



Climate-Smart Municipalities: Modeling Integrated Energy Communities for the 21st Century

A cooperation between Minnesota & NRW

September 29 – October 6, 2018
Duluth, Elk River, Minneapolis, Mankato,
Morris, Rochester, Warren, White Bear Lake

NRW DELEGATION:

- Hans-Juergen Badziura** head, department of environmental protection and green space, City of Lüdenscheid
- Ulrike Badziura** head, department of environmental and climate protection, City of Iserlohn
- Dr. Bernd Bartunek** professor of mechanical engineering and director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences
- Susanne Engelmann** administrative project coordinator, International Office, University of Siegen
- Sven Gotthal** city council member, City of Münster
- Paul Hartmann** climate protection officer, City of Siegen
- Gerhard Joksch** honorary mayor of the City of Münster; member of the Münster City Council
- Henner Klaas** managing director, Günter Klaas Fensterbau GmbH; city council member, City of Siegen
- Marcus Müller** deputy head, department of municipal and regional climate protection, EnergyAgency.NRW
- Carsten Peters** energy consultant, City of Arnsberg
- Wilfried Roos** mayor, City of Saerbeck
- Max Schüssler** graduate student, mechanical engineering, University of Siegen
- Guido Wallraven** technical director, City of Saerbeck
- Thomas Werner** head, department of building management, City of Münster
- Dr. Christof Wetter** professor of environmental technology, faculty of energy, buildings and environment, FH Münster University of Applied Sciences



Welcome!

Welcome to another round of exchange and learning in the Climate-Smart Municipalities program—this time once again in Minnesota! The program is a unique multi-partner collaboration between Minnesota and Germany, and part of the German government's renowned Transatlantikprogramm. "Climate-Smart Municipalities: Modeling Integrated Energy Communities for the 21st Century" brings together stakeholders and leaders in local and state government, politics, business, the nonprofit sector, academia, and the public to learn from each other and to accelerate the transition to a more sustainable, efficient and climate-friendly future at the local level.

Our program tag line reads "Together, we are stronger!" It captures the experience over the past two and a half years of everyone involved in this remarkable undertaking. Together, we command deeper expertise, are able to look at things from a much broader range of perspectives, and create better and more imaginative solutions. Witness the new opportunity for consumers from across Minnesota to secure reduced-rate loans for solar roof installations through the MN credit unions' CUGreen program—inspired by CSM. Witness the joy of citizens in our communities at discovering new ways of doing and thinking and becoming part of a larger community that cares for each other. Each of you through your work adds to that. Together, we are stronger.

Before sharing the exciting agenda for our seven days in communities across Minnesota, I would like to take a moment to thank our German partners for what you have been contributing to this unusual cohort of cities and partners. You have invited us Minnesotans to step right into your advanced efforts to create more sustainable cities. You have shared your plans, explained why longterm ambitious goals matter today, and allowed us to see that even in Germany each city is different and needs its own tailored solutions. You also have had major impact in ways that would be hard to see from afar: you have helped our Minnesota cohort come together as a group and grow more ambitious. Your friendship has created measurable change in Minnesota, from new sustainability positions in municipal government to an inaugural roof top solar plant atop Minnesota's Senate Building. For all those reasons and more, we thank you.

The week's agenda pursues two goals. We want to move to a deeper joint international project stage. Hence the two days of



interactive workshops on Monday and Friday. We also want to connect more thoroughly with the business sector and sustainability innovation. Hence a full day of exchange in Faribault to visit the "Silicon Valley of Glass" and see new forms of indoor farming at the invitation of Senator Jasinski. A special highlight of the week is a signing ceremony that celebrates and will connect even more closely the sustainability efforts of the City of Morris and the City of Saerbeck, Germany.

The week's program again is a massive collective effort. I thank all partners for helping create an inspiring series of activities that demonstrate how much the public and private sectors can do in partnership.

Finally, a big shout-out to our Minnesota and German funders. Your joint support enables the University of Minnesota Institute on the Environment to provide this amazing opportunity to Minnesotans and Germans.

Wishing all of us an inspiring and productive week,

Dr. Sabine Engel
director of international partnerships



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—Leading the way toward a future in which people and the environment prosper together—

A Cooperation between Minnesota and Germany: LIST OF PARTNERS

Germany's Foreign Office
Germany's Federal Ministry for Economic Affairs and Energy
North Rhine-Westphalia Ministry for Environment, Agriculture,
Nature and Consumer Protection (MULNV)
North Rhine-Westphalia Ministry of Economic Affairs,
Innovation, Digitalization, and Energy (MWIDE)
Energieagentur.NRW
Minnesota Environmental Quality Board
Minnesota Department of Agriculture
Minnesota Pollution Control Agency
Minnesota Department of Commerce
Minnesota Department of Administration

The Great Plains Institute
Ever-Green Energy
Minnesota Credit Union Network
Affinity Plus Federal Credit Union
Hiway Federal Credit Union
University of Minnesota, Natural Resources Research Institute

and 10 municipalities:

City of Saerbeck	City of Morris
City of Siegen	City of Duluth
City of Münster	City of Rochester
City of Iserlohn	City of Elk River
City of Arnsberg	City of Warren



Profiles of NRW technical exchange partner municipalities

Arnsberg

The city of Arnsberg is located in Hochsauerland County and is the seat of government for the administrative region Südwestfalen. The city is on the Ruhr River, covers an area of about 74 square miles, and has a population of about 73,000. The city has several neighborhood centers (poly-centered city) that cluster in a ribbon along the river. Major employers are small and medium sized enterprises in the manufacturing sector: metal processing, electronics, wood and paper-based businesses, printing and polymer processing. An important industry specialty is the development and production of lamps. Neheim-Hüsten was known in former times as “the city of lamps.” The sector currently is gaining new weight because of new lighting technologies and LED. As in other communities, demographic changes are becoming more pronounced. The loss of population requires that future urban development will need to focus on developing existing environments. Arnsberg has a city bus system and three train stations that connect it beyond the region. There are five interstate exits along three major national traffic axes. A small airport accommodates one- and two-engine planes. The city offers cultural and touristic activities. In addition to the Ruhr River, the city is shaped by its relatively large forested area, which covers 62% of the area.

Regarding municipal energy and climate policy: In 2011, the city created a master plan for integrated climate protection, which provides a comprehensive city-wide frame for additional climate policy-making. The city has its own municipal utilities which, together with the municipal utilities of the neighboring city of Soest, also provide energy services. In 2013, a thermal aerial mapping of the city's built environment was done to help homeowners identify heat leaks on roofs that can be remedied through better insulation. In 2017, the thermal imaging project was resumed as a “multicopter imaging project” in collaboration with the consumer agency NRW. Solar and a geothermal potential cadasters for Hochsauerland County allow home owners to assess the potential benefits of roof top solar panels and shallow ground geothermal heat. Arnsberg is nationally known for its wetlands restoration along rivers. In 2016, Arnsberg received a European Energy Award. It demonstrates the success of energy and climate protection measures. In 2016, the city council committed itself to the “Sustainable Development Goals” of the United Nations’ Agenda 2030.

Iserlohn

Iserlohn has 94,000 inhabitants. It is a medium-sized center on the eastern edge of the Ruhr area. Geographically, the city is located in southwestern Westphalia and the densely wooded Sauerland, and covers an area of about 48 square miles. Iserlohn has a high production share including metal processing, pharmaceutical and chemical production, and waste management. It is also the location of two universities. The city-owned municipal utilities supply a large part of the city center with district heating through a waste incinerator (MHKW). In 2012, the city, together with many local partners, drew up a climate protection master plan, which is currently being implemented. It speaks for the

success of the city in the implementation of energy and climate protection measures, including for the award of the NRW Power to heat model community that the city was awarded the European Energy Award in Gold. The expansion of cogeneration is therefore an important aspect for future climate protection measures. Another focus is electro-mobility. The Europe-wide project “Emobility Works” mobilized a network of partners and developed an action plan for electro-mobility. An innovative charging infrastructure system has created 17 charging points on public land. The city considers the expansion of renewable energies, in particular photovoltaics, to be key to ensure CO₂-neutral electricity at the charging points. The city council is providing an online solar potential cadaster of rooftops to help individuals assess the feasibility of solar energy on their specific rooftops. The municipal utility evaluates each city-owned property on its solar potential. So far, 11 MW of solar energy have been installed. The next phase is to combine all renewable energy generation plants across Iserlohn into a virtual power plant. A Climate Change Adaptation Concept is currently being developed, outlining scenarios for the impact of climate change on the city and precautionary measures needed. In addition, a new project will be implemented in which companies will be encouraged to promote biodiversity on their company premises.

Münster

Münster is an independent city in the northern part of North Rhine-Westphalia and capital of the local government region Münsterland. The city has a population of nearly 310,000, almost 20% of whom are students, and covers an area of about 302km². With a strong economy, Münster is the largest source of employment in the area. Münster is recognized as an outstanding place to learn, work and live and was issued various awards including Europe's finest park (Aasee) in 2009 and Bicycle Capital of Germany (re-awarded each year since 2009). Münster is one of the most active cities in Germany in regards to climate protection. It was named “Germany's Capital for Climate Protection” already in 1997 and again in 2006.

In the future, the city of Münster seeks to continue being a leader: in 2008 the city passed ambitious climate goals resolving to reduce CO₂ emissions by 40% by 2020 (based on 1990 levels) and to cover 20% of the city's energy load through renewable energy. A specific set of actions was formulated as part of the city's climate protection plan “Klimaschutzplan 2020.” In 2017, Münster passed its “Masterplan 100% Klimaschutz,” extending its goals to 50% energy reduction and 95% reduction of greenhouse gas emissions by 2050.. With the 2018 European Energy Award, Münster will meet gold recognition for 5 cycles continuously. The Münsterland was issued the very first EEA label as Energy & Climate Protection Region in 2015.

How will Münster achieve its ambitious climate protection goals? Climate protection is a matter that affects every citizen, whether at home, at work, or in a management role. Everyone can do their part to improve the city's quality of life, for example by getting involved in the project “Bürgerpakt” (citizens' compact) or the project “Alliance for Climate Protection,” which supports

businesses, institutions, associations and nonprofits that pursue energy efficiency projects. The refurbishment of existing building stock presents large opportunities for saving energy. The program has been financially supported by the municipality since 1997.

In order to further develop the role of municipalities and opportunities to foster sustainable economic development, the state-wide working group Agenda 21 NRW e.V. is engaged in the pilot project "Global Sustainable Municipality." The project is supported by the state of North Rhine-Westphalia and Germany's Federal Ministry for Economic Cooperation and Development (BMZ). It provides hands-on support and consulting services to select municipalities in North Rhine-Westphalia as they develop municipal sustainable development strategies with citizen participation in the context of the Sustainable Development Goals. The city of Münster is one of 15 participating cities, towns, and counties. In fall 2017, the project resulted in a resolution on municipal sustainability strategies.

Saerbeck

The climate-smart municipality "Klimakommune Saerbeck" has a population of 7,200 and is located in the heart of the Münsterland area in North Rhine-Westphalia. It has been pursuing climate protection measures and the energy transition (*Energiewende*) for ten years. The municipality today generates more electricity from wind, solar, and biomass than it needs (320% in 2015). The goal is to reach CO₂ neutrality. Saerbeck's bio-energy park, its transparent heating center, and an energy experience trail draw visitors from around the globe. Saerbeck's citizens support the "Saerbeck Way" through financial and non-financial engagement. Education initiatives such as the Saerbeck Energy Worlds—Bio-Energy Park Classroom (*Saerbecker Energiewelten*) transfer the ideas to a young generation. The municipality has received many awards for its engagement, including Germany's sustainability award "Deutscher Nachhaltigkeitspreis." When the community received the designation "NRW Klimakommune der Zukunft" (NRW Climate-Smart Municipality for the Future) in 2009, it gave an important boost to the efforts. In 2018, Saerbeck celebrates the tenth anniversary of its decision to fully embrace renewable

energy and sustainability. Current work includes research on battery storage in collaboration with Applied University of Muenster FH Muenster and electro-mobility.

Siegen

The city of Siegen is located on the Sieg River. It is the economic and cultural center of Siegerland area in the three-state border region between North Rhine-Westphalia, Hesse, and Rhineland-Palatinate. Siegen has a population of 100,257. Its 44 square miles area features a diverse topography with a valley area that has been a home for steel and metal manufacturing industries and hillsides with large forests (51% forested area with 900 foot differences in elevation). The city's economic history was shaped by ore mining and production far into the 20th century. Today the city is a university research and education center with close to 18,500 students.

Siegen has been involved with climate protection since the 1990s when it joined the Climate Alliance and created the first municipal climate protection program. When the city's program was re-endorsed in 2009, climate protection and energy efficiency activities were made a formal part of the administrative structure and appropriate subject matter specialists were hired. In order to reach energy efficiency and quality goals, a 20-year old energy controlling program has been expanded to cover all city administrative departments. In 2011, the nonprofit Energieverein Siegen-Wittgenstein e.V. was founded as a partnership between the public administration and business. It provides information and consulting services on energy and climate protection to the public and has dedicated space and experts. Siegen has created a strong foundation for continuing work on climate protection and climate adaptation: two European Energy Awards (2010 and 2014), several studies and plans regarding climate adaptation (2016 and 2017) and an overarching master plan (2016). In 2015, the City of Siegen won the 2015 German Climate Protection Award (Deutscher Klimaschutzpreis 2015) for its networking with the Energieverein.



