climate Assessment* . U.S. Global Change Research Program, 24 pp.
	Intense, local thunderstorms mean some Minnesotans will experience heavy rain and flooding, while others will face severe drought and risk of wildfires.	For more information: Adapting to Climate Change in Minnesota: 2013 Report of the Interagency Climate Adaptation Team. Minnesota Pollution Control Agency.
	Drought could reduce drinking water supplies. Drinking water could smell or taste bad, thanks to heat-induced algae growth. And chances of waterborne disease outbreaks increase with more flooding.	Also, Minnesota Department of Health, Climate 101 Training Module http://www.health.state.mn.us/divs/climatechange/climate101.html. And also National Climate Assessment, 2014, p.225 : Luber, G., K. Knowlton, J. Balbus, H. Frumkin, M. Hayden, J. Hess, M. McGeehin, N. Sheats, L. Backer, C. B. Beard, K. L. Ebi, E. Maibach, R. S. Ostfeld, C. Wiedinmyer, E. Zielinski-Gutiérrez, and L. Ziska, 2014: Ch. 9: Human Health. *Climate Change Impacts in the United States: The Third National Climate Assessment* , J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 220-256. doi:10.7930/J0PN93H5. Also, Minnesota Department of Health, Climate 101 Training Module http://www.health.state.mn.us/divs/climatechange/climate101.html
	A longer allergy season is likely-and allergies may be more severe. Health officials say this can worsen asthma symtopms for vulnerable populations, such as kids and the elderly.	MDH Climate and Health website. Air Quality Training Module. At: http://www.he
	Increased freeze-thaw cycles in winter will degrade Minnesota's roads faster and increase replacement costs. More winter ice and rain (vs. snow) will make keeping roads safe even harder.	Planning for Systems Management & Operations as part of Climate Change Adaptation . (n.d.). Retrieved from U.S. Department of Transportation Federal Highway Administration: http://ops.fhwa.dot.gov/publications/fhwahop13030/chap3.htm
	And, more summer heat means more buckled roadways.	Climate Change Impacts on Transportation . (n.d.). Retrieved from U.S. Environmental Protection Agency: http://www.epa.gov/climatechange/impacts-adaptation/transportation.html
	• It is likely iconic spruce, fir, aspen and birch trees will retreat northward and the BWCA may give way to hardwood forests. • From the North Shore to prairie country, the diversity of fish and wildlife is changing, as factors suh as heat stress and flooding alter the availability of food, water and habitat.	Minnesota Forest Ecosystem Vulnerability Assessment and Synthesis: A Report from the Northwoods Climate Change Response Framework Project (May 2014) Stephen Handler, Matthew J. Duveneck, Louis Iverson, Emily Peters, Robert M. Scheller, Kirk R. Wythers, Leslie Brandt, Patricia Butler, Maria Janowiak, P. Danielle Shannon, Chris Swanston, Kelly Barrett, Randy Kolka, Casey McQuiston, Brian Palik, Peter B. Reich, Clarence Turner, Mark White, Cheryl Adams, Anthony D'Amato, Suzanne Hagell, Patricia Johnson, Rosemary Johnson, Mike Larson, Stephen Matthews, Rebecca Montgomery, Steve Olson, Matthew Peters, Anantha Prasad, Jack Rajala, Jad Daley, Mae Davenport, Marla R. Emery, David Fehringer, Christopher L. Hoving, Gary Johnson, Lucinda Johnson, David Neitzel, Adena Rissman, Chadwick Rittenhouse, and Robert Ziel

	Minnesota might have a shorter season of snow and ice cover, resulting in fewer winter recreational opportunities	Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
	Tick- and mosquito-borne illnesses are already on the rise. . Health officials say climate change may explain a geographic spread of ticks, especially in northern Minnesota.	MDH Vector Borne Disease Program website at: http://www.health.state.mn.us/d
	Northeastern Minnesota's moose population has dropped 52% since 2010. Scientists have attributed some deaths to parasites and overall poor physical condition. Both may be linked to warming temperatures.	Moose management and research. (n.d.). Retrieved July 2, 2014, from Minnesota Department of Natural Resources: http://www.dnr.state.mn.us/moose/index.html
	37 percent of all freshwater aquatic animal species, from trout in North Shore streams to walleye in Lake Pepin, could be at risk. This poses potential economic and cultural losses.	Staudt, A., Inkley, D., Rubinstein, A., Walton, E., & Williams, J. (2013). Swimming Upstream: Freshwater Fish in a Warming World. National Wildlife Federation.
	The temperature has increased 1 to 2°F since 1980s, after decades of essentially no change. Closer to the present that the trend is assessed, the greater the rate at which temp is increasing.	Climate at a Glance: Time Series. (n.d.). Retrieved July 2014, from National Climactic Data Center: http://www.ncdc.noaa.gov/cag/time-series Zandlo, J. (2008, March 13). Climate Change and the Minnesota State Climatology Office: Observing the Climate. Retrieved July 2, 2014, from Minnesota Climatology Working Group: http://climate.umn.edu/climateChange/climateChangeObservedNu.htm Also: Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
	Projected increases: 2°F to 6°F more degrees by 2050 and 5°F to 10°F by 2100.	Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Mid-west. *Climate Change Impacts in the United States: The Third National Climate Assessment* , J. M. Melillo, Terese (T.C.) Rich-mond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
	7 of Minnesota's 10 warmest years occurred in the last 15 years.	For more information: University of Minnesota Extension. (2013). Seeing Patterns: Mark Seeley charts Minnesota's changing climate.
	Yearly frequency of the largest storms—those with three inches or more of rainfall in a single day—have more than doubled in just more than 50 years. In the past decade, such dramatic rains have increased by more than 70 percent.	For more information: Saunders, S., Findlay, D., Easley, T., & Spencer, T. (2012). Doubled Trouble: More Midwestern Extreme Storms. Rocky Mountain Climate Organization; Natural Resources Defense Council.
	Scientists project that we will continue to have extreme weather events and that these will occur more frequently.	Saunders, S., Findlay, D., Easley, T., & Spencer, T. (2012). Doubled Trouble: More Midwestern Extreme Storms. Rocky Mountain Climate Organization; Natural Resources Defense Council. Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Mid-west. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Rich-mond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
	Since 2004, Minnesota has had three 1,000-year flash floods.	University of Minnesota Extension. (2013). Seeing Patterns: Mark Seeley charts Minnesota's changing climate.
	When dew point temperatures reach 70-plus degrees, they are tropical.	For more information: Beddow, J., Pardey, P., & Seeley, M. (2012). Changing Agricultural Climate: Implications for Innovation Policies. College of Food, Agriculture and Natural Resource Sciences; University of Minnesota.
	The number of 70-degree dew points is higher than it's ever been in the state.	Seeley, M. (2014). Discussion of Climate Change and Agriculture in Minnesota [PowerPoint presentation]. Retrieved from Minnesota Climatology Working Group website: http://climate.umn.edu/seeley/LSP_Starbuck_2014_seeley.pptx
	When the dew point and air temperature are high, so is the heat index, a measure of how the temperature feels with the two combined.	For more information: Beddow, J., Pardey, P., & Seeley, M. (2012). Changing Agricultural Climate: Implications for Innovation Policies. College of Food, Agriculture and Natural Resource Sciences; University of Minnesota.
	Minnesota had never recorded an 80-degree dew point until the summer of 1966. Now, most years have at least one 80-degree dew point.	Seeley, M. (n.d.). Minnesota Weather Almanac. Minnesota Historical Society Press.
	On July 19, 2011, Moorhead was the hottest, most humid spot on Earth. Its 88-degree dew point and 134-degree heat index eclipsed the Amazon Jungle—the only other place in the Western Hemisphere with a dew point in the 80s.	University of Minnesota Extension. (2013). Seeing Patterns: Mark Seeley charts Minnesota's changing climate.
