

Conference & Expo Adopting Renewable Biomass Heat: Investing in Tomorrow's Sustainable Communities

October 11-13, 2016 Island Resort & Casino Harris, Michigan

Heating the Midwest with Renewable Biomass

Heating the Midwest (HTM) is a group of volunteers with a serious interest in growing awareness and usage of biomass thermal fuel for heat in the Midwest.

Our Mission: "To advance biomass thermal heating in the Midwest for a more sustainable future, while improving the economic, environmental and social well-being of the region."

Driven and directed by a steering committee, Heating the Midwest includes industry, government, non-profit organizations, university and tribal representatives. It is an group of advocates working to promote biomass to a larger constituency, including government policymakers and entities, consumers and businesses in the Midwest.

Heating the Midwest Officers: President, Tony "T.J." Morice Marth Wood Shaving Supply, Inc. tj@marthwood.com

Steering Committee: Bill Cook, Michigan State University Extension, Michigan Statewide Energy Team

cookwi@anr.msu.edu

Stacy Cook, Minnesota Koda Energy scook@kodaenergy.com

Scott Bagley, Ohio Light on the Land Services LLC Scott@llsathens.com

Action Team Chairs: **Biomass Resources and Demographics Becky Philipp** Agricultural Utilization Research Institute bphilipp@auri.org

Biomass Policy and Benefits Marcus Grubbs, University of Minnesota, **Humphrey School of Public Affairs** grubbs022@umn.edu

Share the Vision

We propose that 15% of all thermal energy in the Midwest come from renewable energy sources with 10% derived from sustainably produced biomass by 2025. The remainder of this energy would come from solar thermal and geothermal sources. This shift in our sources for thermal energy will produce extraordinary economic, social, and environmental benefits for the Midwest, which currently relies on fossil fuel for 97% of its thermal energy.



Vice President, Chuck Gagner Northwest Manufacturing, Inc./ WoodMaster cgagner@woodmaster.com

Raymond Miller, Michigan State University Extension, Michigan Statewide Energy Team rmiller@anr.msu.edu

Gregg Mast, Minnesota Earthtech Energy gregg_mast@earthtechenergy.com

> Chris Wiberg, Wisconsin **Timber Products Inspection** cwiberg@tpinspection.com

Biomass Resources and Demographics Alan Doering Agricultural Utilization Research Institute adoering@auri.org

Secretary/Treasurer, Bruno Zagar Fond du Lac Band of Lake Superior Chippewa BrunoZagar@FDLREZ.COM

Brian Brashaw, Minnesota **USDA Forest Service** bbrashaw@fs.fed.us

Becky Philipp, Minnesota Agricultural Utilization Research Institute bphilipp@auri.org

Adam Sherman, Federal/National **Biomass Energy Resource Center** asherman@biomasscenter.org

Biomass Combustion Technology Andrew Murray Round for a Reason LLC andrew.treeguy@gmail.com





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WELCOME!

Dear Conference Attendees

On behalf of the Conference Planning and Steering Committees for Heating the Midwest (HTM), I welcome you to our 2016 Conference & Expo. We all agreed that the priority of this grassroots effort was to collaborate with all states in the Midwest. This being so, we were excited when our colleagues in Michigan were willing to host this year's event in the Upper Peninsula! While the Escanaba area is smaller and more rural than past locations, we are confident this is the exact type of surroundings in which biomass excels.

This past year has been one of transition for Heating the Midwest's efforts, which brought oversight and management back to the region via our relationship with the Agricultural Utilization Research Institute (AURI) in Minnesota and the establishment of our 501(c)(3) non-profit status in Wisconsin. You will notice that much of this year's conference is focused on the concept of *Breaking Through Market Barriers*. We all face this important issue, regardless of where our respective businesses and organizations reside along the value chain. I am confident everyone will benefit from the knowledgeable speakers in this year's program.

Another item of note from the past year is the new Vision on the website (http://heatingthemidwest.org), developed via an economic study we conducted, which illustrates that over 14 million homes and businesses in the Midwest are not connected to the natural gas grid. If we could convert just 10% of those users, as noted in the Vision document, the number of dollars that stay in the Midwest region would increase significantly.

In closing, I want to thank everyone for your support and participation in this conference. Whether you are a co-host, sponsor, exhibitor, speaker or registrant, you are part of an important community that is vital to growing this market and distributing educational information to generate support for the continuation of clean and cost-effective biomass heat implementation.

Best Regards, Tony "T.J." Morice, President, Heating the Midwest Incorporated

CONFERENCE PLANNING COMMITTEE

Ray Miller, Michigan State University

rmiller@msu.edu, Conference Planning Committee Co-chair, Logistics

Bill Cook, Michigan State University cookw@msu.edu, Conference Planning Committee Co-chair, Logistics Chair

Brian Brashaw, USDA Forest Service bbrashaw@fs.fed.us, Program Chair, Sponsor/Vendor

Sabina Dhungana, Wisconsin Department of Natural Resources sabina.dhungana@wisconsin.gov, Program, Sponsor/Vendor

Chuck Gagner, Northwest Manufacturing Inc./WoodMaster cgagner@woodmaster.com, *Marketing/Advertising Chair*

Brenda Haskill, Michigan Department of Natural Resources haskillB@michigan.gov, *Sponsor/Vendor*

Rick Kinsey, Messersmith Manufacturing, Inc. sales@burnchips.com, *Program, Sponsor/Vendor*

Kelsey Loeffler, Northwest Manufacturing Inc./WoodMaster kelseyg@woodmaster.com, *Marketing/Advertising Co-chair*

Ryan Malich, Twin Ports Testing ryan.malich@twinportstesting.com, *Marketing/Advertising*

Gregg Mast, Earthtech Energy gregg_mast@earthtechenergy.com, *Program*

Tony "T.J." Morice, Marth Wood Shaving Supply, Inc. tj@marthwood.com, *Program, Logistics, Marketing/Advertising*