Profiles of Minnesota technical exchange partner municipalities

Duluth

Duluth is a seaport city in Minnesota and the county seat of Saint Louis County. Duluth has a population of 86,110 and is the second-largest city on Lake Superior's shores. Situated at the westernmost point of the Great Lakes on the north shore of Lake Superior, Duluth is accessible to oceangoing vessels from the Atlantic Ocean 2,300 miles (3,700 km) away via the Great Lakes Waterway and the Saint Lawrence Seaway. Lake Superior is the world's largest freshwater lake by surface area. Duluth forms a metropolitan area with Superior, Wisconsin, called the Twin Ports. The cities share the Duluth–Superior Harbor and together are the Great Lakes' largest port transporting coal, iron ore (taconite), and grain. Duluth is also a regional hub for education and health care, serving a large segment of northeastern Minnesota and northwestern Wisconsin. It is a tourist destination for the Midwest. The city is named after Daniel Greysolon, Sieur du Lhut, the first known European explorer of the area.

In 2016, Mayor Emily Larson announced to City of Duluth residents, business and the State as a whole, that Duluth will implement an energy reduction plan to revitalize the City's energy fund and invest in excess of \$1,000,000 over ten years. In 2016, \$500,000 were invested in upgrading different city lighting systems to reduce utility costs by more than \$100,000 annually. The savings are being returned to the energy fund in full for five years and reinvested in additional measures. The reinvestment dollars accompanied by rebates from local utilities allow the city to dive into deep energy retrofits creating additional savings while resetting many building system life cycles. This total investment forms the cornerstone of the corporate municipality's efforts to craft a comprehensive strategy and plan for reducing its carbon footprint over the next 30 years. Through the development of a comprehensive capital plan and implementation strategy and by engaging with local, state and international partners, the City hopes to become a leader in sustainable municipal operations and to serve as an example. As a result of the Climate-Smart Municipalities exchange, the City has partnered with the University of Siegen and the University of Minnesota-Duluth to create an intern exchange program.

Elk River

Elk River is located about 35 miles northwest of the Twin Cities of Minneapolis and St. Paul. The city has a population of 24,000 over 44 square miles. Location and an affinity for nature have played a significant role in the growth of this business-friendly community. As a commuter community, city officials have sought out green industries to grow the local workforce and created a Green Transportation Plan for city fleet vehicles, bike and pedestrian infrastructure, and Complete Streets plans addressing boulevard trees, ADA, and other livability aspects. Elk River was designated "Energy City" by the State of Minnesota to serve as a focal point for renewable and efficient energy demonstration, education, and development. Some of the goals to achieve on the way to a Climate Smart Municipality are outlined in the Energy City

10-year Action Plan, which identifies and promotes renewable energy resources. High priority action tasks include:

1. Explore and promote environmentally sustainable mobility initiatives
2. Improve and grow educational Energy City outreach for sustainability efforts
3. Achieve 15% above State/Federal mandates of renewable energy city-wide by 2024

Inspired by the Climate-Smart Municipalities project, Elk River has partnered with the municipal utility to install two public charging stations and to increase education and outreach within the community. In 2017, Elk River hosted Jonas Schulz from Applied University of Muenster, Germany, as an intern to expand and advance the City's environmental education program.

Morris

Morris Morris has a population of 5,400. It is the county seat of Stevens County. The community is surrounded by some of the richest agricultural lands in the country and agribusiness is a major contributor to the local economy. The town is home to the University of Minnesota, Morris (UMM) and U of M West Central Research and Outreach Center—which are part of the University of Minnesota system. The campus has a student population of about 1,900 and is routinely ranked as a "Top 10 Public Liberal Arts College" by U.S. News and World Report and one of "America's Top Colleges" by Forbes. The United States Department of Agriculture's North Central Soil Conservation Research Lab is located on the edge of Morris with research plots throughout the area. Headquartered in Morris, Riverview, LLP is the largest dairy-milking operation in Minnesota and one of the largest in the United States. Also headquartered in Morris is Superior Industries, North America's only combination manufacturer of conveyor systems and related accessories. The company also manufactures storage tanks and products for the fuel and oil industries and concrete products for the road building industries. They employ over 1900 people. Denco II, LLC is an ethanol production plant located in Morris. They produce 95 million liters (25 million gallons) of corn ethanol annually with corn grown in the Morris area. Other large economic contributors include manufacturing, education and healthcare industries. Electricity is provided to Morris by the local investor-owned utility, Ottertail Power Company. Within 3km of Morris you can visit two 1.65 MW wind turbines, biomass gasification, solar PV systems, solar thermal systems, anaerobic digestion, green buildings and more. 70% of the annual electricity used on the UMM campus is provided by wind. In 2015, Morris signed a Climate Protection Partnership Agreement with Saerbeck, Germany. Morris is working with Ottertail Power to begin an LED street lighting project for the entire community. In 2017, the city of Morris was awarded the Minnesota Clean Energy Community Award.

Rochester

Rochester is the county seat of Olmsted County and lies in the southeastern corner of Minnesota. It is the third-largest city in Minnesota and has been frequently recognized by Money Magazine since the 1980s as one of the best places to live in the United States. The estimated population in 2016 was 114,011. The city lies alongside the south fork of the Zumbro River and encompasses approximately 56 square mile area. It has more than 3500 acres of park land and more than 100 miles of paved trails. Rochester enjoys a strong economy with health care as a leading industry. Median household income exceeds state and national median income, at \$70,078. The Mayo Clinic is a global destination for medical care and has been ranked number 1 in the nation. The Clinic has a strong presence in the downtown and contributes to a dense urban core. The City of Rochester recently updated its Comprehensive Plan. It is intended to guide the growth of the community through 2040. Fueled by Destination Medical Center (DMC), growth projections for the City of Rochester include approximately 30,000 new jobs, 50,000 more residents, and 23,000 more housing units by 2040. The comprehensive plan includes a land use plan that lays out desired timing, location, design, and density for future development, redevelopment, or preservation. The comprehensive plan also includes plans for public or community facilities, parks and open spaces, housing, natural resources, transportation, and infrastructure. Land development ordinances along with transportation planning have a direct impact on community energy use and it will be beneficial to learn how German cities manage their land use along with developing efficient transportation systems to reduce greenhouse gas (GHG) emissions. The City has developed an Energy Action Plan to reduce energy consumption and GHG emissions and is working with a part time energy and sustainability coordinator to improve efficiency in public buildings. The City, through its municipal utility, also has developed a Community Solar Program, offering residents the ability to purchase the output from a large utility grade solar garden and offset their residential use with solar energy. In 2017, 210 residents subscribed to 861 panels. The City is committed to the Minnesota Next Generation

Energy Act of 2007 and its goals of reducing annual energy use by 1.5%, expanding renewable energy to 25% by 2025, and reducing state-wide GHG emissions by minus 30% by 2025 and minus 80% by 2050.

Warren

Warren is a small rural community of 1,586 residents located in the upper northwest corner of Minnesota, on the edge of the Red River Valley in a predominantly agricultural region. The main crops are wheat, sugar beets, and soybeans. A large portion of the residents in Warren commute to work to one of three regional centers about 30 miles away. Warren is seeing a growth in young families moving to the community for a smaller school district. The city has adapted to this change in demographics by incorporating pedestrian paths and focusing on recreational offerings. For climate protection measures, Warren has made an effort to install LED street lights with new street projects. Warren encourages residents to install LED light bulbs and participates in a rebate program. There have also been a number of projects in which insulation was boosted in buildings to cut natural gas usage for heating. Currently, a recreational center is being built that will also be a Renewable Energy Education Module. The city of Warren is pursuing financing to install PV panels on the facility. The city of Warren is a Step 3 GreenStep City. The city continues to strive to become more climate conscious in its everyday delivery of services to residents. In 2017, Warren City Hall removed all plastic and styrofoam from the building to become a role model for other entities to reduce waste. Inspired by their Climate-Smart Municipalities partners in Arnsberg, the City of Warren is currently completing a project that uses drone technology to produce infrared scans of all the buildings in the city to assist residents in reducing their energy consumption. Coupled with this project is an effort to develop a finance program that will help residents complete energy saving projects in their homes using the anticipated energy savings. The city of Warren received a 2018 Clean Energy Community Award for its planning efforts.



Saturday, September 29 – Arrival Day

Individual arrivals to Minneapolis

check into TownPlace Suites Minneapolis Downtown/North Loop. Hotel group name: U of M Group

TownPlace Suites Downtown Minneapolis/North Loop

525 N 2nd St, Minneapolis, MN 55401

Phone: +1 (612)340-1000

4:00 PM meet in hotel lobby to take light rail GREEN LINE to attend MN United FC vs. Philadelphia soccer match at TCF Bank Stadium (*get off at East Bank station—we first want to meet at a bar to connect as a group*)
NOTE: bag policy for TCF Bank Stadium
Only small clutch purses, and clear totes allowed in the stadium. Prohibited items include big purses, backpacks, mesh bags.

TCF Bank Stadium

420 23rd Ave. SE, Minneapolis, MN 55455

Phone: +1 (612) 625-5000

4:45-5:30 PM informal pre-game get-together at The Beacon Public House restaurant. Receive tickets from Alex Jackson. (mobile: +1-218-428-6140)

Beacon Public House

615 Washington Ave. SE, Minneapolis, MN 55414

Phone: +1 (612) 362-6666

6:30-8:30 PM MN United FC vs. Philadelphia; group is seated in private suite, sponsored by MN United FC

Take public transit back to hotel after game

Sunday, September 30, 2018 – Cultural Day: MN Apple Research, Lake Minnetonka, Minneapolis St. Anthony Main/Falls

Day's Hosts: **David Senjem**, MN State Senator
Dr. Sabine Engel, director of international partnerships, Institute on the Environment, U of MN
[mobile: +1-612-501-6504]

9:00 AM *meet in hotel lobby*

9:30 AM Northfield Lines group bus departs to the University of Minnesota Horticultural Research Center
[bus driver: Larry Pluta; mobile +1-(651)-230-2490]

University of Minnesota Horticultural Research Center

7485 Rolling Acres Rd, Victoria, MN 55386

Phone: +1 (952) 443-1400

10:30AM-12:00PM research conversation and guided tour of apple orchard "Advanced Apple Research at the University of Minnesota" with **Ashley Powell**, graduate student, department of horticultural science, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota

12:15PM *board bus & transfer to Excelsior*

1:00-2:00PM group light lunch at dock restaurant. Wharf Fest will be going on (light food will need to be pre-ordered at 11:00).

Maynards Restaurant, Excelsior

685 Excelsior Blvd, Excelsior MN 55331

Phone: +1 (952) 470-1800

2:00 PM depart restaurant & walk to Excelsior Dock boat stop

Excelsior Dock: 37 Water Street, Excelsior, MN 55331

2:20-3:20 PM Fall Color boat ride on historic streetcar boat Minnehaha

3:45 PM board group bus for transfer back to hotel; arrive at hotel at 4:30 PM

6:15-8:45 PM informal group dinner with guests at Wilde Café & Spirits in the Parlor Room

Wilde Cafe & Spirits
65 SE Main St, Minneapolis, MN 55414
Phone: (612) 331-4544

Monday, October 1, 2018 - Minneapolis

Day's Host: University of Minnesota, Institute on the Environment
Dr. Sabine Engel, director of international partnerships, IonE, U of MN
[mobile: +1-612-501-6504]

8:10 AM leave hotel to take GREEN LINE public transit to the U of M- St. Paul Campus; get off at Stadium Village stop and board Campus Connector Bus 121 to St. Paul campus (see map in your folder); get off at corner of Gortner Ave. and Buford. Learning and Environmental Sciences Building is on south-east corner.