	Ninety-seven percent of scientists—including the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA)—agree that humans cause are causing climate change. Burning fossil fuels (oil, coal, natural gas) to run our power plants, vehicles and factories produces carbon dioxide, the most predominant greenhouse gas. The earth's atmosphere acts like a pane of glass in a greenhouse, trapping the sun's heat in the lower atmosphere and causing the Earth's surface to warm.	National Academy of Sciences. (2011). America's Climate Choices. Washington, D.C.: The National Academies Press.
	In 2013, Minnesota became one of the top states in weather related catastrophic losses	Insurance Information Institute, retrieved July 2014 http://www.iii.org/table-archive/20295
	Since 1997, 32 severe natural disasters cost Minnesota nearly $500 million.	(2012). *Helping Communities Recover from Natural Disasters: Evaluation Report Summary / March 2012.* Office of the Legislative Auditor: State of Minnesota.
	Minnesota has good overall air quality, yet some pollutants—ozone and fine particulates—are approaching federal limits.	Minnesota Pollution Control Agency
	The American Lung Association estimates coal-burning power plants cause 24,000 premature deaths, 550,000 asthma attacks and 38,000 heart attacks per year.	(2009). *A National Asthma Public Policy Agenda.* American Lung Association.
	University of Minnesota economists estimated the total damages from criteria air pollutant emissions (sulfur dioxide, nitrous oxides, particulates, ammonia and volatile organic compounds) from Minnesota power plants to be $877 million a year (in 2010 U.S. dollars). These are mostly local and regional respiratory and cardiovascular health impacts. They estimated the total damages from greenhouse gas emissions (predominantly carbon dioxide) from Minnesota power plants to be $1.287 billion a year (in 2010 U.S. dollars). These are global climate change damages that have some immediate impacts but will mostly be realized in the future. Assuming that the years of these estimates are fairly representative of emissions from Minnesota power plants, the total annual health and environmental damages from electricity generation in Minnesota are likely over $2 billion every year. Emissions from coal-fired electricity generation cause 94% of the total damages.	Goodkind, A. L., & Polasky, S. (2013). Health & Environmental Costs Of Electricity Generation in Minnesota. Note: Both the estimates for criteria pollutants and GHGs are overall global damages, not just for MN. For criteria pollutants, the vast majority of the damages/impacts are in the U.S. (though a small portion are likely in Canada). These damages are mostly in MN, but not entirely. For GHGs, the estimates are for global damages, not just damages in MN and not just damages in the U.S.
	In 2007, 24 Minnesota counties received drought designation, while seven Minnesota counties were declared flood disasters. But in 2012, it's 55 Minnesota counties received federal drought designation at the same time 11 countries declared flood emergencies	Shepherd, N. (n.d.). *Minnesota's increasing weather extremes will demand smarter water resources management, says state climatologist, weather historian Mark Seeley* . Retrieved July 2, 2014, from Water Resources Center: University of Minnesota: http://wrc.umn.edu/pubs/minnegramonline/Summer2013/Minnesotasincreasingweatherextremeswilldemandsmarterwaterresourcesmanagementsaysstateclim

	Flooding in 2012 in Northeast Minnesota damaged roads and bridges, water and sewer systems and other infrastructure, costing $108 million. More than 1,700 homes and 100 businesses were damaged or destroyed, costing more than $12 million.	For more information on this event: Minnesota Housing Finance Agency. (n.d.). FLOOD QUESTIONS AND ANSWERS FROM MINNESOTA STATE AGENCIES. And Wilson, C. (2012, June 29). Flood damage to public infrastructure tops $108M. *Minnesota Public Radio News* .
	"[January 2014] was the fourth-warmest January since recordkeeping began in 1880. It was also the 347th consecutive month with above-average temperatures compared to the 20th century average, which has been fueled in large part by climate change."	For more information on this event: Douglas, P. (2014, February 21). 24" - Most Snow on the Ground Since 1982. Retrieved July 3, 2014, from Paul Douglas Weather Column: http://pauldouglasweather.blogspot.com/2014/02/24-most-snow-on-ground-since-1982.html
Our Energy Today - And Tomorrow		
	In Minnesota, we use most of our energy (80%) to earn a living and commute to and from work or transport products. The remainder is for keeping our homes comfortable, bright and connected.	http://www.eia.gov/state/data.cfm?sid=MN
	Today, Minnesota receives more than 55% of its electricity from coal-fired power plants,	Note this is for 2011, as data for 2012 are not reflective of averages due to SHERCO 3 being offline. The more than 55% number reflects in state and imported electricity. For more information: Energy Information Administration. (2014). *Table 5 Electric Power Industry Generation by Primary Energy Source, 1990-2012* . Retrieved from http://www.eia.gov/electricity/state/minnesota/index.cfm
	Coal is the biggest emitter of greenhouse gases in our state. However, in less than one decade, the state's use of coal has dropped by 33%.	U.S. Energy Information Administration. (2013). *U.S. Electric Power Industry Estimated Emissions by State, 1990-2011* . Retrieved from http://www.eia.gov/electricity/data/state/
	Minnesota imports all of its gasoline, primarily from other countries. In 2012, the United States imported about 10.6 million barrels of petroleum per day from about 80 countries. Our imports decrease with increased domestic production, more efficient vehicles and the use of biofuels.	For more information: U.S. Energy Information Administration. (2013). *U.S. Electric Power Industry Estimated Emissions by State, 1990-2011* . Retrieved from http://www.eia.gov/electricity/data/state/
	Today, renewables account for almost 20 percent of Minnesota's electricity generation annually, up from nearly 6% percent in 2000.	Pollution Control Agency calculations, for more information: U.S. Energy Information Administration. (2014). *Table 5 Electric Power Industry Generation by Primary Energy Source, 1990-2012* . Retrieved from http://www.eia.gov/electricity/state/minnesota/index.cfm
	Demand for electricity generation from renewables is expected to increase by 49% from 2012 to 2018 globally according to the International Energy Association.	U.S. Energy Information Administration. (2013). *U.S. Electric Power Industry Estimated Emissions by State, 1990-2011* . Retrieved from http://www.eia.gov/electricity/data/state/
	Minnesota annually imports $13 billion worth of energy, including fossil fuels such as coal, oil and natural gas, from other states and countries because we don't have them here.	For more information: http://www.eia.gov/state/data.cfm?sid=MN#ReservesSupply; or Kushler, Martin. 2013. "Some Ideas for Potential Energy Efficiency Improvements in Minnesota: A High Level View From a National Perspective" presented at the Minnesota Department of Commerce, Division of Energy Resources, Stakeholder Meeting, October 17, St. Paul, MN. http://mn.gov/commerce/energy/images/ACEEE-Marty-Kushler-Pres.pdf, or http://mn.gov/commerce/energy/images/MNEnergyFutureStudyScopingReport_140102.pdf
	Minnesota's 2007 Next Generation Energy Act is a law that requires utilities to generate at least 25% of their electricity from wind, solar and biomass by 2025 (30% by 2020 for Xcel).	For more information: Next Generation Energy Act. (2007). Retrieved from http://www.house.leg.state.mn.us/hinfo/newlawsart2007-0.asp?storyid=608
	Likewise, our state solar energy standard requires investor-owned utilities to meet 1.5% of their electricity needs from solar generation by 2020.	Renewable Energy Objectives. (2013). Minn. Stat § 216B.1691 Subd. 2f.
	And, the Minnesota Pollution Control Agency (MPCA) estimates that annual greenhouse gas emissions in 2010 from the electric power sector were 23% lower than they would have been without the laws.	For more information: http://www.pca.state.mn.us/index.php/view-document.html?gid=18931
	Using wind to generate electricity in Minnesota reduces carbon dioxide emissions by more than 5.4 million metric tons each year the equivalent of taking about 1 millions cars off the road.	"Minnesota Wind Energy State Facts." American Wind Energy Association, 2013. <http://awea.files.cms-plus.com/FileDownloads/pdfs/Minnesota.pdf>.