Andrew Murray, Round for a Reason, LLC andrew.treeguy@gmail.com, Planning

Abdou Niang, Agricultural Utilization Research Institute aniang@auri.org, Sponsor/Vendor

Don Peterson, Wood Education & Resource Center rrsllc@sbcglobal.net, *Sponsor/Vendor*

Becky Philipp, Agricultural Utilization Research Institute bphilipp@auri.org, *Program, Sponsor/Vendor Co-chair, Marketing/ Advertising*

Mark Rudnicki, Michigan Techological University mrudnick@mtu.edu, Sponsor/Vendor

Scott Sanford, University of Wisconsin sasanford@wisc.edu, Program, Sponsor/Vendor

Ann Sarnecki, USDA Forest Service asarnecki@fs.fed.us, Sponsor/Vendor, Marketing/Advertising

Dan Skogen, Agricultural Utilization Research Institute dskogen@auri.org, *Program*

Adam Smith, Nebraska Forest Service asmith11@unl.edu, *Planning*

Al Steele, USDA Forest Service asteele@fs.fed.us, *Program*

Mike Troge, Oneida Nation mtroge@oneidanation.org, *Program, Marketing/Advertising*

Chris Wiberg, Timber Products Inspection cwiberg@tpinspection.com, Sponsor/Vendor

Bruno Zagar, Fond du Lac Band of Lake Superior Chippewa brunozagar@fdlrez.com, *Sponsor/Vendor Chair*

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Energy Team

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Lunch Sponsors

Marth Wood Shaving Supply, Inc.

Conference Exhibitors

Agricultural Utilization Research Institute (AURI)

Cottingham Butler

University of Minnesota Duluth, Natural Resources Research Institute (NRRI)

Bronze Sponsors

Michigan Agency for Energy Michigan Department of Natural Resources

Rotochopper, Inc.

Wisconsin Department of Natural Resources

EXPO HALL

Exhibitors

(See pages 12 and 13 for exhibitors descriptions)

USDA Forest Service 1 2 Michigan Agency for Energy University of Minnesota Duluth, Natural 13 Resources Research Institute 14 Michigan Department of Natural Resources Central Upper Peninsula Planning & Development 15 **Regional Commission** 17 Heating the Midwest Co-hosts 18 Cottingham & Butler Wisconsin Department of Natural Resources 19 **Timber Products Inspection** 20 Michigan Statewide Wood Energy Team 21 22 Minnesota Statewide Wood Energy Team/ Minnesota Department of Natural Resources 23 Marth Wood Shaving Supply, Inc. Northwest Manufacturing, Inc./WoodMaster 24 25 Agricultural Utilization Research Institute 27 Messersmith Manufacturing, Inc. 28 & 29 Wisconsin Statewide Wood Energy Team 30 Indeck Energy

Outdoor exhibits will be open during Expo Hall hours.

Northwest Manufacturing, Inc./WoodMaster

Messersmith Manufacturing, Inc.





AGENDA AT A GLANCE

	Tue :day , Oc	tober 11	Wednesday, October 12	Thursday, October 13
7:30 AM			Registration Opens &	Breakfast
7:45 AM			Continental	Expo Hall Opens (8:00 AM)
B-ID AM			Breakfast	
8-15 AM			Expo Hall Opens (8:00 AM)	
8-30 AM				
E45 AM			Morning	
9:00 AM			Plenary	
9:15 AM	Field	Tour		Morning
9:30 AM				Plenary
9:45 AM				
10-00 AM			Break & Expo	
10-15 AM				
10-30 AM			Morning	Break &
10-45 AM			Plenary	Ехро
11-10 AM			continued	Morning
11-15 AM				Plenary
11-30 AM				continued
11:45 AM			Lunch &	Closing Remarks
12:00 PM			Expo	Expo Hall Closes
12:15 PM				
12-30 PM				
12,45 PM				
1.00 PM			Afternoon	
1:15 PM			Session	
130 PM				
175 PM				
2:00 PM 2:15 PM				
2:13 PM			Basels & Sume	
235 PM			Break & Expo	
3.00 PM				
315 PM				
3-30 PM			Afternoon	
3,45 PM			Session	
4.00 PM			continued	
4:15 PM				
430 PM				
4:45 PM				
5.00 PM			Expo &	
5:15 PM		Registration	Cash Bar	
5:30 PM		Open	Expo Closes (6:00 PM)	
5x15 PM				
5:00 PM				
6:15 PM				
6-30 PM			Evening	
EalS PM	Vendor		Session	
7:00 PM	Reception			
7:15 PM				
7-30 PM				
7715 PM				1
8.00 PM				

AGENDA

Tuesday, October 11, 2016

- 7:45 AM Field Tour: Get Out and Kick the Tires (concludes at 4:00 PM) Messersmith Manufacturing Plant, Bark River, MI Verso Corporation CHP Boiler, Escanaba, MI Pinecrest Medical Care Facility, Powers, MI North Central Area School, Powers, MI
- 12:00 PM Vendor setup in Expo Hall
- 5:00 PM **Registration Opens in the Expo Gallery** (concludes at 7:00 PM)
- 6:00 PM **Vendor Reception in the Vendor Area** (All sponsors, exhibitors, conference registrants, and guests are invited to attendconcludes at 8:00 PM)

Wednesday, October 12, 2016

7:30 AM-7:15 PM

7:30 AM Registration opens with continental breakfast in the Vendor Area

Morning Plenary Session: Breaking Through Market Barriers (Conference Room)