Institute on the Environment
University of Minnesota
Learning and Environmental Sciences Building
1954 Buford Ave., **room LES-R380**
St. Paul, MN

9:00 AM-2:00 PM CSM Minnesota and NRW Partners Workshop, Pt. 1

facilitators: **Marcus Müller**, deputy head, department of municipal and regional climate protection, EnergyAgency.NRW
Will Seuffert, executive director, Minnesota Environmental Quality Board

9:00-9:15 Welcome, introductions, plans for day

9:15-9:30 shameless self-promotion, round #1
60-second plugs on exciting things to share (professional/personal/informational)

9:30-9:50 review of results from Iserlohn workshop--**Marcus Müller**

9:50-11:00 Sharing segment based on 4 slides prepared for workshop:

What theme/topic is your community/org most focused on going forward and what is the main hurdle you are trying to find a solution for?
[each city/org presents ONE slide to group; 3 minutes per slot; use final minute to point out main hurdle you are trying to find a solution for]

11:00-11:15 coffee break

11:15-11:30 short input presentation "E-Mobility: What Research Tells Us"

Dr. Bernd Bartunek, director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences

11:30-12:15 4 parallel group work tables—Round #1

* e-mobility

* efficient buildings

* renewables

* community education

12:15-12:45	reports back to full group on solutions discussion and potential joint group project/activity
12:45-1:10	<i>lunch (sandwiches & salad)</i>
1:10-1:50	4 parallel group work tables—Round #2 * e-mobility * renewables * efficient buildings * community education
1:50-2:00	plenary and feedback
2:00	<i>workshop ends</i>
2:15-5:15 PM	free time
5:10 PM	<i>meet in hotel lobby</i>
5:15 PM	<i>leave hotel and take public transit GREEN LINE to U of M campus, East Bank station</i>

University of Minnesota
McNamara Alumni Center, Minnesota Room
200 Oak St. SE, Minneapolis, MN 55455
Phone: (612) 624-9831

6:00-9:30 PM **“Climate-Smart Municipalities: Together We Are Smarter!”**— an interactive evening of sharing strategies and insights with 100 guests in honor of the NRW Delegation (*see page 14 for list of attendees*)

speakers include: **Dr. Jessica Hellmann**, director, Institute on the Environment
Barbara Muller, honorary consul, Federal Republic of Germany
Commissioner Jessica Looman, MN Department of Commerce
Commissioner Matt Massman, MN Department of Administration

highlight: signing ceremony for new sustainability and climate partnership between Morris, MN and Saerbeck, Germany

9:45 PM *take public transit GREEN LINE back to hotel*

Tuesday, October 2, 2018 – Individual Partner City Day 1:

morning: Delegation members depart to partner cities to work on their specific joint city projects

City of Duluth hosts City of Siegen
City of Elk River hosts City of Iserlohn
City of Morris hosts City of Saerbeck
City of Rochester hosts Stadt Münster
City of Warren hosts Stadt Arnsberg

Hotel Duluth Group:
Canal Park Lodge Duluth
250 Canal Park Dr, Duluth, MN 55802
Phone: (218) 279-6000

Hotel Morris Group:
GrandStay Hotel
East 5, MN-28, Morris, MN
Phone: (320) 585-4000

Hotel Rochester Group:
Brentwood Inn
123 4th Ave. NW, Rochester, MN 55901
Phone: (507) 288-8011

Tuesday, October 2, 2018 – Agency Partner Program: NRW & MN Compare Solutions in Research and Practice:

Day's Hosts: **Dr. Sabine Engel**, director of international partnerships, IonE, U of MN [mobile: +1-612-501-6504]

NRW Delegation members in Minneapolis:

Dr. Bernd Bartunek, director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences
Marcus Müller, deputy head, department of municipal and regional climate protection, EnergyAgency.NRW

8:40 AM *pick up at hotel by Sabine Engel; drive to U of M engine research lab*

Thomas E. Murphy Engine Research Lab
University of Minnesota
2811 Weeks Avenue SE, Minneapolis, MN 55414

9:15-10:45 AM research conversation Dr. Bartunek with **Dr. Will Northrop**, McKnight Land Grant Professor and director, U of M Murphy Engine Research Lab and tour of lab

11:30 AM-12:30 PM lunch at McNamara Alumni Center, D'Amico Café

12:40 PM *transfer by car for Dr. Bartunek to Metro Transit's Heywood campus*

Metro Transit's Heywood campus
560 Sixth Ave North, Minneapolis

1:00-2:30 PM conversation with staff of Metro Transit, Metro Mobility, and Met Council Shared Mobility Collaborative members

"E-Mobility and Transportation: What's Happening in Germany"
20-minute presentation by **Dr. Bernd Bartunek**, director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences followed by Q&A

12:40 PM Marcus Mueller take GREEN LINE to St. Paul, Central Station stop; 7 minute-walk from there

Fresh Energy
408 Saint Peter Street, Suite 220
Saint Paul, MN 55102. Phone: (651) 225- 0878

1:30-3:00 PM conversation **Marcus Mueller** with **Ben Rabe**, senior policy associate, buildings and energy performance, Fresh Energy

rest of day open for individual activities

Wednesday, October 3, 2018 – Individual Partner City Day 2

Delegation members work on their specific joint city projects

City of Duluth *hosts* City of Siegen
City of Morris *hosts* City of Saerbeck
City of Rochester *hosts* City of Münster
City of Warren *hosts* City of Arnsberg
City of White Bear Lake *hosts* City of Luedenscheid

Wednesday, October 3, 2018 – Agency Partner Program: NRW & MN Compare Solutions in Research and Practice II

Day's Hosts: **Dr. Sabine Engel**, director of international partnerships, IonE, U of MN [mobile: +1-612-501-6504]
GreenStep Cities Program
City of White Bear Lake
University of Minnesota Engineers Without Borders student group

NRW Delegation members in Minneapolis:

Hans Juergen Badziura, head, department of environmental protection and green space, City of Lüdenscheid

Ulrike Badziura, head, department of environmental and climate protection, City of Iserlohn

Dr. Bernd Bartunek, director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences

Marcus Müller, deputy head, department of municipal and regional climate protection, EnergyAgency.NRW

8:10 AM *meet in hotel lobby for pick-up by Sabine Engel; transfer by car to St. Paul*

League of Minnesota Cities

145 University Ave. W, Saint Paul, MN 55103

Phone: (651) 281-1200

9:00-11:00 AM **Minnesota GreenStepCities Workshop and Webinar at the League of Minnesota Cities***

Workshop Topic: **Climate Smart Municipalities**

9:00 Welcome and Introductions

9:10 Overview of Climate Smart Municipalities
Abby Finis, senior energy planner, Great Plains Institute

9:20 City partnership: Iserlohn & Elk River share experience and innovative electric vehicle initiatives
Ulrike Badziura, head, department of environmental and climate protection, City of Iserlohn
Amanda Bednar, environmental coordinator, City of Elk River
Marcus Müller, deputy head, department of municipal and regional climate protection, EnergyAgency.NRW
Tom Sagstetter, Elk River Municipal Utilities

9:40 Transportation Innovations
Dr. Bernd Bartunek, director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences

10:00 Minnesota Fleet Action Plan
Larry Herke, director, Office of Enterprise Sustainability, Department of Administration

10:20 Speaker panel and discussion

11:00 close

**The workshop series is supported with generous funding from Siemens and the McKnight Foundation*

11:15 AM *transfer of Dr. Bartunek to Minnesota Department of Transportation (Sabine Engel)*

MnDOT Central Office

395 John Ireland Blvd, St Paul, 55155

11:45-12:30 quick lunch with **Tim Sexton**, chief sustainability officer, MN Dept. of Transportation

1:00-1:35 presentation on e-mobility and transportation by **Dr. Bartunek** to State of Minnesota interagency leadership group (commissioners and assistant commissioners)

1:45 PM *transfer to White Bear Lake to join Luedenscheid & Iserlohn group at City of White Bear Lake (Engel)*

11:30 AM *transfer of all other NRW delegation members to White Bear Lake (Amanda Bednar)*

White Bear Lake City Hall

4701 Highway 61, White Bear Lake, MN 55110

Phone: +1 (651) 429-8526

2:30-5:00 PM site visit & conversations with White Bear Lake City leaders

Jo Emerson, mayor, White Bear Lake

Ellen Hiniker, city manager, White Bear Lake

Connie Taillon, environmental specialist, White Bear Lake

5:15 PM *transfer by car (Engel) to University of Minnesota*

University of Minnesota

Robert H. Bruininks Hall, rm. 144

222 Pleasant Street SE, Minneapolis, MN, 55455

6:00-7:00 PM "Climate-Smart Municipalities Project: An International Exchange" presentation to Engineers Without Borders student group (room 144 Bruininks Hall)

Host: **Tim DeCesare**; mobile +1- 612-750-6502

Thursday, October 4, 2018 – Faribault ("Silicon Valley of Glass")

Focus: energy efficiency in buildings & sustainability
program organized by **Senator John Jasinski**, former Mayor of Faribault in cooperation with Fresh Energy

Day's Hosts: **Dr. Sabine Engel**, director of international partnerships, IonE, U of MN [mobile: +1-612-501-6504]

John Jasinski, MN State Senator

David Senjem, MN State Senator

Julie Rosen, MN State Senator (tbc)

David Noble, executive director, Fresh Energy

SAGE Glass

Faribault Woolen Mill

Living Greens Farm

20 Participants: 12 members of NRW Delegation & 5 hosts
Beverly Heydinger, board chair, MN Citizens Utility Board; former PUC commissioner
Kristin Mroz, local government coordinator, Minnesota Environmental Quality Board

8:30 AM *Northfield Lines group bus departs to Faribault; arrive at 9:45*

9:45-4:30 site visits in Faribault

SAGE Electrochromics, Inc. (SAGE Glass)

1 Sage Way, Faribault, MN 55021. Phone: (507) 331-4848

9:45-12:15 SAGE Glass

10:00 Welcome Guests and Overview of Sage Glass

Dr. Alan McLenaghan, chief executive officer, SAGE Electrochromics, Inc.

Climate-Smart Municipalities: Together We Are Smarter!

an interactive evening of sharing strategies and insights

Monday, October 1, 2018, 6:00-9:30 PM

University of Minnesota, McNamara Alumni Center
200 Oak St. SE, Minneapolis, MN 55455

Attendees:

Anne Anderson, powerED program manager, McKinstry

Ellen Anderson, exec. director Energy Transition Lab IonE, U of M

Hans-Juergen Badziura, head, environmental protection and green space dept., City of Lüdenscheid

Ulrike Badziura, head, environmental and climate protection dept., City of Iserlohn

Katy Baker, undergraduate student, College of Science and Engineering, U of MN Twin Cities

Bernd Bartunek, director, Institute for Vehicle Powertrain System Technology, South Westphalia University of Applied Sciences

Amanda Bednar, environmental coordinator, City of Elk River

Dr. Michelle Behr, chancellor, University of Minnesota-Morris

Mike Benike, executive vice president, Benike Construction, Rochester

Jim Benning, director, public works & utilities, City of Duluth

Paula Bernard, energy commission member, City of Elk River

UJ Bhowmik, undergraduate student, College of Liberal Arts, U of MN Twin Cities

Erik Birkeland, properties and facilities manager, City of Duluth

Zack Carlton, planning manager, City of Elk River

John Carmody, senior fellow, Minnesota Design Center and Center for Sustainable Building Research, U of M

Gabe Chan, Humphrey School of Public Affairs, U of M

Claire Cooke, undergraduate student, College of Food, Agricultural & Natural Resource Sciences, U of MN Twin Cities

Trish Curtis, energy commission member, City of Elk River

Don Davies, community member, Minneapolis

David DeCesare, community member, Prior Lake

Tim DeCesare, undergraduate student, College of Science & Engineering, U of MN Twin Cities

Traci DeCesare, community member, Prior Lake

Sairaj Dhople, dept. of electrical and computer engineering, University of Minnesota

Jo Emerson, mayor, City of White Bear Lake

Sabine Engel, Institute on the Environment, U of M

Susanne Engelmann, administrative project coordinator, International Office, University of Siegen

Pat Farrington, vice president business services, Hiway Federal Credit Union

Divya Ghosh, undergraduate student, College of Continuing and Professional Studies, U of MN Twin Cities

Sheldon Giese, mayor, City of Morris

Mercedes Gohl, undergraduate student, College of Food, Agricultural & Natural Resource Sciences, U of MN Twin Cities

Sven Gotthal, council member, City of Muenster, Germany

Marcus Grubbs, sustainability planner, Office of Enterprise Sustainability, MN Department of Administration

Meg Hannasch, undergraduate student, College of Food, Agricultural & Natural Resource Sciences, U of MN Twin Cities

Paul Hartmann, climate protection officer, City of Siegen

Kristin Helgeson, digital marketing manager, US Bank

Jessica Hellmann, director, Institute on the Environment, U of M

Ryan Hentges, CEO, Minnesota Valley Electric Cooperative

Larry Herke, director, Office of Enterprise Sustainability, MN Department of Administration

Bryan Herrmann, vice chancellor, U of MN Morris

Beverly Heydinger, board chair, MN Citizens Utility Board

Blaine Hill, city manager, City of Morris

Ellen Hiniker, city manager, City of White Bear Lake

Natalie Hoidal, Pesticide Safety and Environmental Education, U of M Extension

Frank Hornstein, Minnesota House Member, Minneapolis

Jack Hoschouer, community member, Northfield

Bill Howard, retired Hennepin County judge

Mara Humphrey, VP government affairs and association services, Minnesota Credit Union Network



above: A panel of CSM champions at a preview party for "Climate Smart: Cities Working Together" (dir. Leya Hale, TPT, 2018)

Alex Jackson, energy coordinator, City of Duluth

Gerhard Joksch, honorary mayor, City of Münster, Germany

Steve Kelley, senior fellow, Humphrey School of Public Affairs, University of Minnesota

Henner Klaas, managing director, Günter Klaas Fensterbau GmbH, Germany

Mark Kotschevar, managing director, Rochester Public Utilities

Michael LeBeau, supervisor, property and facilities management, City of Duluth

Mauricio León, senior researcher, Metropolitan Council

Annie Levenson-Falk, executive director, MN Citizens Utility Board

Dr. Perry Li, deputy director, Center for Compact and Efficient Fluid Power, College of Engineering, U of M

Commissioner Jessica Looman, MN Department of Commerce

Shannon Lotthammer, assistant commissioner, MN Pollution Control Agency

Laura Malwitz, business development manager Siemens

Commissioner Matt Massman, MN Department of Administration

Pamela McClanahan, director of partnerships, Twin Cities Public Broadcasting Service

Craig McDonnell, legislative director, MN Department of Administration

Brent McMillan, facilities management, City of Warren

Michelle Medina, director of renewable energy, Minnesota Farmers Union

Laura Millberg, sustainable development and climate resilience planner, MN Pollution Control Agency

Stacey Modahl, economics & finance dept., Metro State U.