	Our growing population—partly responsible for growing energy demands—is projected to increase 23% by 2040 and up to 70% in some counties, placing increased pressure on transportation and building services	For more information: http://www.demography.state.mn.us/projections.html
	Top 10 Clean Energy Leader: Minnesota is the 4th best state for favorable policies and 9th best state in clean technology leadership, based on a review of technologies, state policies and access to capital. Minnesota generated nearly 16% of its electrical power from wind in 2013, ranking fifth nationwide.	Clean Edge. (2013). 2013 U.S. Clean Tech Leadership Index. San Francisco. Retrieved from: http://cleanedge.com/sites/default/files/CTLI-2013-Report.pdf
	Minnesota generated nearly 16% of its electrical power from wind in 2013, ranking fifth nationwide. (In regards to wind) In 2013, landowners received more than $10 million in annual land-lease payments.	"Minnesota Wind Energy State Facts." American Wind Energy Association, 2013. <http://awea.files.cms-plus.com/FileDownloads/pdfs/Minnesota.pdf>.
	In 2011, large-scale wind power from the upper Midwest was available for just over 3 cents per kWh ($30/MWh) compared to new natural gas plants at 6-8 cents per kWh ($61–87/MWh).	Wiser, Ryan, and Mark Bolinger. 2013. 2012 Wind Technologies Market Report" US Department of Energy. http://emp.lbl.gov/sites/all/files/lbnl-6356e.pdf page 51 and http://gallery.mailchimp.com/ce17780900c3d223633ecfa59/files/Lazard_Levelized_Cost_of_Energy_v7.0.1.pdf
	Solar: Minnesota gets as much sun to power solar panels as Houston Texas.	National Oceanic and Atmospheric Administration. (2005). Selected Maps from Climate Atlas of the United States. 47. Asheville. Retrieved from http://www1.ncdc.noaa.gov/pub/data/images/olstore/SelClimMapsPubOnlineReduced_3.pdf
	Solar demand in the United States increased more than 33% in 2013, and solar energy consumption is projected to increase by roughly 19% in 2014.	U.S. Energy Information Adminstration. (2014, June 10). Short-Term Energy Outlook. Retrieved from http://www.eia.gov/forecasts/steo/report/renew_co2.cfm
	Driving demand for solar in Minnesota is the state's solar energy standard, which requires investor-owned utilities to meet 1.5 percent of their electricity needs from solar by 2020.	Renewable Energy Objectives. (2013). Minn. Stat § 216B.1691 Subd. 2f
	Solar module prices have plummeted almost 75 percent since 2008.	Barbose, Galen. (2014). Tracking the Sun VI: An Historical Summary of the Installed Price of Photovoltaics in the United States from 1998 to 2012. eScholarship, University of California.
	Today, the Department of Natural Resources and the Statewide Wood Energy Team are accelerating the substitution of high-cost fossil fuels, such as propane and fuel oil, with sustainably managed wood from Minnesota's forests. The Minnesota Department of Natural Resources estimates that we could offset about 3% of our fossil needs with woody biomass.	For more information: http://www.dnr.state.mn.us/forestry/biomass/swet.html
	The cost to save a kilowatt hour of electricity is about 1.5 cents. The cost to buy a kilowatt of electricity averages 8 cents.	Center for Energy and Environment citing U.S. Energy Information Agency. (2013). Minnesota's Energy Efficiency Power Plant. Minneapolis, Minnesota. Retrieved from http://www.mncee.org/Innovation-Exchange/Resource-Center/Data-and-Reference/Minnesotas-Energy-Efficiency-Power-Plant/
	Renewables account for almost 20% of Minnesota's electricity generation annually, and our residential electricity rates are still consistently below the national average.	Minnesota Department of Commerce
	14,300 Minnesotans Work on Clean Energy	According to the Minnesota Department of Employment and Economic Development, at least 14,300 Minnesotans spend at least 50% of their time on clean energy projects.
	Specifically, energy efficiency firms employ at least 8,900 people	DEED Clean Energy Economy report to be released September 2014.
	More than 360 new workers were hired in Minnesota's solar industry—a 73 percent increase—between 2012 and 2014. Minnesota solar businesses plan to hire 250 more workers through 2015.	The Solar Foundation. (2014). Minnesota Solar Jobs Census 2013. Retrieved from http://www.thesolarfoundation.org/sites/thesolarfoundation.org/files/Minnesota%20Solar%20Jobs%20Census%202013_Web.pdf

	Xcel Energy has said that wind is now less expensive than a 20-year natural gas contract.	Power Engineering. (2013, October 13). Xcel to pay $25-$35/MWh in new wind power PPAs. Retrieved from http://www.power-eng.com/articles/2013/10/xcel-to-pay-25-35-mwh-in-new-wind-power-ppas.html
	The company is the nation's number one purchaser of wind power and operates two wind farms in Minnesota.	Xcel Energy. (2014). Wind Power on Our System. Retrieved June 30, 2014, from Xcel Energy: https://www.xcelenergy.com/Environment/Renewable_Energy/Wind/Wind_Power_on_Our_System
	St. Paul-based SimpleRay predicts that by end of the decade, Minnesota's solar requirement could boost in-state solar panel sales by a factor of 40.	For more information: Martucci, B. (2014). SimpleRay Solar maximizes sunny business potential. Retrieved from http://www.thelinemedia.com/innovationnews/simpleraysolar01222014.aspx
	The company SmartThings received $12.5 million in venture capital investment in 2013.	For more information: Anderson, J. (2013, November 12). Kickstarter Hit Lands $12.5M From Silicon Valley. Retrieved June 30, 2014, from Twin Cities Business: http://tcbmag.com/News/Recent-News/2013/November/Kickstarter-Hit-Lands-$12-5M-From-Silicon-Valley
	This "cluster" of innovation received more than $200 million in venture capital funding over the last five years and more than 200 patents.	Agricultural Utilization Research Institute. (2013). Agbioscience as a Development Driver. Retrieved from: http://www.auri.org/assets/2013/12/Minnesotas+Agbioscience+Strategy+-+Final+Report-1.pdf
Taking Action		
	On the emissions front, between 2005 and 2010, Minnesota experienced modest reductions of 3%. Minnesota will miss its first GHG emissions reduction target of 15% by 2015.	Claflin, A. (n.d.). *Greenhouse Gas Emissions Reduction: Biennial Report to the Minnesota Legislature January 2013.* Retrieved June 2, 2014, from http://www.pca.state.mn.us/index.php/topics/climate-change/climate-change-in-minnesota/report-on-greenhouse-gas-emissions-in-minnesota.html
	However, due in large part to Minnesota's Renewable Energy Standard and energy efficiency efforts, our electric utility sector is on track to reduce GHG emissions in 2025 by 33% less than first forecasted in 2005, demonstrating that Minnesota's aggressive energy laws and programs are working.	Pollution Control Agency calculation
	Sources of greenhouse gas emissions in Minnesota: 32% Electric Utility, 24% Transportation, 19% Agriculture, 13% Industrial, 7% Residential, 4% Commercial, 1% Waste	Claflin, A. (n.d.). *Greenhouse Gas Emissions Reduction: Biennial Report to the Minnesota Legislature January 2013.* Note: these are 2010 numbers. http://www.pca.state.mn.us/index.php/topics/climate-change/climate-change-in-minnesota/report-on-greenhouse-gas-emissions-in-minnesota.html
	33%: Reduction of coal use for electricity production from 2002-2012.	*Table 5 Electric Power Industry Generation by Primary Energy Source, 1990-2012.* (n.d.). Retrieved from U.S. Energy Information Administration: http://www.eia.gov/electricity/state/minnesota/index.cfm
	nearly 20%: Increase in renewable energy use for electricity generation, up from 5.8% in 2000.	*Table 5 Electric Power Industry Generation by Primary Energy Source, 1990-2012.* (n.d.). Retrieved from U.S. Energy Information Administration: http://www.eia.gov/electricity/state/minnesota/index.cfm
	Clean energy employment grew 14.5 percent from 2012 to 2014, far faster than the 5.3 percent growth of the Minnesota economy overall.	*co econ report to be released Sept 2014 by DEED*