- 8:30 AM **Opening Remarks Bill Cook,** Forester/Biologist, Michigan State University Extension, Escanaba, MI
- 8:45 AM Welcome to Michigan Dave Nyberg, Director, Northern Michigan Office of Governor Rick Snyder, Marquette, MI 9:00 AM Introductions - Tony "T.J." Morice, President, Heating the Midwest, Incorporated
- **Keynote: Regional impacts of advanced wood heat in New England Maura Adams,** Program Director, Northern Forest Center, Concord, NH
- 9:30 AM *What does the public hear when we say "wood energy?"- Sarah Mittlefehldt,* Assistant Professor of Environmental Studies & Sustainabillity, Northern Michigan University, Marquette, MI
- 10:00 AM Break & Expo
- 10:30 AM What reactions have Michigan communities had to wood energy? Stephen Gasteyer, Associate Professor of Sociology, Michigan State University, East Lansing, MI
- 10:50 AM What motivates consumers to buy advanced wood heating systems? Jennifer Cathcart, Consumer Insights Manager, Vermont Energy Investment Corp., Burlington, VT
- 11:10 AM How can we create and expand markets for advanced wood heating? Matt Birbeck, Senior Project Manager, Michigan State University, East Lansing MI
- 11:30 PM *Lunch in the Vendor Area*

Afternoon Panel Session: In the Clouds with Decision Makers and Developers

12:30 PM Panel: Way beyond your grandfather's wood stove What exactly is "advanced wood heat?" Listen to stories successful users tell. Moderator: Bill Cook. Forester/Bioloaist. Michigan State University. Escanaba, MI Advanced wood heat demvstified - Mark Knaebe, Forest Products Technologist, USDA Forest Products Laboratory. Madison, WI Success Story #1, Healthcare - Dave Vandermissen, Assistant Maintenance Supervisor, Pinecrest Medical Care Facility, Powers, MI Success Story #2, Rural school - Darrell Oman, Director of Support Services, North Dickinson County Schools, Felch, MI Success Story #3, Complex - Dr. Andrew Burton, Professor, Michigan Technological University, Houghton, MI 1:30 PM Panel: Going beyond the backyard wood pile Innovations in obtaining secure, reliable, sustainable, and affordable wood supplies. Moderator: Scott Sanford, Distinguished Outreach Specialist/UW Extension Ag Engineer, University of Wisconsin, Madison, WI Securing reliable, sustainable, affordable fuel supplies (understanding the upstream portion of the wood supply chain) Wayne Stanley, Biomass Fuels Procurement Manager, Domtar Paper Company, Rothschild, WI *Innovations in the wood supply chain (creative opportunities in the downstream portion of the wood supply chain)* Brett Hogarth, Head of Business Development, Biomass Consulting Group, Ecostrat, Toronto, ON *Connecting sellers with buyers* Dave Neumann, Forest Products Utilization and Marketing Specialist, Michigan Department of Natural Resources, Lansing, MI

AGENDA 2:30 PM Break & Expo 3:00 PM Panel: Find the value beyond the BTU Advanced wood energy has other values to the user, the community, the region, and the world. Moderator: Brian Brashaw, Program Manager, USDA Forest Service, Madison, WI Healthy forests, industries, and communities, Brian Brashaw, Program Manager, USDA Forest Service, Madison, WI Combined heat and power. Tom Wilson, Principal, Wilson Engineering, Meadville, PA Biomass coolina. Michael Sparby, Senior Project Strategist, Agricultural Utilization Research Institute, Waseca, MN Clear skies, blue water, and green carbon. Kathy Halvorsen, Professor, Michigan Technological University, Houghton, MI 4:00 PM Panel: Incentivizing and financing the future Creating the policy and finance climate needed for success. Co-Moderators: Nan Larson, Director of Innovative Networks, and Marcus Grubbs, Market & Biomass Research Specialist, Agricultural Utilization Research Institute, Marshall, MN Raising capital. Dennis West, President, Northern Initiatives, Marquette, MI Incentive programs, grants, and loans. James Yoder, Area Specialist, USDA Rural Development, Escanaba, MI Policy successes and failures. Tim Baye, State Energy Specialist, University of Wisconsin Extension, Madison, WI 5:00 PM Expo & Cash Bar (concludes at 6:00 PM) - Dinner on your own Evening Session: The Ins and Outs of Commercial Biomass Boilers and Handling Systems (Conference Room, 5:45-7:15 PM) 5:45 PM **Commercial pellet systems and pellet storage** Grant Gagner, Sales Manager, Northwest Manufacturing, Inc./WoodMaster, Red Lake Falls, MN 6:30 PM Commercial chip systems and fuel handling Gerry Guard, General Manager, Messersmith Manufacturing, Inc., Bark River, MI Thursday, October 13, 2016 (7:30 AM-12:00 PM) 7:30 AM Conference opens with continental breakfast in the Vendor Area Morning Plenary: Defeating the Biomass Blues (Conference Room) 8:30 AMHow far have we already come, and where do we go next? Realizing a sustainable advanced biomass thermal industry Charlie Niebling, Prinicpal & Partner, Innovative Natural Resource Solutions, LLC, Boscawen, NH Tell us what keeps you up at night? What gives you hope for the future? 9:30 AM National Updates Panel - What is happening in congress, agencies, and national associations? Julie Tucker, National Lead for Renewable Wood Energy, USDA Forest Service, Washington, D.C. Jeff Serfass, Executive Director, Biomass Thermal Energy Council, Washington, D.C. Tim Portz, Executive Editor, Biomass Magazine, Biodiesel Magazine, Ethanol Producer Magazine; Vice President of Content, BBI International, Grand Forks, ND John Ackerly, President, Alliance for Green Heat, Takoma Park, MD 10:30 AM **Break and Expo** 11:00 AM State Updates Panel - What is happening in the Midwestern states? -Michigan-Bill Cook, Forester/Biologist, Michigan State University Extension, Escanaba, MI (with Stephen Gasteyer, Associate Professor of Sociology, Michigan State University, East Lansing, MI) -Wisconsin-Scott Sanford, Distinguished Outreach Specialist Distinguished Outreach Specialist/UW Extension Ag Engineer, University of Wisconsin, Madison, WI (with Tim Baye, Professor, University of Wisconsin-Extension, Madison, WI) -Minnesota-Mark Lindquist, Biofuel Program Manager, Minnesota Department of Natural Resources, St. Paul, MN Closing Remarks (Conference Closes at 12:00 PM) 11:45 AM

Tony "T.J." Morice, President, Heating the Midwest, Incorporated

CONFERENCE CO-HOSTS



BBI International

Biomass Magazine is a monthly trade publication tailored to serve compa-

nies and organizations engaged in producing or utilizing biomass power and heat, advanced biofuels, biogas, wood pellets, and biobased chemicals. In addition to policy, regulation, project finance, technology and plant management, the publication maintains a core editorial focus on biomass logistics: generating, cultivating, collecting, transporting, processing, marketing, procuring, and utilizing sustainable biomass.