Dr. Ned Mohan, department of electrical and computer engineering, U of MN
Shannon Mortenson, city administrator/clerk-treasurer,

City of Warren

Barbara Müller, Honorary Consul Federal Republic of Germany at Minneapolis

Marcus Müller, deputy head, dept of municipal and regional climate protection, EnergyAgency.NRW, Germany

Nancy Aronson Norr, regional development director, Minnesota Power

Kim Norton, board member, Fresh Energy

Steven Nyhus, Rochester Public Utilities Commission

Carsten Peters, energy advisor, Verbraucherzentrale Nordrheinwestfalen, Germany

Joe Rauzi, undergraduate student, College of Science & Engineering, U of MN Twin Cities

Michelle Rebholz, economic analysis, MN Public Utilities Commission

Mike Reese, renewable energy director, U of M West Central Research & Outreach Center

Greg Ridderbusch, CEO, Connexus Energy

Tara Ritter, senior program associate, Institute for Agriculture and Trade Policy

Britta Roe, undergraduate student, College of Food, Agricultural & Natural Resource Sciences, U of MN Twin Cities

Wilfried Roos, Mayor, City of Saerbeck

Timothy Rudnicki, executive director, Minnesota Bio-Fuels Association

Jerome Samuelson, retired Hennepin Country Public Defender

Robert Scarlett, principal, Hunter Scarlett Consulting

Kenric Scheevel, senior government relations representative, Dairyland Power Cooperative

Matt Schuerger, commissioner, MN Public Utilities Commission

Max Schüssler, graduate student in engineering, University of Siegen, Germany

Paul Scobie, community member, Minneapolis

David Senjem, Minnesota State Senator, Rochester

Will Seuffert, executive director, MN Environmental Quality Board

Philipp Siebel, graduate student in engineering, University of Siegen, Germany

Julie Smith, community member, Minneapolis

Ken Smith, CEO and president, Ever-Green Energy

Jeff Standish, corporate sustainability, Institute on the Environment, U of M

Jamez Staples, Renewable Energy Partners

Russ Stark, chief resilience officer, City of St. Paul

Sabine Sten, community member, Minneapolis

Cora Sutherland, undergraduate student, College of Food, Agricultural & Natural Resource Sciences, U of MN Twin Cities

Brent Svenby, senior administrative analyst, City of Rochester

Teresa Thews, community member, Minneapolis

Nicolle VanWie, director of sustainability, vice president, ESG Architecture & Design

Martin Vos, engineer, 3M

Guido Wallraven, technical director, Klimakommune Saerbeck, Germany

Jordan Wentz, program administrator, Office of Enterprise Sustainability, MN Dept of Administration

Thomas Werner, director of building management, City of Münster, Germany

Christof Wetter, faculty of energy, buildings and environment, FH Münster University of Applied Sciences



Thursday, October 4, 2018 – Faribault (“Silicon Valley of Glass”)

(agenda continued from p. 13)

- 10:30 Tour of SAGE Glass
- 11:30 Q & A and discussion with City and business leaders
additional participants: **Ben Rabe**, senior policy associate for buildings and energy performance, Fresh Energy
David Wanberg, city planner, City of Faribault
- 12:15 *visit ends; delegation boards bus*

The Depot Bar & Grill
311 Heritage Pl, Faribault, MN 55021. Phone: +1-(507) 332-2825

- 12:30 PM group lunch at The Depot Bar & Grill in Downtown Faribault
- 1:15 PM *delegation boards bus*

Faribault Woolen Mill
1500 2nd Ave. NW, Faribault, MN 55021. Phone: 1+ (507) 412-5534

- 1:30 PM Tour of the Faribault Woolen Mill
Paul Mooty, J.D., partner and chairman, Faribault Woolen Mill Company
- 2:30 PM *delegation boards bus*

Living Greens Farm
1512 30th St. NW, Faribault, MN 55021. Phone: (612) 961-7948

- 3:00-4:00 PM Tour of Living Greens Farm
Dana Anderson, founder and president, Living Greens Farm
- 4:00 PM *tour ends*
- [optional] social stop at F-Town Brewery for refreshment (22 4th St NE, Faribault, MN 55021. Phone: (507) 331-7677)
- 5:00 PM *board coach bus for travel back to Twin Cities*
- 6:30 PM *evening open for individual plans*



Hans Juergen Badziura



Ulrike Badziura



Dr. Bernd Bartunek



Susanne Engelmann



Sven Gotthal

BIOGRAPHIES: NRW DELEGATION

Hans Jürgen Badziura is a biologist and directs the department of environmental protection and green space at the City of Lüdenscheid. The department is a specialist service to the City. Tasks include general environmental protection tasks such as contaminated site investigation and disposal, noise mitigation planning, open space planning, habitat and species protection, water conservation and climate protection. The City of Lüdenscheid has a climate protection plan that includes a catalog of measures for the sustainable design of the city. The city of Lüdenscheid is a member of the Climate Alliance and committed to reducing the per capita greenhouse gas emissions by half 2030. At the moment, the main climate protection activities are focused on energy efficiency in existing buildings and the development of an e-mobility concept. Over the next years, the City intends to implement measures to prevent damage caused by climate change. The City also intends to further expand renewable energy generation in cooperation with municipal utilities Stadtwerke Lüdenscheid.

Ulrike Badziura is head of the department of environmental and climate protection at the City of Iserlohn. Her portfolio of tasks includes issues of municipal waste, technological aspects of environmental protection, climate protection, and energy efficiency projects. In 2008, she was named to the post of climate protection officer (Klimaschutzbeauftragte) for the City of Iserlohn. Working with local partners she has implemented many projects in her city. The City was recognized for its municipal climate protection efforts with the European Energy Award in Gold. By 2030, the city seeks to reduce its energy use by 35% and reduce its CO2 emissions by 50% over 1990 values.

Dr. Bernd Bartunek is a professor at the Technical University of Aachen (RWTH) and affiliated with the University of Applied Sciences South Westphalia, where he directs the Institute for Vehicle Powertrain System Technology. His R&D focus is on highly efficient, low emissions propulsion systems, such as found in hybrid and electric vehicles. During a professional career of over 30 years he has worked in leading technical and management positions with different technical services organizations and technology innovation companies regarding advanced powertrain system technologies for conventional and alternative fuels. He has been focused on energy efficiency and exhaust gases and their effect on greenhouse gas emissions. Over a period of about 10 years, he has been involved in numerous engine/vehicle R&D projects with industry and governmental partners, such as the US Environmental Protection Agency (EPA), the US Department

of Energy as well as the California Air Resources Board CARB) and the California Energy Commission. These programs were dedicated to the development of DI diesel and alternative combustion engine concepts as well as for hybrid propulsion systems within the US Partnership for the Next Generation of Vehicles program under the Clinton/Gore administration. Prior to his affiliation with the University of Applied Sciences South Westphalia, he directed technical programs on direct injected natural gas/hydrogen fuel injection and combustion system development as well as on diesel exhaust gases after treatment technology.

Susanne Engelmann is an administrative project coordinator at the International Office at the University of Siegen. She is involved with the student and faculty exchange between the University of Siegen and the University of Minnesota. As part of the exchange, two University of Siegen graduate students have worked as international interns with faculty at the University of Minnesota-Duluth and the City of Duluth on energy efficiency and renewable energy projects designed to help the city meet its climate goals.

Sven Gotthal is a member of the city council of the City of Münster. He is a member of the conservative party CDU and serves on the council's committee for environmental protection, construction, and climate protection. He was elected in 2010. He has been involved in environmental policy since then and has worked on recycling facilities, building insulation standards, and the city's Clean Münster Campaign. Gotthal is a member of the volunteer fire fighters brigade.

Paul Hartmann is the climate protection officer ("Klimaschutzbeauftragter") for the city of Siegen. He is a staff member in the office of the mayor and responsible for all climate protection and climate adaptation issues in Siegen's municipal government. Much of his work focuses on providing information to Siegen's citizens on saving energy, energy efficiency, e-mobility, and environmentally friendly consumption. In 2011, he partnered with private sector allies from the financial services sector, industry, and the trades to found the nonprofit organization Energieverein Siegen. Operated on the platform of the municipal government, it highlights the importance of climate protection to the city. Energieverein Siegen provides free consulting services four days a week and hosts over 30 events each year on topics such as energy savings measures to create more vibrant neighborhoods. Hartmann holds a degree in geography and geology from the University of Münster. From 1992- 2009, he worked as an environmental planner, first in a private sector planning office, then for the city of Gütersloh. In 2009, he specialized on climate protection and adaptation.



Paul Hartmann



Gerhard Joksch



Henner Klaas



Marcus Müller



Carsten Peters

Gerhard Joksch is a member of the Münster City Council and serves as honorary third Mayor of the City of Münster. In his role as mayor, Joksch represents Münster's Lord Mayor Markus Lewe in public affairs. Joksch studied regional and spatial planning (UNIDO) and has been working for over 27 years in municipal environmental and building authorities. From 1991 to 1998, he was technical alderman in Beckum, a town in Westphalia. From 1998 to 2006, he directed the urban development department at the City of Münster. Since 2006, he has been working as a freelance planner and advisor (www.gerhard-joksch.de). His professional life focuses on: urban development, city planning, municipal traffic development, municipal climate protection and municipal housing policies. In 1983 when he was in his early thirties, Gerhard Joksch joined the new Green Party, which was formally established in 1980. Since 2009, he has been representing the Green Party on the Münster City Council. On the City Council he also serves as his caucus' spokesperson on energy policy, climate protection, building policy and waste economy. From 2014 to 2017, Joksch served as chairman of the supervisory board of Stadtwerke Münster, the city's public utility company.

Henner Klaas is managing director of Günter Klaas Fensterbau GmbH, a family-owned manufacturer and installer of windows. Klaas is a master glazer and window technician. He has led the family business since 1994. He has been serving as a publicly certified expert for doors, glazing, and windows since 1996. In 2014, Klaas was elected to the Siegen City Council, where he is a member of the conservative CDU party caucus. He serves on three committees: environment, landscaping, and energy; city planning, economic development, and municipal properties and buildings; and construction. In July 2018, he hosted Commissioner Massman and members of the Minnesota Climate-Smart Municipalities delegation from other state agencies and the private and nonprofit sector for a tour of his company and a specialist conversation on energy efficient buildings and the role of the trades.

Marcus Müller is deputy head in the department of municipal and regional climate protection at EnergyAgency.NRW. He is responsible for the European Energy Award, the ECORegion program, mobile energy consulting, and other efforts that foster climate protection efforts in the region. Before his promotion within EnergyAgency.NRW, Müller spent five years working as a "climate networker" in the rural Arnsberg region of NRW. He was the first person in that role and focused on the local energy transition. He helped build interconnections between municipalities, administrations, companies, and other entities working on climate protection. Müller's consistent work won him and the agency strong support

among local partner. The association of municipalities and counties klimanetzwerk.südwestfalen (www.klimanetzwerk.nrw) emerged directly from his leadership.

Carsten Peters is an energy advisor with the state-wide consumer organization Verbraucherzentrale Nordrheinwestfalen at its Arnsberg location. He serves both private property owners and renters. Counseling for private property owners focuses on how to save energy through building modernization and on ways to add renewable energy to their properties. Counseling for renters centers on generating savings by increasing power and heat efficiency. Peters regularly gives public talks and invites residents to participate in community activities that promote sustainability. He also works on developing new ways to assess the performance and potential of existing buildings. Peters studied environmental engineering. After graduating college he led a team at a national logistics company and later rose to become one of the company's internal consultants on sustainable energy and facilities management. From 2011 to 2015, he ran his own consulting office. The consumer organization Verbraucherzentrale Nordrheinwestfalen became one of his regular clients and in 2015 invited him to join the organization as a full-time staff member.