	10: The number of medium-sized power plants that Xcel Energy has not needed to build has not needed to build thanks to efficiency programs in place since 1992.	Xcel Energy. (2013, April 22). *Xcel Energy on Track to Surpass CO2 Reduction Goal by 2020* . Retrieved June 30, 2014, from Connect A blog powered by Xcel Energy: http://connect.xcelenergy.com/north-dakota/xcel-energy-on-track-to-surpass-co2-reduction-goal-by-2020/
	1,255: The number of heat-related emergency room visits in 2011 statewide, 168 more than the previous decade's high of 1,087 visits (2001).	*Heat-related Illness Emergency Department Visits: Facts & Figures.* (n.d.). Retrieved July 2, 2014, from Minnesota Department of Health: https://apps.health.state.mn.us/mndata/heat_ed#byyear
	After decades of near constant growth, vehicle miles traveled (VMT) stopped increasing in 2004 and leveled, despite population growth.	Minnesota Department of Transportation. (2012, October). *Annual Minnesota Transportation Performance Report 2011.* Retrieved July 2, 2014, from http://www.dot.state.mn.us/measures/pdf/2011-Full%20Report%204-3-13%20LOW%20RES.pdf
	5.8 billion: Minnesota's forests store the equivalent of about 5.8 billion metric tons of carbon dioxide. In recent years, the carbon stored in our forest has grown substantially.	Anderson et. al. (2008, February). *The Potential for Terrestrial Carbon Sequestration in Minnesota.* Retrieved July 2, 2014, from http://files.dnr.state.mn.us/aboutdnr/reports/carbon2008.pdf
	10%: The amount of corn-based ethanol Minnesotans use instead of gasoline. In 2011, Minnesota's exported 880 million gallons, or 79%, of the ethanol it produced.	Ye, S. (2012). *Minnesota Ethanol Industry.* Retrieved July 2, 2014, from Minnesota Department of Agriculture: http://www.ethanol.org/pdf/contentmgmt/plantsreport.pdf
	8.5 billion: Minnesota's value-added recycling manufacturers generated approximately $8.5 billion in total economic activity, including sales, compensation and tax revenue, and supported nearly 37,000 jobs in 2011.	Vee, A. (2012, December). *Report on 2011 SCORE Programs.* Retrieved July 2, 2014, from Minnesota Pollution Control Agency: http://www.pca.state.mn.us/index.php/view-document.html?gid=18888
Health		
	For example, when a 1,000-year flood hit Zumbro Falls in 2010—its fourth significant flood since 1970—community leaders had enough. The town of 200 secured $1.9 million in city, state and federal funds to buy out 14 homeowners and one business on "Water Street," preventing future damage and protecting residents.	For more information: Minnesota Department of Public Safety Homeland Security and Emergency Management. (n.d.). *Zumbro Falls Acquisition Project.* Retrieved July 2, 2014, from Hazard Mitigation: Keeping Minnesota Ready: https://dps.mn.gov/divisions/hsem/hazard-mitigation/Documents/ZumbroFalls%20Haz%20Mit%20photos%20KMR.pdf
	Also with HSEM's help, Wadena-Deer Creek added a tornado safe room to its school.	For more information: Minnesota Department of Public Safety Homeland Security and Emergency Management. (n.d.). *Wadena-Deer Creek School District Tornado Safe Room Project.* Retrieved July 2, 2014, from Hazard Mitigation: Keeping Minnesota Ready: https://dps.mn.gov/divisions/hsem/hazard-mitigation/Documents/Wadena-Deer%20Creek%20Safe%20Room%20Fact%20Sheet%20-%20KMR.pdf
	Moorhead secured a new water pumping system so water is safe to drink during Red River Valley's flood season.	For more information: Minnesota Department of Public Safety Homeland Security and Emergency Management. (n.d.). *Moorhead Pumping Station.* Retrieved July 2, 2014, from Hazard Mitigation: Keeping Minnesota Ready: https://dps.mn.gov/divisions/hsem/hazard-mitigation/Documents/Moorhead%20Pumping%20Station%20Success%20Story%20KMR.pdf
	$877 million: Estimated damages from air pollutants emitted by electricity generation in Minnesota each year. These pollutants cause most harm to humans near the source who suffer from asthma and cardiovascular disease. Note: This number does not include the cost of health issues directly tied to increased temperatures or other climate changes related to CO2 emissions.	Goodkind, A. L., & Polasky, S. (2013). *Health & Environmental Costs Of Electricity Generation in Minnesota.* http://www.minnpost.com/sites/default/files/attachments/Polasky%20report%20on%20externality%20costs.pdf

	$4.3 billion: Estimated damages to property in Minnesota due to extreme weather between 2000 and 2012.	Data from NOAA's National Weather Service: Office of Climate, Water, and Weather Services. (n.d.). *Minnesota Severe Weather Damages from 2000 to 2012: Property Damage (Millions).*
	1255: The number of heat-related emergency room visits in 2011 statewide, 168 more than the previous decade's high of 1,087 visits (2001).	*Heat-related Illness Emergency Department Visits: Facts & Figures.* (n.d.). Retrieved July 2, 2014, from Minnesota Department of Health: https://apps.health.state.mn.us/mndata/heat_ed#byyear
	When Moorhead was the hottest place on Earth with a heat index of 134°F on July 19, 2011, only two Minnesota public health departments had a heatresponse plan.	Moorhead data: University of Minnesota Extension. (2013). Seeing Patterns: Mark Seeley charts Minnesota's changing climate. http://www.extension.umn.edu/source/fall-2013/mark-seeley-charts-a-changing-climate/
	That summer, five heat episodes resulted in heat advisories or warnings, and the number of emergency department visits statewide alarmed state health officials.	Extreme Heat Toolkit: Introduction to Extreme Heat Events. (n.d.). Retrieved July 2, 2014, from Minnesota Department of Health: http://www.health.state.mn.us/divs/climatechange/docs/toolkit_chapter1.pdf
	A 2001 state law allowing Minnesota utilities to recover the costs of moving to cleaner technology with a modest cost to customers improved metro-area air quality. Xcel Energy's Metropolitan Emissions Reduction Project added state-of-the art emissions controls to its Oak Park Heights plant and converted coal-fired plants in northeast Minneapolis and near downtown St. Paul to natural gas. As a result of Xcel Energy's overall project efforts, emissions that can cause respiratory diseases dropped by more than 90% and carbon emissions fell 21% ; customers paid less than expected; and the plants' total production increased.	For more information: *Minnesota Metro Emissions Reduction Project* . (n.d.). Retrieved July 2, 2014, from Xcel Energy: https://www.xcelenergy.com/Environment/Doing_Our_Part/Clean_Air_Projects/MN_MERP
Buildings & Energy Efficiency		
	10: The number of medium-sized power plants that Xcel Energy has not needed to build due to the savings as a result of efficiency programs in place since 1992.	For more information: (2013, April 22). *Xcel Energy on Track to Surpass CO2 Reduction Goal by 2020* . Retrieved June 30, 2014, from Connect A blog powered by Xcel Energy: http://connect.xcelenergy.com/north-dakota/xcel-energy-on-track-to-surpass-co2-reduction-goal-by-2020/
	Nearly 2 million: The number of tons of carbon dioxide that were saved through energy efficiency efforts in Minnesota between 2010 and 2011.	Minnesota Department of Commerce. (2013, October 1). *Minnesota Conservation Improvement Program Energy and Carbon Dioxide Savings Report for 2010-2011* . Retrieved from Minnesota Legislative Reference Library: http://archive.leg.state.mn.us/docs/2013/mandated/131112.pdf Conversion to cars done with: http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results
	8.5:1.5 ROI: In Minnesota, utility conservation programs have returned an average of 8 cents per kWh for every 1.5 cents spent.	Calculation by Joe Plummer, Minnesota Department of Commerce, for measures installed in 2010-2011, using the following sources: Conservation Improvement Program data from Energy Savings Platform (ESP®); U.S. Energy Information Administration (EIA) – average electric and natural gas prices in MN; Global Insight, electricity price escalation rates; Wood Mackenzie, Cambridge Energy Research Associates, ICF International, EIA, Global Insight – natural gas price escalation rates; U.S. Department of Treasury 20-year T-bill rate – discount rate; Minnesota investor-owned utility DSM financial incentive filings; Steve Rakow, Minnesota Department of Commerce (average cost per kW of new capacity in MN).