BTEC Biomass Thermal Energy Council

Biomass Thermal Energy Council

The Biomass Thermal Energy Council (BTEC) is an association of biomass fuel producers, appliance manufacturers

and distributors, supply chain companies, and non-profit organizations that view biomass thermal energy as a renewable, responsible, clean and energy-efficient pathway to meeting America's energy needs. BTEC engages in research, education, and public advocacy for the fast-growing biomass thermal energy industry. For more information, visit www.biomassthermal.org.



Central Upper Peninsula Planning and Development Regional Commission

CUPPAD regularly assists communities with the daunting task of finding

sources of funding for projects that do not qualify for a government grant. In addition to regularly notifying local units of government about funding opportunities, CUPPAD maintains information on various foundations that may provide funds, promotional items for fund-raising activities, and technical assistance.



Delta County Economic Development Alliance

The Delta County EDA is a resource for business attraction, retention, and expansion. We

provide timely and accurate information on nearly any business-related aspect of Delta County. We work with companies with hundreds of employees to entrepreneurial start-ups. We serve as a "one-stop" shop for business and site selectors.

DOVETAIL PARTNERS INC.

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Dovetail Partners provides authoritative nformation about

information about nmental decisions,

the impacts and trade-offs of environmental decisions, including consumption choices, land use, and policy alternatives. Dovetail is a highly skilled team that fosters sustainability and responsible behaviors by collaborating to develop unique concepts, systems, models and programs. Dovetail Partners is a 501(c)(3) nonprofit corporation.



Pellet Fuels Institute

The Pellet Fuels Institute (PFI) is a North American trade association promoting energy independence through the efficient use of clean, renewable, densified biomass fuel. The organization exists in order to: create

and represent the ultimate expertise in the densified biomass fuel industry; coordinate and integrate the needs of raw material sources, equipment suppliers and consultants, fuel producers, appliance manufacturers, and distribution entities; and educate, disseminate, and promote the benefits of densified biomass fuel technology. PFI is comprised of nearly 100 member companies including fuel manufacturers and equipment suppliers.



Western Upper Peninsula Planning & Development Region

Our mission is to foster stable and diversified economies in the Western Upper Peninsula. Since 1968 the staff of the Western Upper Peninsula Planning & Development Region (WUPPDR) office has been providing general planning support to the western six counties of Michigan's Upper Peninsula through its many programs, projects and services.



www.heatingthemidwest.org



John Ackerly

John Ackerly is the founder and President of Alliance for Green Heat, a non-profit that promotes cleaner and more efficient residential wood and pellet heating. In 2011, he founded the Wood Stove Design Challenge, a semi-annual technology competition that promotes innovation in stove design. He serves on the Board of Directors of the Biomass Thermal Energy Council and the Steering Committee of the Northeast Biomass

Thermal Working Group. He attended Dartmouth College and American University Law School. He is an avid rock climber, skier and wood stove aficionado. He lives in Takoma Park, Maryland.



Maura Adams

Maura Adams is a program director at the Northern Forest Center, a non-profit organization that builds community and economic vitality while fostering sound forest stewardship across the Northern Forest of Vermont , New York , New Hampshire, and Maine. Maura is a Wisconsin native and graduate of the University of Wisconsin-Madison and Yale School of Forestry and Environmental Studies. She lives in Concord,

New Hampshire.



Tim Baye

Tim Baye is a Professor of Business Development & State Energy Specialist, University of Wisconsin-Extension. His research & educational programs serve renewable energy executives, professionals & policy leaders. He has over 30 years experience in industrial renewable energy projects, primarily biomass & biogas, in both executive & advisory capacities. Baye holds a senior position with ReCon Associates, an energy & project development consultancy. ReCon's

clients include: renewable energy, agri-business & manufacturing companies, the Open Society Institute, U.S.DOE, USDA, U.S.AID & World Bank. ReCon's practice experience includes biorefinery, wind, solar & biomass projects in 45 countries.



Matt Birbeck

Prior to joining the Michigan State University Product Center for Food, Ag, Bio, Matthew Birbeck worked in the agricultural industry for over 20 years in England and Central Africa. Primarily managing large arable farming operations for various private companies, he spent 10 years in Zambia as General Manager for Zambezi Ranching and Cropping Ltd, growing large scale commodity crops and supplying export vegetables for supermarket

chains in Europe. He joined the MSU Product Center in 2005 as Marketing and Supply Chain Specialist helping Michigan's new and existing agricultural and food businesses create value added products and enterprises.



Brian Brashaw

Brian Brashaw is the Program Manager for the Forest Products Marketing Unit (FPMU), at the USDA Forest Products Laboratory in Madison, Wisconsin. FPMU's mission is to work collaboratively and strategically with Forest Service and external partners to advance high-value, high-volume markets for woody biomass. FPMU focuses on utilization and marketing opportunities for products and residues from forest timber harvest.

land restoration activities, hazardous fuels reduction, natural disaster recovery, and urban forestry. Utilization and marketing emphasis areas include green building, wood energy, cellulosic nanomaterials, and technical support for existing industry.