Wilfried Roos is mayor of the City of Saerbeck (pop. 7,200), which is located in a rural area in the state of North-Rhine Westphalia. Before moving to Saerbeck as the city's new administrator in 1994, Roos held a number of administrative positions at county and city levels. In 1999, the citizens of Saerbeck elected him mayor. He was reelected in September 2015 for the fourth time. Since 2008 and supported by a broad electoral mandate, his daily set of tasks includes implementing an ambitious municipal agenda: by 2030, the City of Saerbeck wants to secure full energy self-sufficiency through renewable energies. A comprehensive blueprint for local climate protection that was generated by the city in partnership with multiple other stakeholders guides the effort. Based on that blueprint, the City of Saerbeck won a state-wide contest and was designated "Climate Community of the Future" (Klimakommune der Zukunft) for modeling sustainability at the municipal level. Today, the City features about 150 concurrent initiatives and projects. The most important among them is "Bio-Energy Park Saerbeck" on the site of a former federal ammunition storage facility. The 250 acre site combines wind, solar, and biogas energy generation. Individual citizens play a crucial role in the energy transformation. 450 citizen small investors invested between \$1,300 (min.) and \$25,000 (max.) in the Saerbeck bio-energy cooperative. In October 2015, Saerbeck and the City of Morris signed a three-year memorandum of agreement for the two communities to work



Wilfried Roos



Max Schüssler



Guido Wallraven



Thomas Werner



Dr. Christof Wetter

together on municipal energy and climate protection initiatives. The exchange is helping transform Morris, MN. In October 2018, the two cities plan to sign an agreement that will extend their cooperation into the future. In 2018, Saerbeck won Germany's prestigious sustainability award Deutscher Nachhaltigkeitspreis 2019. It recognizes the city as Germany's most sustainable small town and comes with a check of 30.000 €, sponsored by Allianz Umweltstiftung.

Max Schüssler is a mechanical engineering master's student in the department of mechanical engineering at University of Siegen. He specializes in energy plant engineering and machine learning. In addition to his course work, he works as a research assistant at the University of Siegen Institute for Fluid- and Thermodynamics on projects concerning wind turbine noise emissions reduction. In 2017, Max had the opportunity to do an extended internship in Siegen's partner-city Duluth, coordinated through the Climate Smart Municipalities program. During his 2.5-month internship, Max developed a hybrid energy system concept for the City's water treatment center and main pump house. He holds a bachelor's degree in industrial engineering from TH Mittelhessen University of Applied Sciences, Giessen and holds a scholarship from the Foundation of German Business (Stiftung der deutschen Wirtschaft) for his current studies in Siegen. His role as a member of the present NRW delegation includes serving as delegation interpreter.

Guido Wallraven has served as technical director for the City of Saerbeck since 2009. He is in charge of implementing about 150 individual initiatives that promote and implement local climate protection. Wallraven has worked on municipal climate protection issues for over 15 years. Together with local stakeholders, he develops plans for adapting to climate change. He serves as a consultant to municipalities and cities on local measures that support sustainability. He also manages the implementation of large and small projects that focus on renewable energies, energy use reduction, energy efficiency, climate-friendly transportation, and community education. Wallraven (pronounced "VAL-raav-n") holds an engineering degree in architecture with a specialization on city planning. He owns the city planning consultancy Stadt-Land-Fluss-Büro für Städtebau und Umweltplanung. The office focuses on energy-efficient city planning, sustainable city development, the use of solar energy in cities, and sustainable master planning. He has taught at Siegen University and frequently speaks at public forums as an expert architect affiliated with the Chamber of Architects in North-Rhine Westphalia.

Thomas Werner directs the office of building management of the City of Münster. He is in charge of all aspects of facilities management but

focuses especially on energy efficiency and sustainable construction measures. He holds a degree in building systems engineering from Applied University FH Münster. He began his career with the City of Steinfurt. In 1989, he started working for the City of Münster. First projects included larger HVAC construction and the technical management of the city's pools. In 1992, he started a systematic rollout and expansion of energy management measures for the city's 350 facilities. Since 2001, he has been a member of the energy management task force of Germany's league of cities Deutscher Städtetag. Werner has lived in Münster for the past 21 years. In summer 2018, he and his family hosted a first University of Minnesota student intern for two and a half months.

Dr. Christof Wetter is a professor at FH Münster University of Applied Sciences in the faculty of Energy, Buildings, and Environment, which he headed as dean from 2008 to 2012. Over the past 25 years, Dr. Wetter has been involved in many environmental technology projects, especially in municipal and industrial wastewater technology and renewable energy. He has served as project engineer, project manager, consultant and adviser. He joined the faculty at FH Münster University of Applied Sciences in 1999. He has been responsible for wastewater technology and water pollution control, and has successfully carried out many research and development projects and a variety of third party projects. For many years, he has been involved with biogas technology, renewable energy and electro-mobility and developed a number of new concepts. He publishes widely and is active in many working groups and expert committees: founding member and member of the board of the Institute for Energy and Process (IEP) (since 01/2014), member of the association BIORES (since 05/2012), founding member and member of the board of the Institute for Water · Resources · Environment (IWARU) (since 05/2011), founding member and member of the Institute for Sustainable Food and Food Industry (iSun) (since 02/2009). Because of his leadership, the University of Minnesota and Applied University Münster have been able to exchange student interns for the past two years. In summer 2018, the first two U of M undergraduate students were hosted by his university. Applied University Münster interns have assisted the CSM project partners in Morris and Elk River. Plans are underway to recruit additional Minnesota companies into this applied environmental services learning partnership.



Amanda Bednar



Dr. Michelle Behr



Jim Benning



Erik Birkeland



Kevin Bright

BIOGRAPHIES: MINNESOTA CSM CHAMPIONS

** [asterisk denotes member of 2018 CSM delegation to NRW]*

Dana Anderson is founder and president of Living Greens Farm, located just south of the Twin Cities in Faribault, MN. Living Greens Farm has developed its own patented aeroponic vertical growing system that, according to its own estimates, uses 200 times less land and 95 percent less water than traditional farming. Launched in 2012, the company grows fresh lettuces, herbs and microgreens on vertical platforms indoors in its Faribault Industrial Park facility, without the use of herbicides or pesticides. Living Green Farms illustrates the principle that for new technology to be adopted, it needs a working business model. “We didn’t invent aeroponics,” Dana Anderson is quoted in *The Produce News* (Oct. 23, 2017). “But we invented how to commercialize it. We feel aeroponics is the fastest and most disease-resistant way to grow.” The NRW delegation and Minnesota-based participants in the renewable energy policy exchange with Germany will discuss sustainability practice with Dana Anderson and tour Living Greens Farm.

Amanda Bednar* is the environmental coordinator for the City of Elk River. Elk River has been known as the “Energy City” since 1997 after being chosen by the Minnesota Environmental Initiative to act as a geographical focal point for the demonstration of efficient and renewable energy products, services, and technologies. Amanda is responsible for various city initiatives related to energy including serving as the staff liaison to the Energy City Commission, which promotes Elk River as a center of energy technology, energy manufacturing, demonstrations, recycling, and education. A major portion of Amanda’s time is spent on education and outreach to the community, including providing tours of demonstration sites and connecting with local residents and businesses. Her role at Elk River also includes work in waste reduction, recycling, and natural resources management. Amanda holds a B.A. in Environmental Studies and Communication from the College of Saint Benedict.

Dr. Michelle Behr* is the sixth chancellor of the University of Minnesota Morris, a position she has held since February 2017. She is committed to working with campus constituents and partners to continue the University of Minnesota-Morris’ deep and comprehensive engagement with environmental sustainability. The Morris campus is the University of Minnesota’s sustainability campus. Dr. Behr earned a bachelor’s degree in anthropology with honors from the University of California, Santa Cruz, and her master’s and doctoral degrees from Arizona State University in anthropology and geography, respectively.

Behr is a three-time Fulbright Scholar and was selected as an American Council on Education Fellow in 2005-2006.

Jim Benning* is the director of public works and utilities for the City of Duluth and is responsible for all aspects of the city’s street lights, roads, bridges, street maintenance, and municipal utilities. Public Works and Utilities is the largest department in the City of Duluth, with an annual budget over \$90 million and 250 employees. The municipal utilities under his direction are: water, natural gas, sanitary sewer, storm sewer, and street lighting. Benning is also the representative for the City on the downtown district heating system. These utilities are some of the largest users of energy and can potentially see the most cost savings from new energy initiatives. Duluth’s gas utility is the largest municipally owned natural gas utility in the state, and 27th in the United States. His department is responsible for implementing various energy loan and grant programs for residential and commercial customers to promote natural gas conservation. Jim holds a B.S. degree in civil and environmental engineering from the University of Wisconsin, Madison. He is also a registered professional engineer in the State of Minnesota.

Erik Birkeland* is the property and facilities manager for the City of Duluth and responsible for the overall operation, maintenance, and capital improvement of 148 buildings comprising of 1,200,000 square feet. Additionally, he is responsible for all city property, including over 12,000 acres of public park spaces and hundreds of parcels of non-park property. Property and facilities management is the primary driver of energy efficiency, conservation, and land resource management initiatives within the city organization. It has been charged with leading these sustainability efforts through implementing the Mayor’s energy plan and building the Environmental Advisory Council, which is made up of key stakeholders from the community and region. Since 2003, the City of Duluth has been actively investing in energy efficiency projects, and since 2013 it has been implementing an asset management system and streamlining its energy resource management capabilities to effectively track and manage its energy consumption while aligning its capital planning and maintenance activities with the latest advances in building science, energy conservation, practice, and technology. The City’s primary focus for the last few years has been on its own infrastructure and core community service deliverables. Prior to working for the City of Duluth, Birkeland spent five years as the business improvement manager and capital planning manager (respectively) for St. Louis County, and 10 years in the private sector leading preconstruction and organizational planning efforts in support of over 60 public school district construction projects throughout the State of Minnesota. He holds a master’s degree in



Jo Emerson



Pat Farrington



Sheldon Giese



Troy Goodnough



Marcus Grubbs

education from the University of Minnesota, and an English degree from Concordia College in Moorhead, Minnesota.

Kevin Bright* is the energy and sustainability director for the Destination Medical Center (DMC) Economic Development Agency. His main functions are to ensure the DMC development projects meet the energy and sustainability goals outlined in the DMC Development Plan, convene the Energy Integration Committee, a collection of energy-focused stakeholders to discuss and implement high-level energy goals for development, and advocate for sustainability, health, and wellness issues throughout the community. Previously, Bright worked in promoting energy efficiency and sustainability in higher education, specifically efforts at Colby College and Harvard University. At Colby, Bright supported all facets of sustainability including: occupant engagement programs, greenhouse gas accounting, third party certifications, new and existing building performance, renewable project development and demand management activities in the existing building stock. Prior to Colby, Bright worked as the assistant program manager of the Green Building Services program at Harvard University in Cambridge, Massachusetts. The program supported Harvard schools and units in efforts to design, build, and operate their buildings more sustainably. The Green Building Service staff also met with project teams to explain Harvard's Green Building Standards, perform life-cycle costing analyses, facilitate green building trainings, conduct energy audits, commission new construction and commercial interior projects, and manage many of the University's LEED green building certification efforts. Kevin holds a M.A. in energy and environmental analysis from Boston University, and a B.A. from Middlebury College in environmental geology.

Tim DeCesare is a fourth year student in environmental engineering in the College of Science and Engineering at the University of Minnesota. In summer 2018, he used the opportunity of the U's new student and faculty exchange with Applied University Muenster to serve as an intern at Saerbeck's Bio-Energy Park and participate in an FH Muenster research project on low-energy cooling technology. In 2016, he competed in a competition through the National Science Foundation where his team proposed to put turbines in the effluent channel of wastewater treatment plants as a means of producing energy locally. That competition first got him interested in renewable energy and sustainability. He is a member of Engineers Without Borders at the University of Minnesota and in a subgroup that works on projects in Ethiopia to assist local communities to improve their water transport systems. As a member of this organization, he has the chance to use his engineering skills and knowledge to help solve real world problems together with other students with different majors

and backgrounds. After college, he plans on working for a company where he can help make the world a more sustainable place by integrating renewable energy and changing how we build things.

Jo Emerson is mayor of White Bear Lake and served as president of the League of Minnesota Cities during the 2017-2018 term. Emerson was first elected mayor in 2009 and is currently serving her third term. She has also served as vice chairwoman of the White Bear Lake Planning Commission, president of the White Bear Lake Area Historical Society, the League of Minnesota Cities Executive Committee, the League of Minnesota Cities Personnel Committee, the League of Minnesota Cities Finance Committee, the League of Minnesota Cities Governance Committee and as president of Minnesota Mayors Association. The League of Minnesota Cities is a membership organization dedicated to helping cities throughout Minnesota build quality communities through effective advocacy, expert analysis, trusted guidance, and collective action. The League serves its more than 830 member cities through advocacy, education and training, policy development, risk management, and other services.

Dr. Sabine Engel* is director of international partnerships at the University of Minnesota Institute on the Environment (IonE). She serves as principal investigator on two projects: "Energy Transition 2.0: Regional Economies & Renewable Energy in the Upper Midwest/Berlin" and "Climate-Smart Municipalities: Modeling Integrated Energy Communities for the 21st Century—NRW and Minnesota." From 2014 to October 2015, she was program director for economic development in the University of Minnesota's Office of University Economic Development. From 2007 to 2014, Engel directed the interdisciplinary DAAD Center for German & European Studies at the University of Minnesota. Under her leadership, the center built unique Minnesota-Germany health policy and renewable energy policy exchange programs. She holds a Ph.D. in English from Duke University and an M.A. from the University of Hamburg. In fall 2018, she was honored with the University of Minnesota Distinguished Award for Global Engagement, which recognizes exceptional contributions to global education, research and engagement.