	We added one of the strongest energy efficiency standards nationwide, requiring electric and natural gas utilities to achieve an annual energy savings goal of 1.5% of their retail energy sales.	For more information: Next Generation Energy Act, Minn. Stat. § 216B.241. (2013).
	According to the U.S. Energy Information Administration, in 2012 the average Minnesotan household spent $1,875 on utility costs each year	For more information: *Minnesota State Profile - Consumption & Expenditures.* (2012). Retrieved from U.S. Energy Information Administration: http://www.eia.gov/state/data.cfm?sid=MN#ConsumptionExpenditures
	Minnesota utilities provide reports that show much energy we use compared to our neighbors. In just two years, the reports helped Minnesotans save $6 million in utility bills .	For more information: *Opower Announces 10th Utility Customer in Minnesota; Saves Residents more than $6 Million on Energy Bills* . (2011, August 17). Retrieved June 30, 2014, from Opower: http://opower.com/company/news-press/press_releases/30
	The first Twin Cities Habitat for Humanity Net Zero home in north Minneapolis house is built to the highest levels of energy efficiency, insulated at least three times as much as a regular house and sealed extremely well to keep drafts out	Chad Dipman, Project Manager, Twin Cities Habitat for Humanity Net Zero home, personal communication, July 1, 2014.
	The first LEED Gold-certified multifamily residential project created in Minneapolis was completed in 2013. 7west is a 213-unit apartment building whose design incorporates features that go beyond typical sustainable construction and energy conservation techniques.	For more information: *1st LEED Gold Certified Multifamily Residential Project in Minneapolis* . (2014, April 15). Retrieved June 30, 2014, from City of Minneapolis: http://www.ci.minneapolis.mn.us/cped/WCMS1P-123321
	According to the U.S. Energy Information Administration, in 2012 the commercial sector in Minnesota spent about $2.8 billion on energy	*Minnesota State Profile - Consumption & Expenditures.* (2012). Retrieved from U.S. Energy Information Administration: http://www.eia.gov/state/data.cfm?sid=MN#ConsumptionExpenditures
	U.S. Department of Energy State Energy Program (SEP)—Federal funds for Minnesota energy efficiency and renewable energy programs that help reduce U.S. emissions	For more information: *State Energy Program* . (n.d.). Retrieved from U.S. Department of Energy: http://energy.gov/eere/wipo/state-energy-program
	Every $1 of the federal-state SEP partnership yields $7.23 in energy cost savings.	*State Energy Program Benefits* . (n.d.). Retrieved June 30, 2014, from U.S. Department of Energy: http://energy.gov/eere/wipo/state-energy-program-benefits
	A business loan program developed by the St. Paul Port Authority and Xcel Energy has funded $25.5 million in project costs, financed 53 projects, and saved or created 890 jobs.	For more information: Saint Paul Port Authority. (n.d.). *Trillion BTU Program 2014 – 1st Quarter Report.*
	St. John's Hospital, Maplewood, received $875,000 from Trillion BTU and other sources to help finance a $1 million building automation and efficiency project for its air, heating and cooling systems. $86,000 per year in energy saving are projected; nine jobs were created during construction	For more information: Saint Paul Port Authority. (n.d.). *Trillion BTU Program 2014 – 1st Quarter Report.*
	The Iron Range Resources and Rehabilitation Board assists Hibbing businesses with energy efficiency decisions and financing for energy retrofits. Energy savings from 16 projects are expected to save more than $70,000 a year. Projects employed 18 local contractors and 13 local vendors (or 4,900 hours of work).	Zahorik, S. (2014, July 7). Arrowhead Economic Opportunity Agency. (A. Sherman, Interviewer)
	Minnesota has a state goal to reduce total energy consumption by 20% in throughout all state agencies by 2020.	State of Minnesota Executive Order No. 11-12. (2011, April 8). Retrieved from http://www.leg.mn/archive/execorders/11-12.pdf
	If achieved, Minnesota will reap an estimated $53.8 million in energy savings and reduce emissions by 527,000 U.S. tons per year.	Deptartment of Commerce calculation
	SB2030 standards—Construction and renovation of large public buildings in Minnesota must meet a mandatory set of design standards that reduce energy use and carbon intensity.	For more information: *B3 Sustainable Building 2030 Energy Standards* . (n.d.). Retrieved July 1, 2014, from Minnesota SB 2030 Energy Standard: http://www.b3mn.org/2030energystandard/
	Energy consumption in the Capitol Complex was reduced more than 20% from 2008 to 2013, saving estimated $2 million in utility costs.	Minnesota Department of Administration Plant Management Division. (n.d.).
	The Minnesota History Center reduced energy consumption 53%, carbon emissions 37%, and energy costs 35% over the last seven years with energy conservation measures including building automation and lighting improvements	For more information: (2011). *Public Buildings Enhanced Energy Efficiency Program Final Report Investigation Results For Minnesota History Center.* Center for Energy and Environment.
Transportation		

	After decades of near constant growth, vehicle miles traveled (VMT) stopped increasing in 2004 and leveled, despite population growth	Minnesota Department of Transportation. (2012, October). *Annual Minnesota Transportation Performance Report 2011.* Retrieved July 2, 2014, from http://www.dot.state.mn.us/measures/pdf/2011-Full%20Report%204-3-13%20LOW%20RES.pdf
	Since 2007, annual transportation fuel usage dropped by more than 10%, due to more fuel-efficient vehicles and decreases in driving and other factors.	Minnesota Department of Transportation Office of Finance; Minnesota Department of Revenue; Minnesota Pollution Control Agency
	Transit ridership hit 105 million in 2012, an overall increase since 2003.	For more information: Minnesota Department of Transportation. (2013, February). *2012 Transit Report: A Guide to Minnesota's Public Transit Systems.* Retrieved July 3, 2014, from http://www.dot.state.mn.us/govrel/reports/2013/transitreport.pdf
	Biking and walking in Minneapolis and St. Paul has increased markedly from 2007 – 2013.	U.S. Department of Transportation Federal Highway Administration. (2013, December 12). *Bike Walk Twin Cities: 2013 Count Report.* Retrieved July 3, 2014, from http://www.bikewalktwincities.org/sites/default/files/bwtc-2013-count-report-final-lowres.pdf
	Pedestrian up 16%	U.S. Department of Transportation Federal Highway Administration. (2013, December 12). *Bike Walk Twin Cities: 2013 Count Report.* Retrieved July 3, 2014, from http://www.bikewalktwincities.org/sites/default/files/bwtc-2013-count-report-final-lowres.pdf
	Bicyclists up 78%	U.S. Department of Transportation Federal Highway Administration. (2013, December 12). *Bike Walk Twin Cities: 2013 Count Report.* Retrieved July 3, 2014, from http://www.bikewalktwincities.org/sites/default/files/bwtc-2013-count-report-final-lowres.pdf
	Non-Motorized up 45%	U.S. Department of Transportation Federal Highway Administration. (2013, December 12). *Bike Walk Twin Cities: 2013 Count Report.* Retrieved July 3, 2014, from http://www.bikewalktwincities.org/sites/default/files/bwtc-2013-count-report-final-lowres.pdf
	Roundabouts eliminate idling at signals, reducing vehicle emissions and fuel consumption by 30% or more.	For more information: *Roundabouts in Minnesota* . (n.d.). Retrieved July 3, 2014, from Minnesota Department of Transportation: http://www.dot.state.mn.us/roundabouts/
	300 miles of bus-only shoulders in the Metro have for decades allowed buses to bypass congestion, increasing ridership.	For more information: *Bus-only shoulders move you past congestion* . (n.d.). Retrieved July 3, 2014, from MetroTransit: http://www.metrotransit.org/transit-advantages.aspx
	By 2015, Minnesota aims to displace 14% of petroleum with biofuels, such as ethanol and biodiesel.	Petroleum Replacement Promotion, Minn. Stat. §§ 239.7911 (2013).