Dr. Andrew Burton

Dr. Andrew Burton is a professor of forest ecology in the School of Forest Resources and Environmental Science at Michigan Technological University, where he teaches Forest Ecology and Advanced Terrestrial Ecology. His research examines the effects of global change factors on carbon and nutrient cycling, stand health and productivity, and below ground processes in forest ecosystems. Dr. Burton is Director of the Ecosystem Science

Center at Michigan Tech and the former Director of the Ford Center and Forest, where cordwood boiler systems were installed in 2015 in order to reduce heating costs and use of fossil fuels.



Jennifer Cathcart

Jennifer Cathcart leads the Consumer Insights team at Vermont Energy Investment Corporation. In this role, she combines her expertise in traditional customer research methodologies with the Human-Centered Design approach to help clients develop high-impact energy efficiency programs, make informed decisions, and effectively message to customers. Jennifer has an MBA from UC-Berkeley and is an adjunct professor who

teaches courses on Design Thinking and Consumer Behavior.



Bill Cook

Bill Cook is an Upper Peninsula Extension Forester & Wildlife Biologist for Michigan State University. Since 1997, Bill has worked with regional private forest owners, natural resource agencies & industries, and within public education communities. Recently, he has spent a considerable amount of time with oak wilt control projects and with woodbased thermal energy. He has lived, traveled, and played across the United States and has

international forestry experience in Germany, Great Britain, Malaysia, Sweden, and Austria. He has also traveled to other countries across Europe and Southeast Asia, as well as Cuba, Nicaragua, Ecuador, Aruba, Bahamas, and Mali. He enjoys visiting the more remote areas of the U.P. via backpack and small boat... and usually takes a camera wherever he goes.



Grant Gagner

Grant's educational background is a degree in business management from the University of Minnesota. He has been involved with WoodMaster for over 12 years. Grant has worked in all aspects of the business from production, at a younger age, up to business development in residential boilers. Grant became the sales manager for the commercial boiler and furnace department in 2014. Grant has been working in the commercial

boiler and furnace market since 2010. Since then, WoodMaster has successfully installed commercial biomass boilers and furnaces across the United States and Canada in projects from commercial, agricultural, educational, government facilities and also large district heating systems.



Gerry Guard

Gerry's educational background is a degree in Electrical Engineering from Michigan Technological University. His early career was in the forest products industry as a sawmill owner. Producing lumber also provided the opportunity for free home heating with sawdust. This proved to be a good foundation for his transition to Messersmith biomass boiler systems. Gerry has been part of the Messersmith team for the past ten years.

During most of this time, he has been a customer advocate. Gerry has worked with clients to explore the most effective way for them to acquire the fuel cost savings associated with biomass boiler systems. He has assisted customers from Maine to Alaska in examining the variety of options available with Messersmith systems. Gerry became General Manager of Messersmith Manufacturing, Inc. in 2013. In this role, he leads the Messersmith team to continue their tradition of outstanding customer service. This strong service record has led to installations in 2016 like the University of Maine Farmington campus and a district heating system in Galena, Alaska.



Stephen P. Gasteyer

Dr. Stephen P. Gasteyer is an Associate Professor of Sociology at Michigan State University. Dr. Gasteyer's research focuses on community change, specifically looking at community development, landscape change, and the implications for food, water, and public health. Recent research has addressed the food access and impacts to urban greening in small US cities, alternative energy and community action, environmental equity in access to water and sanitation, and water governance.

Dr. Gasteyer's previous positions include: assistant professor of Human and Community Leadership Development at the University of Illinois (2005-2008); Research and Policy Director at the Rural Community Assistance Partnership in Washington, DC (2002-2005); research consultant on issues of global water governance (2001-2002); UNAIS project worker on Agroecosystem research at the Applied Research Institute Jerusalem, and the Palestine Institute for Arid Lands and Environmental Studies, Palestinian territories (1993-1996); Program Associate for the Committee on Sustainable Agriculture, World Resources Institute (1991-1993). He was a Peace Corps Volunteer in Mali from 1987 through 1990. He received a BA from Earlham College in 1987, and a Ph.D. in Sociology from Iowa State University in 2001. He has authored or co-authored 24 peer review publications, 5 book chapters, and 28 monographs, reports, and non-refereed articles and has 2 co-authored books.



Kathy Halvorsen

Kathy is Professor of Natural Resource Policy in Michigan Technological University's School of Forest Resources and Environmental Science. She has studied the impacts of and barriers to forest-related bioenergy development for over ten years. Her work includes membership on the National Academy of Sciences committee studying the viability of the U.S. federal cellulosic ethanol mandate. She leads an interdisciplinary, international

group of scientists studying forest-related bioenergy impacts across the Americas. Her primary research foci are climate change mitigation and biodiversity protection.



Brett Hogarth

Brett Hogarth has held the position of Head of Business Development, Biomass Consulting Group for five years. Over that time, he has overseen the steady growth by focusing on client relations, marketing and new product development. Brett's responsibilities include market analysis and tracking, client engagement, project scope development and oversight. Brett has been integral in identifying and executing on opportunities to leverage

Ecostrat's Biomass Supply Network[©] and provide new and innovative answers needs in the bio-energy market, including our MarketWatch[©] technology and the revamp of the Wood2Energy database for North America. Brett holds an Honours Bachelor of Arts and Science from the University of Toronto.



Mark T. Knaebe

Mark Knaebe works in the Forest Products Marketing Unit of the USDA Forest Products Laboratory in Madison, Wisconsin. One focus of his work is bioenergy, and he specializes in problems associated with batch fed stoves. He operates a BioMax 5™, which generates electricity by burning wood pellets. Technologies used in the BioMax can also improve efficiency and reduce pollution in other burning devices. He is currently developing

a condensing stove with a higher heating value (HHV) efficiency exceeding 96%. In addition to his research work, he frequently gives presentations on bioenergy and utilization of silvicultural thinnings. His Fuel Value and Power Calculators spreadsheet gives the equivalent dollar values of various fuels.