Patrick Farrington* is vice president of business services at Hiway Federal Credit Union, a 1.1 billion dollar St. Paul credit union. He is a 35-year business professional working in the financial services industry. Prior to joining Hiway, Farrington held senior management and sales roles in numerous Twin City community banks, including seven years as a community bank president and CEO. Farrington holds a B.S. in political science from the University of Wisconsin, Eau Claire, and graduated in 2008 from Stonier Graduate School of



Kim Gullickson



Larry Herke



Bryan Herrmann



Blaine Hill



Alex Jackson

Banking from the University of Pennsylvania.

Sheldon Giese is mayor of the City of Morris, MN, and currently serving his third term. Before being elected mayor in 2006, he served as a member of the Morris City Council. Under his leadership, the City established a technical partnership with Germany's City of Saerbeck to work together on comprehensive energy and sustainability measures for their communities. Since joining the Climate-Smart Municipalities program, the City of Morris has become a GreenStep Cities community and won a Clean Energy Community Award from the Minnesota Department of Commerce. Mayor Giese serves on several boards, including the Stevens County Economic Improvement Commission (SCEIC), West Central Initiative Economic Development District Board, and Morris Public Library Board. He also serves on the Morris Theatre Cooperative Board and is a Morris American Legion officer. Sheldon has been accounting manager at West Central Environmental Consultants in Morris for the past 25+ years. He and his wife, Kim, have been the owner/operator of West Central Screen and Print in Morris since July 2003. Sheldon was born in Morris and grew up on the family farm in Artichoke Township, Big Stone County 25 miles southwest of Morris and is a member of Zion Lutheran Church of Morris.

Troy Goodnough has served as the director of the office of sustainability at the University of Minnesota, Morris for the past decade. Previous to his university service, Troy spent a decade in semiconductor start-up companies leading crystal growth operations for laser development. Troy was the first sustainability coordinator hired in the University of Minnesota-system in 2006 and has also served in the Center for Small Towns. Troy works with students, faculty and staff to develop and implement sustainability initiatives. His work has included creating new educational programs, outreach initiatives, and renewable energy projects. Troy provides leadership with the Upper Midwest Association for Campus Sustainability, the West Central Clean Energy Resource Teams and other sustainability-focused groups. During his tenure as director, Morris has earned AASHE STARS Gold ratings, the Second Nature Climate Leadership Award, and recognition by Sierra Club, Princeton Review, Minnesota Environmental Initiative and other organizations. On the Climate-Smart Municipalities project, he serves as the advisor of record for the student interns from Germany. He also serves as a speaker on the student delegation tours to Germany.

Marcus Grubbs is the sustainability planner at the Office of Enterprise Sustainability in the Department of Administration at the State of Minnesota. He develops sustainability action plans for the operations

of the State in the areas of energy, water, procurement, solid waste, fleet, and greenhouse gases and assists other state agencies in developing their sustainability plans. Before joining the Office of Enterprise Sustainability, he worked as a coordinator for the New Agricultural Bioeconomy Project at the University of Minnesota, served as a community planner with the Headwaters Regional Development Commission, and served as a consultant on sustainability projects helping clients understand technology, policy, and market forces important to their decision making. Marcus has a Masters of Urban and Regional Planning from the University of Minnesota Humphrey School of Public Affairs and a Bachelor's degree in environmental studies from the University of Minnesota, Morris. He is a member of the American Institute of Certified Planners.

Kim Gullickson* is a member of the Morris City Council and has been serving in that role since 2017. She is a graduate of the University of Minnesota at Morris and has been active in the Morris community for the past 29 years. To her as a new member to the City Council, the partnership with the City of Saerbeck and the opportunity to participate in learning learning how to transition to a more climate-friendly energy future is very important. She participated in the MN delegation to Germany in July 2018 and is eager to help implement clean energy initiatives for the Morris community.

Dr. Jessica Hellmann is director of the Institute on the Environment at the University of Minnesota and the Russell M. and Elizabeth M. Bennett Chair in Excellence in the department of Ecology, Evolution and Behavior in the College of Biological Sciences, where her research focuses on global change ecology and climate adaptation. She was among the first to propose and study ways to reduce the impact of climate change through new techniques in conservation management. Hellmann regularly counsels state and national governments on habitat management, restoration and endangered species. In addition, building upon her seminal findings in ecology, Hellmann has extended her work on climate change adaptation to human systems, including health, infrastructure, food and water. She works with governments and corporations to build investment in climate change adaptation and co-authored several climate assessment and adaptation planning efforts, including the biodiversity and ecosystem portions of the Chicago Climate Action Plan and the 2014 National Climate Assessment. From 2003 to 2015, Hellmann served on the faculty of the University of Notre Dame. Hellmann holds a Ph.D. in biology from Stanford University and served as a postdoctoral fellow at Stanford's Center for International Security & Cooperation, and the University of British Columbia's Centre for Biodiversity Research.



Emily Larson



Jessica Looman



Shannon Lotthammer



Matt Massman



Brent McMillan

Larry Herke* is director of the Office of Enterprise Sustainability for the State of Minnesota. As director, he guides and supports 24 cabinet level agencies as they employ sustainable strategies to save money, conserve resources, and improve the environment. Larry is committed to developing sustainable strategies that allow best practices to be shared between agencies, while providing transparency to all Minnesotans on how efficiently their government operates. Larry recently retired as a Colonel after 31 years of service in the U.S. Army and the Minnesota Army National Guard where he last served as the construction and facilities management officer. In that position, he was responsible for all real property improvements to include new construction, renovations, preventative maintenance, and repairs. A major focus for Larry in this position was to employ sustainable strategies that would not only save money, but improve the resiliency of armories and training sites at Camp Ripley and Arden Hills. Larry is a graduate of Minnesota State University at Mankato. He holds a B.S. degree in accounting and M.A. in public administration.

Bryan Herrmann* is the vice chancellor for finance and facilities at the University of Minnesota, Morris. Morris has a broad array of operational and academic initiatives devoted to sustainability. The campus recently was recognized by the U.S. Department of Education as one of nine first-ever ED Green Ribbon Schools Postsecondary Sustainability Awardees and by the U.S. Environmental Protection Agency for its demonstration-model of renewable energy production. A diverse renewable energy platform is a key part of the campus community's plan to achieve carbon neutrality. Herrmann has extensive experience in strategic planning and financial-aid leveraging as well as results-oriented leadership, primarily as it relates to student enrollment. He has more than a dozen years' experience in enrollment management, which has culminated in his attaining the roles of director of admissions and, ultimately, vice chancellor. Herrmann holds a B.A. in economics and management from the University of Minnesota, Morris and a M.B.A. from the University of Minnesota, Duluth.

Blaine Hill is the city manager for the City of Morris, Minnesota, a city in which he was born and raised. Morris is a small farming community in west central Minnesota with a population of 5,300 people. With him, the city entered into a climate protection partnership agreement with the city of Saerbeck, Germany, and has begun implementing projects to reduce energy use, identify renewable energy sources, and look at ways to protect the environment. Hill served as the president of the League of Minnesota Cities in 1997. Prior to being named city manager in Morris, Hill served as the city clerk-treasurer for the City of Breckenridge, Minnesota for 17 years. He started his

career in government as a city accountant for the City of Morris. He has 38 years of experience in city finance and administration. He holds a bachelor's degree in political science from the University of Minnesota, Morris and an associate's degree in accounting from the Willmar Vocational School.

Ellen Hiniker is the city manager for the City of White Bear Lake, a suburb of 24,000 in the Twin Cities Metro area. She was appointed city manager in 2016. Previously she served for three years as the City's assistant city manager and for seven years as assistant to the city manager. Ellen's career has been dedicated to public administration and community service and she is known as a collaborative leader. In her role as assistant city manager, she directed the solicitation and evaluation of competitive proposals for a comprehensive solid waste management contract with careful consideration given to performance metrics, reporting requirements, and environmental standards and incorporated performance incentives and penalties in anticipation of potential service deficiencies. She led several environmental initiatives, including Green Step Cities program, Class 5 Energy program, Restaurant Energy Conservation project, Natural Steps program, downtown shared enclosure project, and a multi-jurisdictional initiative to increase recycling participation at apartment complexes. She has a bachelor's degree in political science from UW Eau Claire and a master's in public administration from the University of Minnesota. Her volunteer activities include serving as a board member for the White Bear Lake Emergency Food Shelf.

Alex Jackson* is the energy coordinator for the City of Duluth. Assigned to the Property and Facilities Management Division of Public Administration, he is responsible for the tracking and reduction of utility consumption within 148 buildings and numerous other park assets and public areas. As a member of the Property and Facilities Management team, Alex is tasked with developing and leading energy efficiency projects throughout the City's infrastructure as well as serving as the primary driver of the City's sustainability initiatives as envisioned in the Mayor's energy plan. A major effort within Alex's purview is consolidating energy tracking within the city's asset management system, streamlining its energy resource management capabilities to more effectively track and manage its energy consumption, and ensuring that reductions are accurately documented so these savings can be credited to the city's energy fund for continued investment in energy efficiency projects. Prior to working for the City of Duluth, Alex spent nearly five years as the air program coordinator for the Fond du Lac Band of Lake Superior Chippewa. There, he was responsible for tracking the Band's air emissions and operating their air quality monitoring station. Other



Shannon Mortenson



Kristin Mroz



Kim Norton



Cal Portner



Matt Privratsky

responsibilities included leading the band's efforts to be re-designated as a Class 1 air shed, and offering comments to regulatory agencies on behalf of the Band in an effort to protect the Reservation and ceded territories. Alex holds a B.S. degree in biology from the University of Wisconsin.

John Jasinski is a first term Minnesota state senator and the recent mayor of the City of Faribault. His southeast Minnesota district encompasses Steele County and parts of Rice, Dodge and Waseca counties. Senator Jasinski is vice chair of the Transportation Finance and Policy committee. He is also a member of the Capital Investment, Local Government, and State Government & Elections committees and the Pension Commission. He was named "First Term Legislator of the Year" by the Coalition of Greater Minnesota Cities. Senator Jasinski was one of five co-authors (with Senators Rosen and Senjem) of a proposed Clean Energy First Act that would have required Minnesota's electric utilities to meet resource needs using renewable energy and other clean energy resources. The legislation unfortunately did not pass. Senator Jasinski is the vice president of MDC Real Estate Services and also works for Met-Con Companies management team. He is a graduate of Minnesota State University Mankato. He served in the U.S. Navy as an air intercept controller. Senator Jasinski was born and raised in Faribault and served as its mayor for eight years. As mayor, he was strongly focused on business development. Thanks to Senator Jasinski, the NRW delegation will have the opportunity to discuss sustainability technology and innovation with Faribault business and city leaders in Faribault on October 4.

Emily Larson is mayor of Duluth and has been serving in that role since January 2016. Prior to being elected mayor, Emily was president of the Duluth City Council, served as a commissioner on the Duluth Economic Development Authority and was the Council conduit to Parks and Libraries. Currently, Mayor Larson serves as a member of the Young Women's Initiative of Minnesota, and is a seated board member to the Great Lakes and St. Lawrence Cities Initiative and the Greater Minnesota Housing Fund. As Mayor, her priorities include sustainable energy, increasing and improving the city's housing stock, addressing the opioid epidemic, developing a stable and reliable long terms streets funding plan, and continuing to grow Duluth's robust and unique economy. Emily earned an undergraduate degree from the College of St. Scholastica, a master's degree from the University of Minnesota Duluth and is a graduate of Intermedia Arts Creative Community Leadership Institute. An active trail runner and full-time admirer of Lake Superior, Emily is married to Doug Zaun and together they have two sons.

Jessica Looman is the Commissioner of the Minnesota Department of Commerce. She was appointed by Governor Mark Dayton in November 2017. As Commissioner, Looman's priorities include fair treatment of Minnesota consumers, advancing the clean energy economy, and ensuring the fair, efficient, and proper regulation of more than 20 Minnesota industries. The Department regulates Minnesota's insurance industry, financial institutions, securities and real estate sector. It also has a major role in overseeing the electric, natural gas and telephone sectors, energy conservation and efficiency, and administering low-income energy programs. Additionally, the Department regulates the accuracy of scales and pumps used for fuel and goods transactions in Minnesota's economy. Prior to her appointment as Commerce Commissioner, Looman served as Deputy Commissioner for the Minnesota Department of Labor and Industry (DLI). During her tenure at DLI, Looman led efforts to increase the Department's efficiency and improve the State of Minnesota's services for workers and businesses. Innovative reforms led by Looman have reduced costs for more than 110,000 construction permits and 120,000 professional licenses issued by the Department every year. She has also engaged stakeholders to address technical, regulatory and policy issues to help protect and grow Minnesota's economy. Looman is a graduate of George Washington University (B.A. in political science) and the University of Minnesota Law School (J.D.).

Shannon Lotthammer* was appointed assistant commissioner for water policy at the Minnesota Pollution Control Agency (MPCA) in February 2018. In this role, she oversees the agency's water resources programs and activities to protect the environment and enhance human health. Prior to that, Shannon served for six years as the director of the MPCA environmental analysis and outcomes division. Throughout her career, Shannon has served in various positions at the MPCA, ranging from water assessment and environmental information section manager, to water monitoring section manager, to watershed project management. She also spent more than three years in local government as the administrator of the Prior Lake/Spring Lake Watershed District in Scott County. Shannon has a B.S. in biology from the University of Minnesota, Duluth, and a M.S. in ecology from the University of Minnesota, Twin Cities.