	Minnesota Pollution Control Agency's Drive Electric Program is expanding charging stations for electric vehicles, which reduce emissions by about 40% compared to gas-powered vehicles.	U.S. Department of Energy Energy Efficiency and Renewable Energy. (n.d.). *Emissions from Hybrid and Plug-In Electric Vehicles* . Retrieved July 3, 2014, from Alternative Fuels Data Center: http://www.afdc.energy.gov/vehicles/electric_emissions.php
	Public stations are installed at 70-plus sites, including the Minneapolis-St. Paul Airport, the Depot in Duluth, downtown Rochester, and Metro ramps and parking lots.	For more information: *Public Charging Locations* . (n.d.). Retrieved July 3, 2014, from Drive Electric Minnesota: http://www.driveelectricmn.org/charging_public.cfm
	Minnesota's goal is to transition 30% of our gasoline to biofuels by 2025.	Petroleum Replacement Promotion, Minn. Stat. §§ 239.7911 (2013).
	Metro Transit reduced CO2 exhaust emissions and saved more than $300,000 over a five-month period in 2013 by using B-10 and B-20 fuel blends in its buses.	For more information: http://www.metrotransit.org/buses-going-big-on-biodiesel
	St. Cloud is the nation's first city to have a public bus powered by recycled vegetable oil.	For more information: French fries driving Metro Bus on St. Cloud State student routes. (2008, April 14). St. Cloud, Minnesota.
	Minnesota is starting to dedicate resources to fortify key roads, including $50 million for the Statewide Flood Mitigation Program. By 2016, approximately 30 projects in towns across the state, from Ada to Ortonville and Chanhassen to Breckenridge, will be completed.	*Statewide flood mitigation program* . (n.d.). Retrieved July 2, 2014, from Minnesota Department of Transportation: http://www.dot.state.mn.us/floodmitigation/
	In a two-year period after light-rail service began, the number of low-wage jobs reachable within 30 minutes of transit travel jumped by 14,000 I nlight-rail station areas and 4,000 in areas with direct rail-bus connections. Along the proposed Green Line Extension, for example, UnitedHealth Group is building a 70-acre campus for 6,700 employees in Eden Prairie near a planned LRT station.	University of Minnesota. (2013, September). *Transforming Community: Transitway Impacts Research Program Research Synthesis* . Retrieved July 2, 2014, from http://www.cts.umn.edu/Publications/researchsummaries/documents/TIRP_synthesis.pdf
	The Metropolitan Council predicts the seven-county metro region will add 800,000-plus people by 2040.	Metropolitan Council. (2014, February). *Metro Stats: A Growing and Changing Twin Cities Region: Regional Forecast to 2040.* Retrieved July 2, 2014, from http://metrocouncil.org/Data-and-Maps/Publications-And-Resources/MetroStats/Census-and-Population/Growing-and-Changing-A-Regional-Forecast-to-2040.aspx
Agriculture		
	In Minnesota, agriculture and related businesses generate approximately $75 billion per year for our economy and employ nearly 350,000 people.	Ye, S. (2010). *Economic Impact of Minnesota's Agricultural Industry.* Retrieved July 2, 2014, from Minnesota Department of Agriculture : http://www.mda.state.mn.us/food/business/~/media/Files/food/business/economics/econimpact-mnagindustry.ashx
	12,600 jobs and $5 billion: Total economic output and jobs, respectively, from Minnesota's ethanol industry in 2011	Ye, S. (2012). *Minnesota Ethanol Industry.* Retrieved July 3, 2014, from Minnesota Department of Agriculture: http://www.ethanol.org/pdf/contentmgmt/plantsreport.pdf
	10%: The amount of corn-based ethanol Minnesotans use instead of gasoline.	Minnesota Department of Agriculture. (2013). *Ethanol Program* . Retrieved June 25, 2014, from http://www.mda.state.mn.us/renewable/ethanol.aspx
	In 2011, Minnesota's exported 880 million gallons, or 79%, of the ethanol it produced.	Ye, S. (2012). *Minnesota Ethanol Industry.* Retrieved July 2, 2014, from Minnesota Department of Agriculture: http://www.ethanol.org/pdf/contentmgmt/plantsreport.pdf
	Minnesota's current biofuels mandates for ethanol and biodiesel, including the increased biodiesel mandate effective July 1, are projected to reduce CO2 emissions by nearly 874,000 metric tons,	Kevin Hennessy, Bioenergy Manager, Minnesota Department of Agriculture.
	Minnesota's current biofuels mandates for ethanol and biodiesel, including the increased biodiesel mandate effective July 1, are projected to reduce CO2 emissions by nearly 874,000 metric tons, the equivalent of taking 188,000 cars off the road each year.	*Greenhouse Gas Equivalencies Calculator* . (n.d.). Retrieved July 2, 2014, from U.S. Environmental Protection Agency : http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results
	By 2015, Minnesota aims to transition 14% of our gasoline to biofuels. (By 2025, we are striving for 30% in biofuels.)	Petroleum Replacement Promotion, Minn. Stat. §§ 239.7911 (2013).
	Minnesota was the first state to mandate use of ethanol in its fuel supply. In doing so, the state moved from sub-standard air quality to achievement of the Clean Air Act standard by the mid-90s.	*Ethanol Program.* (n.d.). Retrieved July 2, 2014, from Minnesota Department of Agriculture: http://www.mda.state.mn.us/renewable/ethanol.aspx
	In a retrofitted ethanol plant in Luverne, GEVO, a renewable chemicals and advanced biofuels company, produces isobutanol. With, 30% more energy content than conventional biofuels, isobutanol already is used as jet fuel in army helicopters and as a replacement for fossil-fuel based chemicals for making plastics, rubber, textiles, paint solvents and more.	Lane, J. (2014, February 16). *Gevo: Biofuels Digest's 2014 5-Minute Guide.* Retrieved July 2, 2014 , from Biofuels Digest: http://www.biofuelsdigest.com/bdigest/2014/02/16/gevo-biofuels-digests-2014-5-minute-guide/
	The SMSC is exploring burning native prairie plants in Koda's facility, which could drive conversion of less-productive cropland to grassland cover and energy crop production; reduce agricultural run-off; and create wildlife habitat.	For more information on this: Koda Energy Facts. (n.d.). Retrieved July 3, 2014, from Koda Energy, LLC: http://www.kodaenergy.com/about-us/facts

	Minnesota Ag Water Quality Certification Program - piloted in four watersheds touching Olmsted, Wabasha, Winona, Stearns, Jackson, Martin, Faribault, Wilkin and Otter Tail counties—could become a national model for other parts of the country.	*Minnesota Agricultural Water Quality Certification Program* . (n.d.). Retrieved July 3, 2014, from Minnesota Department of Agriculture: http://www.mda.state.mn.us/awqcp
	Fertilizing crops with a precise amount at the right time, with the right techniques, keeps nutrients in the soil and lowers nitrous oxide emissions.	For more information: Beene, M., Krauter, C., Goorahoo, D., & Roberts, B. (n.d.). *Ammonia Emissions Related to Fertilizers on Field Crops Using Precision Application Practices in the Central Valley of California* . Retrieved July 3, 2014, from EPA.gov: http://www.epa.gov/ttnchie1/conference/ei13/ammonia/beene.pdf
	Cover crops improve soil fertility, hold nutrients for the next crop, help sustain ecosystems for wildlife, and improve the land's ability to absorb carbon.	For more information: Hoorman, J. J. (n.d.). *Fact Sheet Agriculture and Natural Resources: Using Cover Crops to Improve Soil and Water Quality* . Retrieved July 3, 2014, from The Ohio State University Extension: http://www.mccc.msu.edu/states/Ohio/OH_CoverCrops_to_Improve_Soi&Water_Quality.pdf
	Ian Cunningham, a fourth-generation farmer in Pipestone, plants cover crops and tills his land less to increase his soil's health and the likelihood cash crops will be more profitable. A mix of annual grasses, broadleaves and winter cereals, grown between corn and soybean crop seasons, also reduces storm water run-off and helps the soil retain moisture, especially during dry periods. After harvest, Cunningham's cattle graze cover crops and crop residue, such as cornstalks, reducing feed costs and naturally fertilizing the soil.	Cunningham, I. was interviewed June, 2014 by Liz Otto of the Haberman Firm in Minneapolis.
