

Heating the Midwest with Renewable Biomass Initiative

Joint Action Team Monthly Call Minutes

(Biomass Resources & Demographics, Biomass Policy & Benefits, & Biomass Combustion Technologies)

Tuesday, February 20, 2018 – 1:30 p.m. (CST)

PURPOSE: To advance the goals and planning activities of the Midwest Biomass Resources & Demographics Action Team and the overarching *Heating the Midwest (HTM) with Renewable Biomass Initiative* (HTM), specifically as it relates to the annual conferences and growing the biomass for thermal market opportunities.

FACILITATORS: Biomass Resources & Demographics Action Team Chairs -- Alan Doering, AURI and Becky Philipp, AURI & HTM Steering Committee Member

CALL PARTICIPANTS: Alan Doering, Agricultural Utilization Research Institute (MN); Brent Bailey, 25x'25 Alliance (MD); Curtis Borchert, Char Energy Equipment (MN); Stacy Cook, Koda Energy LLC (MN); Fritz Ebinger, Clean Energy Resource Teams (MN); Greg Flogstad, Mississippi River Regional Planning Commission (WI); Ron Gagner, Northwest Manufacturing/Woodmaster (MN); Mark Knaebe, USDA Forest Service, Forest Products Lab (WI); Gregg Mast, Clean Energy Economy Minnesota; Mike Marsollek, Koda Energy LLC (MN); T. J. Morice, TNT Ventures LLC (WI); David Neumann, Michigan Department of Natural Resources; Becky Philipp, Agricultural Utilization Research Institute (MN); and Dan Svedarsky, University of Minnesota-Crookston.

GUEST PRESENTERS: Tim Hagen, UMD – Natural Resources Research Institute (NRRI) and Kendall Carden, UMD-NRRI

MEETING AGENDA

- I. Welcome/Roll Call
- II. Review of the Minutes / Action Items
- III. Guest Speakers: Tim Hagen, NRRI and Kendall Carden, NRRI
- IV. Midwest Biomass Exchange Project Update
- V. Biomass Policy & Benefits Action Team Discussion
- VI. Biomass Combustion Technologies Action Team Discussion
- VII. Biomass Resources & Demographics Action Team Discussion
- VIII. Current Happenings / Needs of the Industry
- IX. HTM Steering Committee Update
 - A. 2018 HTM Conference Planning
 - B. Activities Update
- X. Next Conference Call
 - A. Tuesday, March 20 at 1:30 p.m. (CST)

CONVENE: The call convened at 1:30 p.m. (CST)

I. WELCOME/ROLL CALL

Becky Philipp welcomed action team members and expressed appreciation to call participants for joining the call. Special welcome was extended to guest speakers, Tim Hagen and Kendall Carden.

As their last official call as co-chairs of the Biomass Resources and Demographics Action Team, Becky Philipp and Alan Doering expressed appreciation for the opportunity to lead the action team for the past seven years. Becky noted it has been a privilege, and hopes she and Alan have served the team well. Both noted they are looking

forward to the opportunity to experience the leadership of another chair(s) going forward as active team participants. Alan Doering reflected over the past years of HTM and highlighted some of the outcomes that demonstrates why the Biomass Resources & Demographics Action gained his interest. First, the action team is a way for people to bring up topics to them pertaining to the renewable energy and biomass industries. Second, there was and continues to be valuable research generated from the action team's efforts including: 1) Midwest Biomass Exchange website for sourcing biomass for energy; 2) A Minnesota Biomass Feasibility Guide; 3) A Midwest Biomass Inventory Assessment conducted by David Ripplinger of NDSU (2012); 4) a study on utilizing biomass for cooling to identify how small of a cooling system could be run using biomass; 5) Midwest Biomass Suppliers Resources, and 6) partnering on other efforts and projects, such as the Midwest Residential Heating Fuel Assessment. All of these project demonstrate a primary intent of the action teams in furthering the goals of HTM. Alan noted that he hopes more projects like the ones noted will continue to be developed into the future.

Roll call was taken.

II. REVIEW OF MINUTES/ACTION ITEMS

The minutes were reviewed for the joint action team call on January 16, 2018. There were no changes noted; the minutes were approved as provided.

Becky reported that all action items were completed with the exception of sending out the call invite for the months of March through December 2018. She noted the invite is forthcoming.

A summary of *completed* action items follows:

- Becky to distribute information received from Suzanne Rhees with the link to the draft report of the Working Lands Watershed Restoration Program.
- Gregg Mast to distribute the "Save the Date" for the 2/2/18 Clean Air Minnesota Partner group meeting mentioned by Mikey Weitekamp, and also Weitekamp's contact information.
- Becky to add Mikey Weitekamp to the e-distribution list for the action teams.

