

2016 Wisconsin Biogas Conference

When: Thursday August 4th, 8:00 am – 5:00 pm

Where: Chippewa Valley Technical College, Eau Claire, WI

Master of Ceremonies: Maria Redmond, Director, Wisconsin Office of Energy Innovation

Registration & Breakfast	8:00 – 9:00 am
Welcome and Introduction <i>Clint Fandrich, Wisconsin Office of Energy Innovation</i> <i>Wisconsin Assembly Representative Dana Wachs</i>	9:00 – 9:15 am
Keynote <i>Joe Kramer, GDS Associates, Inc.</i>	9:15 – 9:30 am
Panel #1- Biogas for Energy Production Moderator: Clint Fandrich, Wisconsin Office of Energy Innovation <i>Daniel S. Meccariello, Dynamic Group</i> <i>Nadeem Afghan, BIOFerm</i>	9:30 – 10:15 am
Break	10:15 – 10:30 am
Panel #2- Opportunities for Collaboration Moderator: Megan Levy, Wisconsin Office of Energy Innovation <i>John Haeckel, Founder & CEO, Clean Fuel Partners</i> <i>Bob Nagel, Holsum Dairy</i> <i>Zach Vruwink, Mayor, Wisconsin Rapids</i> <i>Jim Neitzel, Wisconsin Rapids</i>	10:30 – 11:15 am
Lunch Jolt session	11:15 am – 12:15 pm

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Breakout Sessions

12:15 – 2:15 pm

Session #1 Wisconsin Biogas Council

Cate Rahmlow, Wisconsin Economic Development Corporation

Session #2 Biogas products

Brian Langolf, University of Wisconsin, Oshkosh

Session #3 Nutrient trading/nutrient management

Tom Nowakowski, Wisconsin Department of Natural Resources

Rebecca Larson, University of Wisconsin-Madison

Panel #3- Ask the Experts

2:15 – 3:00 pm

Moderator: Andrew Werthmann, Eau Claire City Council

Megan Levy, Wisconsin Office of Energy Innovation

Wisconsin Assembly Representative Kathleen Bernier

Cameron Field, Michael Best & Associates

Tyler Huebner, RENEW Wisconsin

Conclusion and closing remarks

3:00 - 3:15 pm

Art Harrington, Godfrey & Kahn

Reception & Digester tour

3:15 – 5:00 pm

Refreshments provided

Discussion Panels

Panel 1: Biogas for Energy Production

Where is the most value for biogas energy? Are there particular industries that could benefit from using biogas as a fuel?

Participants will be apprised of recent studies or projects implemented for the production of heat, electricity, vehicle fuel, or other renewable fuels using biogas. Discussion will lead to key insight on where the state is headed when it comes to utilizing biogas.

Panel 2: Biogas Collaboration

What are the remaining challenges for forming partnerships involving biogas energy production?

Participants will be apprised of recent studies or projects implemented where partnerships were formed or strengthened by incorporating a biogas project. Speakers will highlight the advantages of collaborative partnerships in biogas projects that deliver tangible benefits for stakeholders.

Panel 3: Experts Panel

Where do you see the biogas industry going in the coming years?

Participants will learn what biogas project developers should think about before submitting a proposal. Experts will discuss what their organizations can offer those interested in biogas projects.

Breakout Sessions

Session 1 – Wisconsin Biogas Council

Many Wisconsin-based companies and organizations that comprise the state's biogas industry benefit from the industry representation of the American Biogas Council (ABC) on the national level. ABC works with organizations across the United States to promote biogas development through policy advocacy in Washington, DC and the establishment of forums to share system operation best practices and research. Even while Wisconsin is a national leader in anaerobic digester development, no such group exists on the state level to give a voice to this important industry within the state. This breakout session serves as an opportunity to formulate how a Wisconsin Biogas Council would look, who could lead it and how members would participate in its efforts.

Session 2 – Biogas Products

As the biogas industry in Wisconsin develops, more diverse applications of the bio-methane produced have changed how energy is produced. While electricity production has recently been the most common application, system operators have become more interested in using the gas to produce heat for their industrial processes, vehicle fuel for their transport fleets, and injection into existing natural gas pipeline networks. Recent developments even allow the production of bioplastics using biogas. This breakout session will explore the latest potential applications of biogas production and highlight some examples in Wisconsin.