	Years of heavy rains and flash flooding near Featherstone Farms in Rushford caused owner Jack Hedin to consider the future of agriculture, climate change and how he could reduce his 250-acre farm's energy use and increase its efficiency. With financial assistance from MDA, customers and friends, Hedin installed a 38-kilowatt photovoltaic array on a shed roof, which powers about half of his farm's operations.	For more information: Advocacy & Sustainability - From our farm to your table. (n.d.). Retrieved July 3, 2014, from Featherstone Farm: http://featherstonefarm.com/advocacy--sustainability.html
	Between 2007 and 2012, higher crop prices, increased land values and fewer federal conservation incentives encouraged conversion of about one million acres of Minnesota conservation and pasture land to row crops	Minnesota Department of Natural Resources; Minnesota Department of Agriculture
	The University of Minnesota's West Central Research and Outreach Center in Morris has launched a process that takes energy from wind, converts it to hydrogen, and then to ammonia that can be used as fertilizer on surrounding farmlands.	For more information: *Winds of change* . (2013, November 5). Retrieved July 3, 2014, from University of Minnesota: http://discover.umn.edu/news/environment/wind-power-helps-make-agriculture-more-sustainable
Natural Resources		
	Minnesota's lakes and rivers, towering pines, rolling prairies and wetlands are iconic. But these trees, waters and lands also are an important part of our economy, home to wildlife and where we go for outdoor recreation. They also contribute to the big climate picture: America's forests, grasslands and wetlands absorb about 40% of our greenhouse gases.	*Climate Change and Renewable Energy: Management Foundations.* (2011, August). Retrieved July 3, 2014, from Minnesota Department of Natural Resources: http://files.dnr.state.mn.us/aboutdnr/reports/conservationagenda/crest-ccref.pdf
	Minnesota is known as the "Land of 10,000 Lakes," but our surface water resource actually includes 11,842 lakes greater than 10 acres and 63,000 miles of rivers and streams.	*Lakes, rivers, and wetlands facts.* (n.d.). Retrieved July 3, 2014, from Minnesota Department of Natural Resources: http://www.dnr.state.mn.us/faq/mnfacts/water.html
	Minnesota's peatlands are estimated to store the equivalent of about 15 billion metric tons of carbon dioxide.	Anderson et. al. (2008, February). *The Potential for Terrestrial Carbon Sequestration in Minnesota.* Retrieved July 2, 2014, from http://files.dnr.state.mn.us/aboutdnr/reports/carbon2008.pdf
	Minnesota's forests store the equivalent of about 5.8 billion metric tons of carbon dioxide. In recent years, the carbon stored in our forest has grown substantially.	Anderson et. al. (2008, February). *The Potential for Terrestrial Carbon Sequestration in Minnesota.* Retrieved July 2, 2014, from http://files.dnr.state.mn.us/aboutdnr/reports/carbon2008.pdf
	In one year, an acre of mature trees absorbs the amount of carbon dioxide produced when you drive your car 2,700 miles.	According to DNR calculations, on average, an acre of DNR-administered forestland removes 1.14 metric tons of CO2 from the atmosphere per year. Using EPA's estimate of CO2e emitted per mile driven (0.00042 metric tons per mile; http://www.epa.gov/cleanenergy/energy-resources/refs.html) the average acre of DNR-administered forestland removes the CO2 equivalent of about 2,700 vehicle miles driven.
	The DNR manages more than 3.5 million acres of state forestland with sustainable management practices that improve carbon retention, soil quality and habitats.	*North-4 Subsections: St. Louis Moraines, Tamarack Lowlands, Nashwauk Uplands, and Littlefork-Vermilion Uplands.* (n.d.). Retrieved July 3, 2014, from Minnesota Department of Natural Resources: http://www.dnr.state.mn.us/forestry/subsection/north4/description.html
	Minnesota Forests for the Future Program uses state, federal and private dollars to protect large blocks of private forestland that could instead be converted to other land uses. These easements protect our forests' carbon storing capacity and conserve timber-related jobs; increase public access for recreation; and build our resiliency to climate change. Continuous forests speed recovery from wildfires, floods and droughts, and preserve animal and plant habitats.	*Minnesota Forests for the Future.* (2008, April). Retrieved July 3, 2014, from Minnesota Department of Natural Resources: http://files.dnr.state.mn.us/assistance/backyard/forestlegacy/forestsfortheFutureReport_2008.pdf
	The Upper Mississippi Forest Project protects more than 187,000 acres of northern forests; more than 60,000 acres of wetlands; and 280 miles of shoreline. A working forest, the property supplies 17 manufacturing facilities supporting more than 3,200 families. Combined with adjacent public forestlands, the project connects more than 4,000 square miles of uninterrupted habitat.	Department of Natural Resources: http://www.dnr.state.mn.us/forestlegacy/uppermiss_UPM/benefits.html
	Community tree gravel beds—irrigated boxes filled with gravel—hold bare root trees for three to six months. The trees develop a dense network of roots, increasing chances they will survive once planted and thrive for generations. More than 25 Minnesota communities use gravel-bed systems, from Hendricks (pop. 700) to Rochester. Building on its own success, the Sherburne County Soil and Water Conservation District established a tree gravel bed for six communities in the county to share.	Busiahn, J., & Peterson, S. (2013). *All You Need to Know About Community Gravel Beds.* Retrieved July 2, 2014, from University of Minnesota, Department of Forest Resources: http://trees.umn.edu/files/2013/11/All-You-Need-to-Know-About-Community-Gravel-Beds-2013-edition.pdf
	One large tree provides almost $4,000 in environmental and other benefits over its lifetime. Here are just a few: Trees near buildings can reduce the demand for heating and air conditioning. Tree-filled neighborhoods report lower levels of domestic violence, are safer and more sociable, and reduce stress.	U.S. Department of Agriculture; U.S. Forest Service; Pacific Southwest Research Station. (2011, May). *Trees Pay Us Back in the Midwest Region* . Retrieved July 3, 2014, from http://www.fs.fed.us/psw/programs/uesd/uep/products/18/808uesd_uep_tpub_Midwest.pdf
	Our groundwater resource includes several aquifers that support about 400,000 drinking water wells.	*News Release: Private well owners urged to have their water tested.* (2012, March 14). Retrieved July 3, 2014, from Minnesota Department of Health: http://www.health.state.mn.us/news/pressrel/2012/wells031412.html

	One inch of rain falling on a one-acre parking lot (about the size of a football field) generates enough storm water runoff to fill three 9,000-gallon semi-tanker trucks.	Mark Lindquist, Energy/Biofuels Program Manager, Minnesota Department of Natural Resources
	55 rain gardens, 6,733 square feet of permeable pavers, 375 trees, and one decorative 5,700-gallon cistern built to catch storm water greet visitors. Together, they help intercept 20 million gallons of runoff per year—before it reaches nearby Kohlman Lake.	Holt, E., & Kumka, M. (n.d.). Maplewood Mall Stormwater Retrofit Project. Retrieved July 3, 2014, from http://www.minnesotaikes.org/Summit/Summit-2013/Maplewood%20Mall_MEK2.pdf
	Facing well levels nearly 12 feet below the 16-year average in Worthington in 2014, the gas station decided to stop selling its top-two car washes to help conserve water. The moved saved about 30% of the station's water usage, while only reducing revenue slightly.	Hain, S. (n.d.). Public Utilities Director, City of Worthington. (J. Sehl, Interviewer)
	With climate change, Prairie Pothole Region wetlands could shrink and shift optimal waterfowl breeding conditions from Canadian prairies and the Dakotas into western Minnesota. Without major restoration efforts to replace drained wetlands there, ideal habitat for ducks could gradually disappear.	(2013). Adapting to Climate Change in Minnesota: 2013 Report of the Interagency Climate Adaptation Team. Minnesota Pollution Control Agency.