Matt Massman* is the commissioner of the Minnesota Department of Administration. He was appointed by Governor Mark Dayton in 2014. He leads more than a dozen administrative service divisions, including the state's purchasing, fleet services, risk management, and continuous improvement services. As commissioner, he has been a leader on supplier diversity and sustainable government operations. He established the Office of Enterprise Sustainability



Mike Reese



Corey Rupp



David Senjem



Will Seuffert



Ken Smith

to lead environmentally conscious, cost saving initiatives across state government, including bringing solar and wind energy to state buildings. Prior to joining the Department of Administration, Massman served as Governor Dayton's deputy chief of staff as well as deputy commissioner at the Minnesota Department of Revenue. He also worked 20 years for state legislative bodies, including as chief fiscal analyst for the Minnesota Senate. He also worked for the Minnesota House of Representatives and the Wisconsin Legislative Audit Bureau. Massman is a graduate of Hamline University and holds a M.A. in public administration from the University of Wisconsin. In his free time, he enjoys spending time with family and friends, biking, hiking, and relaxing at the Lake.

Alan McLenaghan is chief executive officer of SAGE Electrochromics, Inc., based in Faribault, Minnesota. The company develops electronically tintable smart glass (also called electrochromic glass, EC, or dynamic glass), for use in building windows, skylights and curtainwalls, that can be electronically tinted or cleared to optimize daylight and improve occupant comfort in buildings. SageGlass technology has the potential to reduce building heating and air conditioning equipment size by up to 25%, resulting in construction cost savings. The technology also has the potential to significantly reduce cooling loads for commercial buildings and lighting costs by up to 20% and 60% respectively. The company is a subsidiary of the French company Saint-Gobain. SAGE moved to Faribault in 1998 to develop and test its first commercial product. Since then the company has significantly expanded. The NRW delegation and Minnesota-based participants in the renewable energy policy exchange with Germany will discuss energy efficiency and technology innovation with Alan McLenaghan and tour the Faribault plant.

Brent McMillan* is a lineman for the City of Warren. After earning a B.E.E. from the University of Minnesota, he went on a quest to find the perfect job. After stops in Minneapolis, San Diego, Illinois, and North Dakota, who knew it would be in little Warren, MN. The City has allowed him to explore his passion to save the planet, one small utility at a time. Carrying the burden of trying to educate the northwest corner of the state to the perils of climate change has taken a toll. It has taken away time from golfing poorly, not catching fish, slowly completing triathlons, and not finishing a home renovation! But, nonetheless a rewarding experience!

Paul Mooty, J.D., is a partner and chairman of Faribault Woolen Mill Company in Faribault, MN. Faribault Woolen Mill makes blankets, throws, scarves and other woolen products. It is one of only a few full-process woolen mills in the country that still make textiles from

raw wool. The business shut down in 2009 but was revived in 2011, when cousins Chuck and Paul Mooty bought the plant. Paul Mooty holds a BSB in business from the University of Minnesota Carlson School of Management and a JD from the University of Minnesota Law School. Mooty's professional career includes working in the tax department of Arthur Andersen & Company and in private practice law. He also served as president and CEO of Custom Rock, a St. Paul based manufacturer and architectural concrete contractor. Mooty has been involved in a number of community and civic organizations, including serving as the president of the Rotary Club of Edina and as member of its Board of Directors and Foundation Board. He is currently a member of the Fairview Community Advisory Committee and the Edina Community Foundation Board of Directors. The NRW delegation and Minnesota-based participants in the renewable energy policy exchange with Germany will discuss local economic value manufacturing with Paul Mooty and tour Faribault Woolen Mill.

Shannon Mortenson* is city administrator and clerk-treasurer for Warren. Mortenson has been the city administrator since 2010. The city operates the electric and gas distribution and sales in the city along with providing sanitation, water and sewer service. Warren has been a participant in the GreenStep Cities program to further encourage residents and city leaders to have a more "green" city. The city of Warren has garnered much new information through the Climate-Smart Municipalities partnership program and has launched innovative projects for residents on climate protection measures and sustainability. In 2018, the city of Warren won a Clean Energy Community award from the Minnesota Commerce Department for implementing a benchmarking program. The Clean Energy Community Awards are an acknowledgment of the work done by Minnesota communities to further the state's clean energy goals by implementing programs, policies, and technologies that encourage energy efficiency, conservation, and renewable energy generation.

Kristin Mroz is the local government coordinator for the Environmental Quality Board, a state board made of 9 state agency heads and 8 citizen members working on emerging and cross-sector environmental issues. Kristin is responsible for providing technical assistance to local governments undergoing the Environmental Review process and also supports the GreenStep Cities program and its many branches into sustainability best practices at the local level. She first participated in the Climate Smart Municipalities program when she worked as the environmental technician at the City of Elk River. Kristin graduated from the University of Wisconsin-Stevens Point with a B.S. in natural resource management and served two years in the Peace Corps, providing environmental education in



Brent Svenby



Brian Volkman



Dr. Rolf Weberg



Jordan Wentz



Kevin Wulf

Nicaragua.

Barbara Müller is Honorary Consul for the Federal Republic of Germany at Minneapolis serving the states of Wisconsin, Minnesota, North Dakota & South Dakota. She is very active in the German-American community and has been a strong supporter of the Minnesota-Germany renewable energy policy and sustainability exchanges hosted by the University of Minnesota Institute on the Environment. She grew up North Rhine-Westphalia. Barbara graduated from the university in Bonn, Germany, in 1987 and worked as law clerk in various areas before she finished her German legal education in June 1990 with honors. In Germany, Barbara focused on European legal and business issues. Before she came to Minnesota in 1996, she was chief of division in the Department of European Affairs in the German State of Hesse. Barbara is a lawyer with Cozen O'Connor. Her practice is focused on mergers and acquisitions, corporate formation, and governance and renewable energies.

Michael Noble is executive director of Fresh Energy, a non-partisan, nonprofit organization that advocates for clean energy and transportation policy in Minnesota and the Midwest Region. Fresh Energy was founded in 1990 and Noble has served as its executive director since 1996. He is well known for his strategic thinking and his ability to build and catalyze partnerships that secure new policies and harness market forces. His partners come from business, non-governmental groups, policy leadership, and private philanthropy. He has been the lead strategist for dozens of public policy innovations that are improving energy efficiency, spur renewable energy development, and address climate change by reducing the reliance on coal and oil. Deeply committed to entrepreneurship, Noble has served as chief executive at four successful energy companies in the private and nonprofit sectors since 1980. He was a founding board member of Wind on the Wires, Climate Generation: a Will Steger Legacy, Minnesota Environmental Partnership, Conservation Minnesota, the Conservation Minnesota Voter Center, and RE-AMP. Fresh Energy also is the publisher of Energy News. Staffed by a multistate team of journalists, Energy News Network digests provide daily links to top news and in-depth reporting that increase public understanding of energy issues. Noble is a graduate of Carleton College with a B.A. in history.

Dr. William Northrop is McKnight Land Grant Professor in the department of engineering and director of the T.E. Murphy Engine Research Laboratory at the University of Minnesota.

Kim Norton* is vice chair of the Rochester Energy Commission and a

board member of Fresh Energy. She just completed a two-year Bush Foundation Fellowship focusing on improving public health through a more sustainable, clean urban environment. She is the proud owner of two electric vehicles and purchases solar and hydro power as energy sources for her home. A retired legislator representing Rochester, home of the Mayo Clinic, Norton held numerous leadership positions in the Minnesota House of Representatives for most of her ten year tenure. She was first elected to the Minnesota House in 2006 and retired at the end of 2016. In the 2013 legislative session, Rep. Norton was the chief House author of the legislation that authorized up to \$327 million from the State of Minnesota for the Mayo Clinic Destination Medical Center (DMC) project in Rochester, a \$585 million infrastructure project. From 1998 to 2006, she served on the Rochester School Board.

Cal Portner* is the city administrator for the City of Elk River, Minnesota. As Elk River's chief administrative officer, he oversees a municipal staff of 150 and a general operating fund of \$13 million for this full service city. Elk River is located 20 miles northwest of Minneapolis and is designated as Minnesota's "Energy City", a statewide focal point for the demonstration of efficient and renewable energy products, services, and technologies. Elk River's Energy City Commission has set a goal to make Elk River "the most energy responsible city in Minnesota." The commission promotes green technologies and seeks to grow green industry in the community. The city owns and operates a municipal power utility and works closely with Great River Energy who are the operator of a Refuse Derived Fuel power plant. The City also works with Waste Management, which operates and maintains a landfill gas-to-energy power plant within the city. Prior to his appointment in Elk River, Portner served in municipal leadership positions with the cities of Plymouth and Brooklyn Park. Previous positions include working as district field director for a U.S. Congressional office and nine years for the US Air Force. Portner serves as president of the Elk River Rotary Club, he holds a bachelor's degree in political science from the University of Minnesota, a master's degree in public administration from Hamline University and is a credentialed manager through the International City and County Manager's Association.

Ashley Powell is a graduate student at the University of Minnesota pursuing a Ph.D. in the applied plant sciences program working with the apple breeding program. Her professional interests include fruit breeding, strengthening the communication between the science community and public, and engaging with the younger generation in fun, interesting ways involving science. She holds a bachelor of science in agricultural biotechnology from Washington State University.

Matt Privratsky is the director of public affairs at Fresh Energy, a non-partisan, nonprofit organization that advocates for clean energy and transportation policy in Minnesota and the Midwest Region. Matt directs Fresh Energy's government relations strategy at the State Capitol and with state, local, and federal government officials. This includes work on renewable energy, building codes, energy efficiency, and electric transportation. Prior to joining Fresh Energy, Matt worked for Minnesota's rural electric cooperative utilities, the Minnesota House of Representatives, and as a news director at a rural radio station. He holds a B.A. degree in political science and communications from the University of Minnesota.

Ben Rabe is a senior policy associate for buildings and energy performance for Fresh Energy. His work focuses on supporting and passing policies that improve energy efficiency related to buildings and the built environment. He develops positions and strategies on policy matters, assists with Fresh Energy's legislative priorities, and develops documents to communicate policy and scientific information to policy makers and the public. Before joining Fresh Energy, Ben managed the Energy Smart Program at the Minnesota Chamber of Commerce working to help small businesses take advantage of utility rebate programs and worked in the residential energy efficiency space at the Neighborhood Energy Connection. Ben holds a MA in international energy policy from the Fletcher School of Law and Diplomacy at Tufts University and a BA in international studies, political science, and anthropology from Macalester College. He is also a certified energy manager with the Twin Cities Chapter of the Association of Energy Engineers.

Joseph Rauzi is a third-year undergraduate in bioproducts and Biosystems engineering in the College of Science & Engineering at the University of Minnesota. In summer 2018, he used the opportunity of the U's new student and faculty exchange with Applied University Muenster to serve as an intern at 2G Energy company in Heek, Germany. 2G Energy makes modular combined heat and power units and is active also on the US market. He worked on the production floor, later joined the marketing team and worked on an analysis of the potential for biogas CHPs in individual states in America. "When I return to Minnesota, I am very excited to make use of the knowledge I gained through my internship in Germany at 2G Energy. Most importantly, I want to continue gathering information about biogas and its potential as an energy source in Minnesota and how this potential can be realized given our large farming industry in the south and south-west."

Mike Reese* has been the renewable energy director at the University of Minnesota West Central Research and Outreach Center (WCROC) located near Morris, Minnesota, since 2001. He has overseen the development of the renewable energy program at Morris and has participated as principal investigator or project manager on over \$15 million of research and demonstration projects, including large and small scale wind energy, biomass gasification, renewable hydrogen and ammonia, and solar thermal and photovoltaic energy systems. He has led the development of the renewable hydrogen and ammonia pilot plant for the University of Minnesota from conceptualization to operation. Reese is currently leading the renewable energy program's new strategy to reduce fossil energy consumption in production agriculture through researching and developing renewable and efficient energy technologies for farms. In addition to working for the University, Mike enjoys operating the family grain and livestock farm

located by Lake Emily near Hancock, MN and participates in several civic organizations and boards.

Corey Rupp* is the senior vice president of lending at Affinity Plus. He joined Affinity Plus in 2004 as a branch manager. In his current capacity, Corey oversees all aspects of consumer lending, business lending, student lending and real estate. During his career, he has led the implementation of new lending platforms, made significant enhancements to mobile lending and completely overhauled the credit union's lending program. Corey is also a dedicated community leader serving on local chamber, foundation and university boards, and coaching youth athletics.

David Senjem* is a Minnesota state senator representing portions of Dodge and Olmsted Counties, including half of the City of Rochester. He was first elected to the Minnesota Senate in 2002, and has served as both the Senate Majority and Minority Leader. He spent 44 years of his professional life with Mayo Clinic, retiring as environmental affairs officer. He also served 11 years on the Rochester City Council. Currently, Senator Senjem is chairman of the Capital Investment Committee and vice chair of the Tax Committee. He also serves as a member of the Energy, Utilities Finance and Policy Committee, the Transportation Committee, the Environment Natural Resources Finance and Policy Committee, and the Legacy Committee, and is a member of the Legislative Pension Commission. Senator Senjem was the Senate author of Mayo Clinic's Destination Medical Center legislation. This innovative economic development initiative is generally regarded as the largest economic development project in Minnesota history. It secures Mayo Clinic's status as a global medical destination and sets into motion the reinvention of the City of Rochester both physically and culturally, including the necessity for the city to take a new look at how it procures and utilizes energy. Senator Senjem has played an active role in the Minnesota/Germany energy policy exchange program. From these experiences he has come to understand the reasons, reality, and importance of looking at energy transformation from an economic perspective. His personal ambition is to take what he has learned and continues to learn from his Germany experiences and work with others towards building a new energy based economy in Southeastern Minnesota.