Session 3 – Nutrient trading/nutrient management

In key areas of Wisconsin and around the country, fresh water resources have become more valuable for energy production, agriculture, industrial processes, tourism and general consumption. Does the biogas industry have a role in strengthening the sustainability of these valuable resources in Wisconsin's economy? This breakout session will outline some of the challenges facing ground and surface waters in the state and give attendees an opportunity to discuss programs that may play a role in securing our state's abundant water resources.

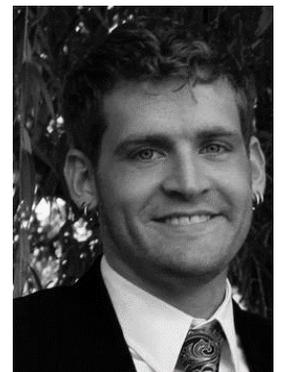
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Speakers



Representative Dana Wachs was born and raised in Eau Claire. A graduate of Eau Claire Memorial High School, Marquette University (BA) and Valparaiso Law School (JD), he has served as small business owner and trial attorney in Eau Claire for over 25 years. He began his service in government as a member of the Eau Claire City Council, and was elected to the State Assembly in 2012 to represent the 91st District. He is currently the ranking Democrat on the Committee on Judiciary and the Committee on Colleges and Universities. He is married with three adult children and lives in Eau Claire with his wife, Beverly and their dog, Artie.

Clint Fandrich is a native of Wisconsin and a graduate of the University of Wisconsin-Madison (BA). He began working at the Wisconsin Office of Energy Innovation in 2014 and soon completed a comprehensive survey of all biogas facilities in the state to assess operational barriers and gain perspectives on the state of the industry. Clint administers programs through funding from USDOE and USDA to support Wisconsin's robust biogas and alternative transportation fuel industries. He lives in Madison with his wife, Lili.



Joe Kramer is a Project Consultant for GDS Associates. He is an expert researcher, project manager and industry leader focused on the intersection between energy, environment, economics, and technology working to identify policies and strategies that optimize efficiency of resource use and environmental outcomes. He has over 22 years of experience doing energy and environmental research examining issues associated with energy generation, rate design, agriculture, technology diffusion, and efficiency program implementation. He has produced five biogas casebooks that set the standard for communicating experience using anaerobic digestion technologies in the U.S.

Joe has had leadership roles in numerous government, educational and public interest advisory groups including as a U.S. EPA AgSTAR State Program Partner. He has a BS in Economics from the University of Wisconsin – Madison, and an MS in Environmental Science and Policy from the University of Wisconsin – Green Bay.



Maria Redmond has worked in the State of Wisconsin for 15 years. She has an extensive knowledgebase of renewable energy, alternative fuels, biofuels and advanced vehicle technologies. Maria specializes in alternative fuels, biofuels, and advanced vehicle technologies and has helped the energy office secure and manage nearly \$84 million in federal grant funding for energy related programs for local governments and businesses in Wisconsin. She also managed a \$15 million program to advance the use of alternative fuels and advanced vehicle technologies for both public and private fleets throughout the state. Maria currently serves as Director for the newly created Office of Energy Innovation (November 2015), now home to a number of robust and exciting energy programs including Focus on Energy, the Municipal Energy Efficiency Technical Assistance Program, Biofuels Retail Advancement in Wisconsin Transportation, the State Energy Program and the Clean Energy Manufacturing Revolving Loan Fund.



Daniel S. Meccariello has been involved in the design, engineering, and operations of organic waste facilities throughout his entire professional career. A mechanical engineer by trade, Dan leads the engineering group overseeing process system design, material transfer, site logistics, and technology implementation. He has led the complete design of (8) greenfield anaerobic digestion and manure waste water treatment facilities. Since 2014, Dan has served as the COO of Dynamic Systems Management, LLC managing all day to day business operations. Dan is also an accomplished project manager and estimator, having managed in excess of a \$100M in projects in his career. In 2011, Dan was a founding partner of US Biogas LLC and is now a partner in Dynamic.