	Funded by the amendment, the Minnesota Prairie Plan balances the needs of prairie-wetland ecosystems with working farmland, including cropland and pastureland.	*Minnesota Prairie Conservation Plan.* (n.d.). Retrieved July 3, 2014, from Minnesota Department of Natural Resources: http://files.dnr.state.mn.us/eco/mcbs/mn_prairie_conservation_plan.pdf
Waste		
	Managing our trash and wastewater—the water we use for washing, flushing and manufacturing—emitted nearly 2.3 million tons of greenhouse gases in 2010.	Claflin, A. (n.d.). Greenhouse Gas Emissions Reduction: Biennial Report to the Minnesota Legislature January 2013. Retrieved June 2, 2014, from http://www.pca.state.mn.us/index.php/topics/climate-change/climate-change-in-minnesota/report-on-greenhouse-gas-emissions-in-minnesota.html
	Most waste-related emissions are from methane-producing landfills.	Waste: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012. (2014, April). Retrieved July 3, 2014, from U.S. Environmental Protection Agency: http://epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2014-Chapter-8-Waste.pdf
	In 2011, about 2.1 million tons of greenhouse gas emissions were captured, a roughly 50% increase from 2000.	Minnesota Pollution Control Agency
	More than 46,000 full-time workers are employed by Minnesota businesses that deal in rented, repaired or reused goods. The businesses generate $1 billion wages and $4 billion in sales annually.	2011 Solid Waste Policy Report. (2012, June). Retrieved July 3, 2014, from Minnesota Pollution Control Agency: http://www.pca.state.mn.us/index.php/view-document.html?gid=17104
	Minnesota's value-added recycling manufacturers generated approximately $8.5 billion in total economic activity, including sales, compensation and tax revenue, and supported nearly 37,000 jobs in 2011.	Vee, A. (2012, December). Report on 2011 SCORE Programs. Retrieved July 2, 2014, from Minnesota Pollution Control Agency: http://www.pca.state.mn.us/index.php/view-document.html?gid=18888
	Between 2004 to 2011, nearly 6,200 direct jobs were created by Minnesota recycling manufacturers —companies that make products from recycled materials and their suppliers.	Recycling supports our economy. (n.d.). Retrieved July 3, 2014, from Minnesota Pollution Control Agency: http://www.pca.state.mn.us/index.php/about-mpca/mpca-news/featured-stories/recycling-supports-our-economy.html
	Gerdau Ameristeel, South St. Paul, is one of 200 Minnesota recycling manufacturers who prefer locally sourced recyclables for their products. The company uses steel cans from your curbside collection to make steel rebar, 7 million pounds of which was used to help rebuild the 35W bridge.	Recycling info for: Steel Food Cans/Tin Cans. (n.d.). Retrieved July 3, 2014, from Integrated Waste Management Company - Anoka County, MN: http://www.anokacounty.org/v2_dept/iwm/show-item-info-iframe.aspx?id=130
	Minnesota recycling programs collected material worth almost $700 million in 2010	Minnesota Pollution Control Agency
	Minnesotans discarded 1 million tons of recyclables worth $210 million and spent $200 million to dispose of it.	Source scenarios calculated using Regional Economic Models, Inc. (REMI) Minnesota Forecasting and Simulation Model, March 2011, Minnesota Pollution Control Agency/Wayne Gjerde
	Minnesotans send 30% of their solid waste to landfills. More than 70% of landfill-waste could be recycled or composted, conserving resources and preserving landfill capacity	For more information: http://www.pca.state.mn.us/index.php/data/score/recycling-in-minnesota-the-score-report.html
	Full Circle Organics Recycling Cooperative and Dodge County collect food waste from grocery stores and restaurants, combining it with yard waste to produce garden and landscape compost. In a two-year pilot, Erdmans County Market in Kasson diverted 56 tons of food trimmings and waste. (That's 28 tons of rich soil for gardeners and landscapers.)	Pollution Control Agency, MN State Fair Ecoexperience Energy Stories 2013
	Since switching to single-sort recycling in 2013, Minneapolis experienced a 50% increase in the volume of recyclables collected in about one year.	Hennepin County Public Works Environmental Services. (2014, April). Recycling Progress Report. Retrieved July 3, 2014, from http://www.hennepin.us/~/media/hennepinus/your-government/projects-initiatives/documents/RecyclingProgressReport.pdf
	Winona County has added curbside collection countywide, both single-sort and expanded-plastic collection.	2011 Solid Waste Policy Report. (2012, June). Retrieved July 3, 2014, from Minnesota Pollution Control Agency: http://www.pca.state.mn.us/index.php/view-document.html?gid=17104
	Ninety-six percent of residents are participating in the new program.	Resolution #2013 - 27. (n.d.). Retrieved July 3, 2014, from Minnesota Legislative Auditor: http://www.auditor.state.mn.us/Other/councils/PerformanceMeasures/Counties/Winona2013ResolutionResults.pdf
	As landfill-waste decomposes, it produces methane, a greenhouse gas with global warming potential more than 20 times as potent carbon dioxide.	Climate Change and the Life Cycle of Stuff. (n.d.). Retrieved July 3, 2014, from U.S. Environmental Protection Agency: http://epa.gov/climatechange/climate-change-waste/life-cycle-diagram.html#endoflife and http://epa.gov/climatechange/ghgemissions/gases/ch4.html
	The Crow Wing County Landfill in Brainerd collects its landfill gas and uses a portion of it to heat a maintenance building, replacing natural gas. The remaining landfill gas is flared, or destroyed.	Crow Wing County Landfill. (n.d.). Retrieved July 3, 2014, from TerraPass: http://www.terrapass.com/our-projects/crow-wing-county-landfill/
	Minnesota has 21 landfills in operation, 9 of which employ gas collection and recovery systems. Statewide, 109 closed landfills (full and monitored for pollution) participate in the voluntary Closed Landfill Program. A number of these landfills captured and prevented a combined 28.4 million pounds of methane gas from entering the atmosphere in FY2012.	Closed Landfill Program 2012 Report to the Legislature. (2012, December). Retrieved July 3, 2014, from Minnesota Pollution Control Agency: http://www.pca.state.mn.us/index.php/view-document.html?gid=18841
	Electricity accounts for 25% to 40% of a wastewater utility's operating budget.	Energy Efficiency in Water and Wastewater Facilities. (2013). Retrieved July 3, 2014, from U.S. Environmental Protection Agency: http://www.epa.gov/statelocalclimate/documents/pdf/wastewater-guide.pdf
	Metropolitan Council Environmental Services saves $600,000 annually after switching Blue Lake, Minnesota's fourth-largest wastewater treatment plant, from natural gas to renewable "biogas" generated by anaerobic digesters. The Shakopee plant produces biogas equivalent to the natural gas usage of nearly 820 Minnesota homes. Additionally, 10% of Blue Lake's power will come from on-site	New Biogas System at Blue Lake Plant Produces Green Energy, For Green Savings - the Color of Money. (2013, July 15). Retrieved July 3, 2014, from Metropolitan Council: http://metrocouncil.org/News-Events/Wastewater-Water/Newsletters/New-biogas-system-at-Blue-Lake-plant-produces-gree.aspx
	Habitat for Humanity ReStores help reduce landfill-waste by offering the public a way to donate and buy gently-used building materials, appliances and furniture. Twelve Minnesota stores sell goods, using proceeds to build nearby homes.	ReStore Search Results. (n.d.). Retrieved July 3, 2014, from Habitat for Humanity: http://www.habitat.org/restores/search?zip=&area=MN&province=