Nan Larson

Nan Larson is the Director of Innovative Networks for the Agricultural Utilization Research Institute. This position leads the effort to actively engage thought leaders, business and industry, commodity groups, stakeholders, and education to accomplish AURI's value-added mission. The goal is improved competitiveness of businesses/entrepreneurs through ongoing, purposeful connection of resources and partners along the value chain and increased knowledge of opportunities, technologies

and trends. She serves as the Facilitator for both the HTM Biomass Combustion Technology and Policy and Benefits Action Team. Larson has a M.A. in Urban and Regional Studies and a B.S. in Political Science/ Public Administration. She has been active in this area for over 25 years.



Mark Lindquist

Mark Lindquist is the Energy Program Manager for the Minnesota DNR. He works in an evolving position but for much of the last decade has been a point person for the DNR on issues at the intersection of natural resource management, energy and climate policy for much of the last decade. Mark has also worked in the non-profit sector and local government in similar capacities.

Sarah Mittlefehldt

Sarah Mittlefehldt is an environmental historian who is interested in the use of history for thinking about current sustainability challenges. She is currently working on a project that explores the cultural and political barriers to developing distributed power systems since the 1970s. Before moving to the U.P. of Michigan, Professor Mittlefehldt explored communityscale biomass energy systems as a scholar and as a practitioner in Vermont, where

she helped to coordinate the Poultney Woodshed Project. Mittlefehldt earned her PhD from UW-Madison, a Masters at Harvard University, and a BA at Carleton College in Minnesota—her home state.



Tony "T.J." Morice

In business since 1987, T.J. has been involved in transportation, operations, development and public relations aspects of renewable energy, especially biomass with his Marth VP role for 18 years. As past officer of the Pellet Fuels Institute for 10 years, a founding and current board member of the Biomass Thermal Energy Council, Wisconsin State Wood Energy Team, and current President of HTM, he has a passion for biomass heating, the supply chain and its local benefits. A variety of experiences and perspectives,

he's been invited to participate at a variety of events and committees including Wisconsin's Wood Biomass Task Force, DATCP Bioenergy Advisory Council and others where he's had the pleasure of connecting with many industry professionals.



Dave Neumann

David Neumann is a Forest Products Utilization & Marketing Specialist for the Michigan DNR's Utilization & Marketing program. The program provides information about forest resources, wood use, the forest products industry, and technical assistance to industry. He has been with the DNR for 17 years, and worked 14 of

them as a silviculturist and private land forester. He has MS, BS & BA's in Forestry & Journalism from Michigan State University, and is a recovering firewood user.



Charlie Niebling

Mr. Niebling is a partner with Innovative Natural Resource Solutions LLC, located in Concord, New Hampshire. Over the last 28 years, he has served as general manager of New England Wood Pellet, vice president of the Society for the Protection of New Hampshire Forests, and executive director of the New Hampshire Timberland Owners Association. He is founding board chair of the Biomass Thermal Energy Council in

Washington DC. He has forestry degrees from the University of Vermont and the Pennsylvania State University, and lives in Boscawen, New Hampshire.

Dave Nyberg

Dave serves on Governor Rick Snyder's executive team as Deputy Legal Counsel and as Director of the Governor's Northern Michigan Office. Dave returned to the U.P. in 2011 after several professional experiences in the state's capital, including service as legislative affairs director for Michigan United Conservation Clubs and as legislative assistant to the Speaker of the Michigan House of Representatives. Dave is a graduate of Michigan State University College of Law (J.D.),

MSU (B.A.), and the Michigan Political Leadership Program. He is active with several community, conservation, and professional organizations. Dave lives in Skandia with his wife, Tracy, and daughters, Hazel and Harriet.



Darrell Oman

Darrell Oman has been employed for 11 years at North Dickinson County Schools in Felch, Michigan. He is responsible for building and grounds, maintenance, custodial, transportation, technology and school nurse as needs arise. He grew up farming and logging. A graduate of North Dickinson High School, Oman served from 1981 – 1989 in the U.S. Navy as an Aviation Electrician. He also worked in the business machines and equipment industry as a service technician.

Tim Portz is the Executive Editor of Biomass

of the titles alongside the managing editors,

freelance writers and editorial board. Tim

has been covering the biomass industry for seven years traveling throughout Europe and North America to do so. Tim is also the Vice President of Content at BBI International and is responsible for the development of BBI

Magazine and Pellet Mill Magazine. In this capacity, Tim guides the editorial direction

Oman is a certified firefighter, serving 25 years on a department with 18 years as Fire Chief. He is also a licensed EMT, volunteer member for 18 years, with 12 years as the Director. He is currently serving his second term as Elected Township Clerk.

Tim Portz



International's renewable energy conference agendas. Tim grew up in rural Iowa and is a graduate of the University of Iowa.

she helped to co earned her PhD a BA at Carletor



Scott Sanford

Scott manages the Rural Energy Program for the University of Wisconsin-Extension which looks for ways to reduce energy use in agriculture and rural businesses, provides educational materials on energy efficiency and promotes energy generation from renewable energy sources. Programming areas includes irrigation, dairy farm, greenhouses, crop storage, mint distillation, grain drying, renewable energy and maple syrup production.

He has authored 23 extension bulletins, written many articles and made numerous presentations on energy related topics. Nine of his publications have been awarded an ASABE Blue Ribbon award for Education aids including the publication "Wood Heating Appliances for Homes and Businesses" published by the University of Wisconsin-Extension.



Jeff Serfass

Jeff Serfass serves as the Executive Director of the Biomass Thermal Energy Council (BTEC), which he helped found in 2009. He is also President of Technology Transition Corporation (TTC), a 30-year old Washington DC company that creates industries and makes change happen in the clean technology and renewable energy sphere. Mr. Serfass previously held positions at the U.S. Department of Energy, U.S. Energy Research and Development

Administration, and Westinghouse Electric Corporation. He holds Bachelors and Masters Degrees in Electrical Engineering from Cornell University.