Steven Sell has a Bachelor of Science degree in Biological Systems Engineering from the University of Wisconsin Madison and a Master of Science degree in Agricultural and Biosystems Engineering from Iowa State University. He specializes in the area of co-substrate anaerobic digestion and has significant experience in the design and commissioning of BIOFerm anaerobic digestion technologies including his role as a project lead for the commissioning of the first dry fermentation system in the U.S.





A graduate of the University of Wisconsin, Madison; **Megan Levy** has spent a decade working with building energy efficiency both in the low-income weatherization program with Office of Energy Innovation (OEI). Megan oversees the Energy Independent Communities program in Wisconsin, comprised of more than 147 member communities. Megan is the manager of OEI's new Municipal Energy Efficiency Technical Assistance Program (MEETAP) providing the necessary technical assistance to municipalities, Tribes, and schools across the state interested in executing successful energy efficiency projects. Since joining the Office, Megan has won and managed more than \$5M of US Department of Energy grants. A chanteuse for the last 20 years, Megan performs jazz, jump blues, and swing all over Wisconsin under the moniker Madison Red, with her four-piece band.



John Haeckel is the founder and CEO of Clean Fuel Partners, LLC which has been active in the pursuit, acquisition, development and operation of renewable energy ecosystems since January 2015. Prior to founding Clean Fuel, John was an investment banker and corporate executive. As a banker, he specialized in financial restructurings of large corporations in financial distress, including Chrysler and the maker of Wonder Bread and Hostess products. As an executive, he was chief financial officer of Broadway Department Stores, a California-based company with 82 department stores. Following this role, he joined the predecessor to CB Richard Ellis as CFO and worked with the CEO to build the first global real estate services firm.

Bob Nagel, MS DVM, is a partner and general manager at Holsum Dairies LLC in Hilbert, WI. Holsum dairies were an early adopter of methane digesters and currently produces over 2 Megawatts of electricity. Bob holds a B.S. from the University of Wisconsin-River Falls and a Master's degree in reproductive biology from the University of Missouri-Columbia in 1993. He then completed veterinary certification in 1997 at the University of Wisconsin-School of Veterinary Medicine. He practiced veterinary medicine from 1997 until joining Holsum in 2007.





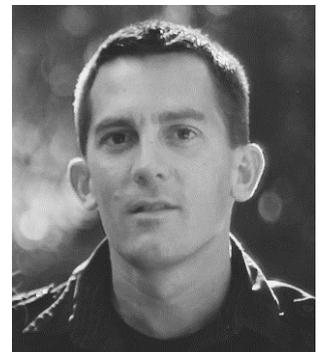
Mayor Zach Vruwink was first elected in April 2012 as Wisconsin Rapids' 22nd and youngest mayor in a historic four-way election and re-elected in 2014 & 16. A Wisconsin Rapids native and business owner, Zach is a proud graduate of Lincoln High School and of the University of Wisconsin-Stevens Point. He holds degrees in Political Science, Public Administration and Policy Analysis. Vruwink is passionate about the outdoors, recreation, technology, entrepreneurship, citizen engagement and public service.

Jim Neitzel has been employed with the City of Wisconsin Rapids for 37 years, serving as Construction Supervisor for 19 years. In 2005, Jim was awarded the job of Wastewater Superintendent. He is a WDNR Certified Grade (4) Operator and acted as the owner's representative in the Wisconsin Rapids \$28,000,000 WWTP expansion through the years 2008-2011 which included the installation of a 325K bio/natural gas Jenbacher Generator that includes heat capture for an efficiency rating of 78%.



As a Director for Sector Strategy Development at Wisconsin Economic Development Corporation (WEDC), **Cate Rahmlow** guides private/public partnerships in the Water Technologies, Water/Energy, Food & Beverage, and Agriculture sectors. WEDC, The Water Council, and Cate have been nationally recognized for innovation leadership in technology based economic development, and in corporate real estate development. Cate's education includes an MBA from the University of St. Thomas in Minnesota and Bachelor's degree from Creighton University in Nebraska.