Will Seuffert* is executive director of the Environmental Quality Board (EQB) and has served in that role since 2013. EQB is made up of nine agency heads and eight citizen members. The Board provides leadership and coordination across agencies on priority environmental issues that are multi-jurisdictional, and multi-dimensional. It also provides opportunities for public access and engagement. Before joining the EQB, Seuffert served as a senior policy advisor to Minnesota Governor Dayton, working closely with the cabinet agencies and legislators involved in energy, environment, and agriculture. Prior to his work for Governor Dayton, Seuffert was a committee administrator for the Minnesota Senate Energy, Utilities, Technology and Communications Committee. In that role, Seuffert worked on legislation to advance renewable energy and conservation. He holds a master's in international peace and conflict resolution from American University and a bachelor's degree in political science from Eckerd College.

Ken Smith* has been the president and CEO of District Energy St. Paul and its affiliate Ever-Green Energy since 2010. A recognized leader in community and campus scale energy systems, Ken is actively

engaged in industry, policy, and academic forums addressing our energy future. He is a frequent speaker nationally and internationally, and is regularly requested to brief local, state, and federal planners, policy makers, and regulators. For the past seven years, Smith has participated in an energy policy exchange between Germany and the State of Minnesota. Prior to joining District Energy St. Paul and Ever-Green Energy in 2006, Smith worked globally in the engineering and construction industry for over 20 years, planning, designing and implementing highly reliable energy projects, including central plants, microgrids, datacenters, and other mission critical facilities for advanced tech industry, campuses, international airports, and U.S. Department of Defense. Smith currently serves as vice president of the Midwest Renewable Energy Tracking System Board of Directors (M-RETS), executive board member of the Saint Paul Area Chamber of Commerce, and is a fellow of the University of Minnesota's Institute on the Environment (IonE). From 2014-2015, he served as chair of the International District Energy Association board of directors. He has a bachelor's degree in electrical engineering from North Dakota State University and a master's degree in business administration from the University of St. Thomas in Minneapolis, MN.

Tim Sexton is chief sustainability officer at the Minnesota Department of Transportation. He was appointed in September 2018 and is the agency's first chief sustainability officer. Assigned to the Commissioner's Staff, he provides executive leadership and oversight of agency sustainability programs that help MnDOT explore and adopt new ways to reduce our environmental impact and adapt to the changing climate. Tim will work closely with senior leadership and key partners and stakeholders both inside and outside the agency to champion long-term, cost-effective investments for improved energy efficiency, renewable energy, transportation electrification and resource conservation. Tim joined MnDOT as an assistant office director in the Office of Environmental Stewardship in 2014 where he directed the construction and operations section, which includes blowing and drifting snow control, roadside vegetation management, environmental investigation, environmental modeling and testing, and the erosion control and stormwater management units. He also chairs the agency Sustainable Transportation Steering Committee and has completed a mobility study as Office Director in the Office of Transit and Active Transportation. Nationally, Sexton chairs the Transportation Research Board's committee on transportation sustainability and co-chairs the Transportation Working Group of the US Climate Alliance. For the American Association of State Highway and Transportation Officials (AASHTO), he serves on the steering committee of the Committee on Environment and Sustainability and the Committee of Transportation System Security and Resilience. Before coming to MnDOT, Tim managed climate policy at the Washington State DOT, built green/vegetated roofs in Germany, and founded a land-use planning firm in Iowa. He studied at the University of Iowa, where he earned a B.A. in anthropology, certificate in international business, M.S. in urban and regional planning, and MPH in environmental health.

Brent Svenby* is a senior administrative analyst for the City of Rochester within the City Administrator's Office. He oversees the energy & sustainability director for the City which is a shared position with the Destination Medical Center Economic Development Agency. In addition, Svenby is responsible for overseeing the city's targeted business enterprise utilization plan and staffing the heritage preservation commission. Svenby also assists in redevelopment and

affordable housing projects requesting tax increment financing. Prior to his role in the City Administrator's Office, he worked as a planner at the Rochester-Olmsted County Department for over 17 years. He holds a bachelor's degree in geography and a master's degree in urban planning from Minnesota State University- Mankato.
Connie Taillon

Brian Volkmann is the executive vice president and chief financial officer of Affinity Plus Federal Credit Union, a not-for-profit financial cooperative serving over 180,000 members with 28 locations throughout Minnesota. Affinity Plus is a cooperative that believes in strengthening communities through partnerships with local organizations and improving the financial well-being of consumers. Volkmann currently oversees all aspects of accounting, finance, business performance, investor relations, lending and quality assurance. He joined Affinity Plus in 2000 as a branch manager, and during his career has held various leadership positions within the credit union. Volkmann spear-headed numerous new lending initiatives at Affinity Plus, including the launch of innovative real estate products, student loans and numerous consumer lending products. Volkmann's belief is that credit unions can play a vital role today in bridging the gap in the sustainable energy market by offering financial products to people and communities in order to help achieve their goals. Brian serves on several boards, both within the credit union industry and the community. He is the co-chair of the Minnesota Business Ethics Award and is on the Board of Financial Executives International – Twin Cities. Volkmann holds a bachelor's degree in management from Minnesota State University Mankato, and a MBA and Master of Science in Finance from Kelley School of Business.

David Wanberg is the city planner for the City of Faribault (pop. 23,000). The City has a master plan "Community Vision—2040" that emphasizes economic development and sustainability. Faribault was selected by Xcel Energy to be a Partners in Energy community in Minnesota and the city is working to reduce community-wide energy expenditure by 1 percent annually from business as usual (2015 baseline). By 2040, this is estimated to save Faribault residents and businesses over \$8 million a year, with cumulative savings of over \$100 million. David will meet with the delegation during their visit to Faribault.

Dr. Rolf Weberg directs the University of Minnesota Duluth's Natural Resources Research Institute. He is responsible for the operation, integration and performance of this applied research institute and its 130 full time and 40+ part time and student employees to drive the mission of "fostering development of Minnesota's natural resources in an environmentally sound manner to promote private sector employment". In this capacity, NRRRI seeks to develop recognition as model for interfacing the University of Minnesota with all state stakeholders to define and deliver research solutions balancing economic development with natural resource and environmental management. Dr. Weberg works to build and maintain relationships with Institute constituents, business leaders, agency partners and Minnesota's communities. Dr. Weberg grew up in Mankato, Minnesota and later attended the University of Minnesota Duluth where he graduated with a BS degree in chemistry (1982). He received a PhD in inorganic/organometallic chemistry from the University of Colorado, Boulder (1986). After two post-doctoral appointments, he embarked upon a 25-year career in the R&D division of the DuPont

Company. He left DuPont in 2014 as the global technology manager for DuPont's Building Innovations Business – Surfaces Division.

Jordan Wente is the enterprise sustainability program administrator at the State of Minnesota's Office of Enterprise Sustainability. Jordan's main duties pertain to data management, analysis, and the coordination of sustainability reporting across the 24 cabinet level agencies. In addition, he provides technical assistance and consulting on renewable energy and energy savings to the different state agencies. He recently moved back to Minnesota after finishing his graduate engineering degree in energy systems modelling at the Technical University of Denmark. Jordan is a 2014 Truman Scholar. He now lives in St. Paul, Minnesota. In his free time, he enjoys cross country skiing, hunting, and fermenting (sauerkraut, kimchi).

Kevin Wulf is the director of community relations and educated at Riverview Dairy. Wulf was born and raised on a beef and row crop farm in western Minnesota. He joined the Riverview team in 2007 after teaching fifth grade for eight years and works with the Human Resources team, primarily focusing on education and community relations. He enjoys teaching Riverview Academy classes to his coworkers around the themes of culture, safety, personal finance, leadership, teamwork, and continuous improvement. Kevin also spends time showing local, national and international guests around the operation.



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Friday, October 5, 2018 – Minneapolis

Day's Host: University of Minnesota, Institute on the Environment
Dr. Sabine Engel, director of international partnerships, IonE, U of MN [mobile: +1-612-501-6504]

morning *take GREEN LINE public transit to the U of M- St. Paul Campus*

Institute on the Environment
University of Minnesota
Learning and Environmental Sciences Building
1954 Buford Ave., room LES-R380
St. Paul, MN

9:00-10:30 AM morning session tba

11:00-2:15 PM CSM Minnesota and NRW Partners Workshop, Pt. 2

facilitators: **Marcus Müller**, deputy head, department of municipal and regional climate protection, EnergyAgency.NRW
Kristin Mroz, local government coordinator, Minnesota Environmental Quality Board

11:00-11:10 Welcome, agenda goals
11:10-11:50 Reports back from work visits with community partners
11:50-12:45 4 parallel group work tables—refine ideas of Monday's workshop & formulate steps
* e-mobility * renewables
* community education * efficient buildings
2 reporters per group table who will report back to group after lunch
12:45-1:10 *sandwich & salad lunch*
1:10-1:30 Reports back from topic tables
1:30-1:55 Next Steps for CSM group: goal setting & commitments
2:00 *workshop ends*

2:15 PM *public transit to Allianz Field stadium construction site (St. Paul Midway. Snelling Ave. light rail station)*

3:00-4:30 Tour of Allianz Field stadium – energy efficiency & sustainability at a sports facility
Justin Borrell, general manager, Allianz Field
Sean Sittnick, vice president of ticket sales, Minnesota United FC

4:30-7:00 *free time*

7:00-9:00 farewell dinner at Sabine's home (4453 43rd Ave. S., Minneapolis, MN 55406).

Saturday, October 7, 2017 – Wrap-Up & Departures

9:00-12:00 debrief & feedback (TownPlace Suites, Billiard Room)

12:00 *end of formal program; individual departures*

Together, we are smarter!

“Together, we are smarter!”—That’s one of the core beliefs driving the Climate-Smart Municipalities collaboration. How does it all stack up? What has changed because of it? Here are some comments from the Minnesota partnering cities and the partners in state government and the private sector.

“Warren is a changed community due to the CSM involvement. The experience opened our eyes to the different possibilities that can be implemented in a small Minnesota city. **We approach every project differently in terms of climate protection measures.** We are continually engaged in conversations that center around how can we be more energy efficient. What can be implemented to save residents and the city money? The thermal imaging program would not have been considered if it was not for the CSM opportunity.”

Shannon Mortenson, City Administrator
City of Warren

“You have shown us how to take charge of our future and to live in a responsible way using renewable and sustainable energy. The solutions you have found can be easily implemented here, but will take a cultural change in how we think about what we use and where it comes from. Education is the key to that cultural change and you have given us a great deal of information to share with our citizens. “

Blaine Hill, City Administrator, City of Morris

“The experience with the German project has **sparked a desire to incorporate a sustainability coordinator into the city organization,** promote e-mobility, and further our research into district energy systems.”

Mark Kotschevar, general manager,
Rochester Public Utilities

“This program has created a relationship that would not have been possible on our own and **has provided information sharing beyond anything we could experience here in Minnesota.** Germany’s energy system and public mindset related to climate protection differs from the US so drastically and that has been very interesting to learn about. We continue to apply what we learned from our Germany partners to our work at the City of Elk River. “

Cal Portner, City Administrator
City of Elk River

“This program has inspired the City of Duluth to set a carbon reduction goal of minus 80% by 2050. We have used this opportunity to develop our municipal energy plan. Inspired by our 2016 visit to Germany, we have developed strategies that have already resulted in a 10% reduction in GHG emissions for the municipality.”

Erik Birkeland, property & facilities manager,
City of Duluth

“The state’s role is evolving and is becoming more reliant on bottom-up, municipal-led, broad-based leadership. The state has **both increased capacities** in the Green Step Cities program **and has joined multi-state collaboratives** (Under 2 Coalition and US Climate Alliance) to accelerate progress on climate mitigation.”

Will Seuffert, executive director,
Environmental Quality Board

“Minnesota has come together as a state, bridging ideological differences, to implement a clean energy future for cities, rural communities, businesses, industry and individuals. The German experience has catalyzed this effort.”

Mike Reese, director for renewable energy,
West Central Research and Outreach Center,
University of Minnesota

“The CSM program has **jump started MN credit unions’ look at ways to encourage MN consumers to go green.** The involvement has led to the creation of several loan products and credit unions doing their own energy improvement upgrades.”

Brian Volkman, chief financial officer, Affinity
Plus Credit Union

The logo for CU GREEN features the text 'CU GREEN' in a bold, sans-serif font. To the right of 'CU' is a stylized green flower icon with multiple petals. Below the text is the tagline 'clean energy lending platform for Minnesotans' in a smaller, lowercase font.

clean energy lending platform for Minnesotans