Michael Sparby

Michael Sparby is the Senior Project Strategist at the Agricultural Utilization Research Institute (AURI), responsible for developing projects, securing grant funds and assists in the program delivery. Over the course of his more than 20 years at AURI, he has identified opportunities to develop and commercialize value-added agricultural products throughout Minnesota. He has implemented and managed the development and coordination of AURI's

Renewable Energy Roundtable. Sparby is a graduate of Moorhead State University and received his Bachelor of Science degree in public relations and mass communications.



Wayne Stanley

Wayne Stanley is a 28-year employee of Domtar Paper. He is responsible for the procurement of the biomass fuels for the We-Energies Biomass Cogeneration Plant located in Rothschild, Wisconsin. The Rothschild Biomass Cogeneration Plant is designed to produce up to 50 megawatts net electric generation as well as provide the full process steam requirements of the Domtar paper mill.



Julie Tucker

Julie Tucker serves as the National Lead for Renewable Wood Energy. Since 2005, she has advocated to shift our country toward more sustainable management of natural resources by advancing energy efficient technologies, promoting energy conservation, and expanding renewable wood energy. Prior to joining the USDA Forest Service as a Presidential Management Fellow, Julie worked as an environmental engineering consultant and

attorney for public and private sector clients and served as a Peace Corps volunteer in West Africa. Julie has a Bachelor of Engineering degree from Vanderbilt University and a Juris Doctor degree from North Carolina Central University.



Dave Vandermissen

Dave Vandermissen is the Assistant Maintenance Supervisor of Pinecrest Medical Care Facility and the Maintenance Supervisor of Whispering Pines. Pinecrest is a 174 bed skilled care facility that covers over 119,000 sq.ft. in addition to three out buildings. At Pinecrest, Dave oversees operations of the wood and back up boilers, absorption chillers, and all heating and cooling equipment. He rebuilds boiler fire boxes and performs general repairs on

the facility including vehicles. After graduating from Bark River-Harris School, he attended Bay de Noc Community College earning a degree in Automotive, Diesel and Welding Repair. Further education has included water-tec boiler operations with safety high pressure steam, absorption chillers and working with several SFI Certified Timber Producers.



Dennis West

Dennis has been the President of Northern Initiatives since 1997. Northern Initiatives has made \$53M in business loans to customers in the UP and Northern Michigan since 1994, translating into over 900 loans. Roughly 30% of its loans are to start-up businesses, with 25% in support of manufacturers. Along with making loans, NI offers business development services to its borrowers, and NI is also affiliated with the Michigan Manufacturing Technology Centers. This role positions NI to offer small

businesses resources to advance their business through top line and bottom line resources and strategies.



Tom Wilson

Wilson Engineering Services, PC (WES), is a multi-disciplinary engineering company providing clients a full range of engineering and consulting services. WES combines extensive experience in renewable energy, energy conservation, environmental remediation, dredging, agricultural production, waste stream management, and project and program implementation to provide clients with sustainable answers to energy and

environment-related issues. Tom's background as a mechanical design engineer, 32 years in the farming industry, and 15 years as a consulting engineer help guide WES's analysis and implementation of renewable energy and energy conservation projects. Clients include: federal, state and local governments, universities, school districts, corporate, private and tribal businesses.



James Yoder

James has a B..S. in Dairy Science from Michigan State University; 25 years with USDA, first as an assistant County Supervisor for Farmers Home Administration for five years, and then as an Area Specialist with Rural Development for 20 years in the Community Facilities program area. James has assisted in the financing of vehicles such as fire trucks and snow plows all the way through multimillion dollar replacement hospitals.

SPONSORS

Indeck Energy

Indeck Ladysmith, LLC, located in Ladysmith, Wisconsin, is a PFI certified manufacturer of wood pellets for home heating use. Available in both hardwood and softwood, Indeck Energy Premium Wood Pellets provide more heat, a cleaner burn, less ash, reduced fines and consistent quality for customers.

Marth Wood Shaving Supply, Inc.

Established in 1958, Marth is one of the longest continuously operating pellet companies east of the Mississippiusing ablend of specifically qualified and contracted by-products and refined managed forestry fiber. Marth was one of the first PFI Standards Qualified Standards facilities audited by Timber Products Inspection in the US. As providers of densified pellet fuel throughout the Midwest states, they see a continued opportunity in this industry and its future growth with collaboration between its players.

Messersmith Manufacturing, Inc.

Industrial Biomass Boiler Systems. Design Assistance, Fabrication, Installation, Start-up & Training. Our Engineers and CAD technicians will help develop a customized Biomass Boiler System which burns wood chips, sawdust or other clean biomass to produce hot water or steam. 2612 F Road, Bark River, Michigan 49807 Phone: 906-466-9010, Fax: 906-466-2843 www.burnchips.com

Michigan Agency for Energy

The Michigan Energy Office (MEO) is a federally-designated state agency that provides technical and funding assistance to public and private sector organizations for the purpose of lowering energy costs and reducing energy waste. MEO's programs promote adaptable, affordable, reliable, and environmentally protective energy options, including energy efficiency and renewable energy. MEO is largely funded by the U.S. Department of Energy, and is part of the Michigan Agency for Energy.

Michigan Department of Natural Resources

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use and enjoyment of the state's natural and cultural resources for current and future generations.

Michigan Statewide Wood Energy Team

The Michigan Wood Energy Team is a partnership between Michigan State University, The State of Michigan, the United States Forest Service, and numerous interested parties in Michigan. The team works on "Promoting analysis, dialog, understanding, and development of wood energy systems in Michigan."

Minnesota Department of Natural Resources/ Statewide Wood Energy Team

The mission of the Minnesota Department of Natural Resources is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.