Brian Langolf received his master's in microbiology in 2004 from the University of Wisconsin Oshkosh. From 2004 to 2010 he worked as a research scientist at Kimberly-Clark Corporation. Today he serves as the director of UW-O's Biogas Program, overseeing technical aspects of three anaerobic digesters. The program supports many academic and sustainability programs on campus and has helped UW-Oshkosh achieve their current ranking as the 3rd greenest university in the nation by the Sierra Club's Cool Schools list. He is also responsible for expansion of our organic diversion efforts and development of value added end products.





Tom Nowakowski has been with the DNR since 1987. Tom is currently the Energy Sector Development specialist in DNR's Sustainability and Business Support section, focused on building relationships with the energy industry, trade associations, and other state and local agencies. In his time with DNR, Tom has worked as a meteorologist with the Bureau of Air Management analyzing air quality impacts of industrial sources; and the Bureau of Community Financial Assistance, as the statewide grant manager for the lakes, rivers, and recycling grant programs. As the Project Manager for DNR's Office of Pollution Prevention, he developed the "Southeast Wisconsin Toxics Reduction Project" to evaluate company wastes and associated costs over a broad spectrum of industries in Southeast

Wisconsin.

Dr. Rebecca Larson is an Assistant Professor and Extension Specialist focusing on manure and agricultural by-products in the Biological Systems Engineering Department at the University of Wisconsin-Madison. Becky completed her B.S, M.S., and Ph.D. in Biosystems Engineering Department at Michigan State University. Her research and extension interests include all areas of agricultural by-products including manure management, manure handling systems, biological treatment systems, nutrient segregation, diffuse source pollution, agricultural sustainability, and waste- to-energy technologies including biogas production from anaerobic digestion. The main component of her work focuses on livestock manure where her efforts aim to increase the profitability and sustainability of food production systems while simultaneously reducing the environmental impact.



Andrew Werthmann has served on the Eau Claire City Council for eight years, representing the downtown district. He is the Midwest Representative for The Pew Charitable Trusts' Clean Energy Initiative which works with businesses, associations and non-profits to advocate for federal policy to strengthen the clean energy economy. He is a founder of the Forest Street Community Garden and an urban beekeeper.

Cameron Field is an environmental attorney at Michael Best & Friedrich LLP. Cameron brings a broad focus to his work advocating for clients in the agribusiness, food and beverage, and energy industries. He assists clients in navigating the state and federal regulatory process and evaluating strategic business decisions. Clients rely on Cameron for well-informed counsel on water and air permitting matters, as well as hazardous waste reporting and liability questions.





Representative Kathleen Bernier was born in Eau Claire and grew up in the Village of Lake Hallie. Kathy worked a variety of part- and limited-term jobs while raising children and later began studying business at the University of Wisconsin-Eau Claire. Kathy earned a degree in Political Science in 1998 and was soon elected Chippewa County Clerk and served in that position until 2011. She has also served as Village Trustee for the Village of Lake Hallie. Representative Bernier was elected to the Wisconsin State Assembly and took office in 2011. She serves as the Chair of the Campaigns and Elections Committee.

Tyler Huebner joined RENEW Wisconsin as the organization's 3rd Executive Director in June 2013. After graduating in electrical engineering from the University of Iowa, Tyler earned his Master's at Stanford University in the Atmosphere & Energy Program, where he also co-founded the major conference and student group Energy Crossroads (now Stanford Energy Club) focused on the intersection between business, national security, and environmental interests in clean energy. He has been a consultant with ICF International working on energy efficiency projects with utility companies and the U.S. EPA; led grant programs at the U.S. Department of Energy in low-income weatherization, and worked for the State of Wisconsin's Division of Energy Services prior to joining RENEW. In his spare time, Tyler enjoys spending time with family, wife Heather and daughter Emma, friends, and exploring Wisconsin by bicycle.



Art Harrington is a member of the environmental/energy strategies team at Godfrey & Kahn, s.c. He has had the privilege to provide legal advice for permitting for a variety of renewable energy biogas projects including waste to energy/pyrolysis and large scale digester projects. He is an Adjunct Professor of Law at the Marquette Law School where he teaches an Energy Law work shop. He also has the privilege to serve on numerous DNR Advisory committees including the Phosphorus and Air Management Advisory Committees.