Northwest Manufacturing, Inc./WoodMaster

WoodMaster boilers and furnaces are manufactured and distributed by Northwest Manufacturing, Inc. of Red Lake Falls, Minnesota. Since 1989, WoodMaster has built industry-leading indoor and outdoor cord wood and wood pellet boilers and furnaces, continually finding innovative uses of natural energy and alternative fuel sources.

Rotochopper, Inc.

Rotochopper manufactures industrial grinding equipment for converting wood waste and agricultural residue into engineered fiber products such as biomass fuel. Rotochopper horizontal grinders are available with diesel or electric power from 150 to 950 hp. Two-stage Rotochopper grinders take raw waste materials to short fiber specifications in a single pass.

Timber Products Inspection/Biomass Energy Lab

Timber Products (TP) provides inspection and analytical testing services for the biomass and pelletized fuel industry. TP is accredited by the ALSC as an auditing agency and testing lab for the Pellet Fuels Institute's Standards program. Biomass Energy Lab (BEL) provides certification for biomass export shipments per CEN/EN methods, as well as ENplus auditing, testing and on-site consulting. Both divisions are ISO 17025 accredited.

USDA Forest Service

The USDA Forest Service Forest Products Laboratory's Forest Products Marketing Unit (FPMU) provides expertise in wood products utilization, marketing, technology transfer, and technical assistance. FPMU assists businesses, federal and state agencies, rural communities and tribal entities to promote use of forest-based technologies. FPMU's work includes land management, timber processing, manufacturing efficiency, and biofuels.

Wisconsin Department of Natural Resources

The Wisconsin Department of Natural Resources, Division of Forestry, Forest Product Services Program provides assistance in the marketing and utilization of forest products to facilitate the ability of woodproducing and wood-using organizations to use the state's wood resource in an efficient, effective, and sustainable manner, maximizing wood's contribution to Wisconsin's economy.

For more information browse dnr.wi.gov, keyword "forest products"

Wisconsin Statewide Wood Energy Team

The Wisconsin Statewide Wood Energy Team, a public-private stakeholder group, aims to expand markets that convert woody biomass into energy, advance installation of commercially viable wood energy systems in public and private facilities, and support wildfire mitigation, forest restoration, urban wood utilization and other forest management goals that utilize Wisconsin woody biomass.

EXHIBITORS

Agricultural Utilization Research Institute

The Agricultural Utilization Research Institute (AURI) helps develop new uses for agricultural products through science and technology, partnering with businesses and entrepreneurs to bring ideas to reality. AURI generates economic impact in Minnesota by helping businesses take advantage of innovative opportunities in four areas: biobased products, renewable energy, coproducts, and food.

Cottingham & Butler

Cottingham & Butler's risk management consulting team is a fullservice brokerage practice specializing in custom property & casualty programs utilizing both traditional insurance and alternative risk financing strategies. Since 1887, Cottingham & Butler have consistently invested in the resources necessary to challenge conventional models and support its clients' profitable growth.

University of Minnesota Duluth, Natural Resources Research Institute

NRRI's mission is to deliver research solutions to balance the economy, resources and environment for resilient communities. NRRI focuses on delivering solutions with both regional focus and global relevance. To do this, NRRI's applied research works to:

- Develop sustainable, natural resource-based industries,
- Inform environmental management and policy,
- Support business & entrepreneurial opportunities, and
- Assist industry and communities in defining and maintaining the social license.

TOUR LOCATIONS



Messersmith Manufacturing Plant

Industrial Biomass Boiler Systems. Design Assistance, Fabrication, Installation, Start-up & Training. Our Engineers and CAD technicians will help to develop a customized Biomass Boiler System which burns wood chips, sawdust or other clean biomass to produce hot water or steam.



Pinecrest Medical Care Facility

Pinecrest is located in Powers, Michigan. The facility offers medical care, Alzheimer's care, physical,

occupational, and speech therapy, and can house up to 160 residents. There are 170,000 square feet in four buildings that are both heated and cooled using a low-pressure steam district energy (DE) system fueled primarily by wood chips. Cooling is provided by a Trane absorption chiller.



North Central Area School

North Central Area School located in Spalding, Michigan, operates a state of the art 2.5 million BTU Messersmith biomass boiler system. The system has storage for more than one truckload of fuel, a built in fire prevention system, an automated fuel delivery system, and a highly advanced control panel with the capability to store data on the systems operation and performance. It burns chips at more than 80% efficiency,



Verso

Verso Corporation operates a pulp and paper mill located in Quinnesec, Michigan. In 2012, the company invested \$45 million to expand its

ability to use renewable, carbon-neutral, wood-based biofuel for more than 95 percent of its on-site electricity generation. Its biomass handling system is capable of processing residual wood such as tree tops, limbs and bark. Verso ensures that the expanded harvesting of this logging residue meets forest sustainability standards. The mill's boilers also burn black liquor, a byproduct of the wood pulping process.

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FPL's approach to the "Wise Use" of America's forest resources promotes forest health, reduces wildfire risk, creates jobs, boosts rural economies, strengthens the housing market, clears the way for innovative ideas to reach the marketplace, and benefits virtually every sector of American society.

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- Our residential line includes indust and outdoor wood pellet boilers and furnaces.
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SPONSORS



Our team can help you get started with biomass.

Why use biomass? New advanced technology is available for a variety of applications that makes biomass cleaner to burn and simpler to use than ever. The Statewide Wood Energy Team can provide expertise, preliminary evaluations, and funding for feasibility studies.

How can you get started? If your Minnesota facility is without access to natural gas, our team can help you control costs with biomass. Visit <u>http://www.dnr.state.mn.us/forestry/</u> biomass/swet.html to learn more.

Experience (QureEnergy)



All wood pellets are not the same.

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Biomass Policy & Benefits	Active Member Only	Leadership Role
Meets second Tuesday of each mon		-
Biomass Combustion Technologies	Active Member Only	Leadership Role
Meets first Tuesday of each month a	at 9:00 a.m. CST	



www.heatingthemidwest.org