III. GUEST SPEAKERS: Tim Hagen, Researcher/Program Coordinator, NRRI and Kendall Carden, Researcher, NRRI

Becky introduced Tim Hagen and Kendall Carden and provided a brief biography for each. Tim develops novel and innovation solutions for transforming wood, lignite, recycled plastics, tear-off shingles and cotton lintens into useful green-based products for re-use. He has successfully developed and defined a variety of torrefaction techniques in which the combustion, handling, grinding and stowage properties of wood and ag-based biofuels are heated in an oxygen deprived atmosphere and prepared for densification. Tim has a B.S. Chemical Engineering from the University of North Dakota in Grand Forks. Kendall is a 2016 graduate of the University of Minnesota Duluth with a degree in Cell and Molecular Biology with a Chemistry background. She works on characterizing the samples developed in NRRI's lab as well as the Renewable Energy Lab in Coleraine, MN. She and her team also work to formulate bio-coal recipes that mimic or exceed the characteristics of industrial coal at the bench scale level with the intent of those formulations being scaled up to the demonstration level. Kendall also works to develop innovative ways to turn biomass waste streams into profitable and sustainable applications.

Call participants were provided with a copy of the presentation prior to the call. Tim and Kendall presented on "Creating Solid Biofuels from Biomass Materials for Industrial Applications." Information provided included the densification challenges associated with torrefied wood; industrial applications as a product use; biocoal, charcoal, and industrial coal data; and research conclusions. Looking to the future, Tim noted that NRRI is cooperating with industrial partners to install a demonstration scale rotary briquette machine along with the pilot scale 220 machine they have to produce lab quantities for coal-firing larger scale trials and improve the viability of

the briquette in the larger commercial sector. He added that this will help them to better understand greater pressures at the briquette related to temperature rise and the degree of densification across the device. They are also fine-tuning system conditions for raw material types and automating the process more. Finally, Tim noted that the commercialization of technology configuration is possible. A question/answer session was held.

IV. MIDWEST BIOMASS EXCHANGE UPDATE

David Neumann reported on the status of activities related to advancement of the Midwest Biomass Exchange project. Biweekly progress check-in calls continue to be had with the contractor. Progress has been made on the website and it has also been linked to HTM's Twitter and Facebook sites. David noted that key work pending completion includes separating out the way biomass products are listed, which was a carryover of the previous database platform. The developer hopes to finish that work within the next two weeks. Resource information is also currently being reviewed for relevance and maintaining as part of the new site.

David noted that a presentation of the Midwest Biomass Exchange website will be provided at the 2018 HTM Conference & Expo either onsite or remotely. Details are being worked out in that regard. A timeline to demonstrate the website to the action team is yet to be determined but likely after the descriptors are finished. David noted that HTM is paying a very reasonable fee for the work being done, and thus patience has been required in meeting timelines and moving activities forward.

Becky thanked David for an informative update and for his great work in leading the project.

V. BIOMASS POLICY & BENEFITS ACTION TEAM DISCUSSION

Gregg Mast, chair of the Biomass Policy & Benefits Action Team, provided an update on the following policy-related items:

- The BTU Act as not included in the continuing resolution bill appropriating money. Participants were encouraged to check out BTEC's website for information related to the opportunity to sign on to a letter of support, and contacting Congressional delegates.
- The Farm Bill continues to be worked on. There remains an opportunity for funding the Community Wood Energy Program. Whenever education can be done on these program with legislatures, it is encouraged. Contact Gregg for additional information.
- The Minnesota Legislative Session started today. The Clean Energy Economy Minnesota is working on a Minnesota Residential Biomass Heating System tax credit, and hoping to get a hearing on the House. A hearing was already conducted in the Senate last session. Support is needed from the industry and other involved in the biomass sector in Minnesota.

On behalf of Brent Bailey who had to depart the call early, Becky provided information on an Energy Title support letter for the Farm Bill clean energy programs. She noted details would be distributed following the call, along with other policy updates of note.

VI. BIOMASS COMBUSTION TECHNOLOGIES (BCT) ACTION TEAM DISCUSSION

Becky Philipp reported that due to the demands of a new restaurant and two other businesses, Andrew Murray has decided to step down as chair of the Biomass Combustion Technologies Action Team. She noted HTM's and the action team's appreciation for Andrew's contributions to HTM over the past 1-1/2 years and wished him well. With Andrew's departure, efforts are underway to secure a chair for the Biomass Combustion Technologies Action Team. She encouraged participants to consider sharing their leadership talents, and if interested, to please reach out to her or other members of the steering committee.

Becky relayed the following information that was shared by David Bancroft of BTEC during the recent HTM Steering Committee call:

- Validation testing on the protocol is finished and the protocol updated for the wood energy efficiency standard. Work is underway with ASHRAE to develop a biomass thermal working group within ASHRAE to have a place to house the efficiency standard for a national wood energy standard and that builds and provides a uniform rating system for U.S. boilers.
- Wood Energy Financial App update is nearly complete. It is a tool for preliminary economic analysis for wood energy conversion. Completion anticipated early April.
- The wood chip standard being developed through ASABE is in its final stages of approval through ANSI. It is anticipated it will be a national standard in March. There is also a user's guide being developed for use of the wood chip standard. Anticipate completion early summer 2018. Adam Sherman has offered to come to HTM's conference to present on this new standard.

Becky also shared that as of January 3, 2018, Andrew Murray was issued a patent from Canada on his heating appliance. The patent # is 2,707,405.

VII. BIOMASS RESOURCES & DEMOGRAPHICS (BR&D) ACTION TEAM DISCUSSION

Becky Philipp, action team co-chair, reminded participants to share ideas they might have for projects the team can rally around for 2018. She reiterated an early comment by Alan Doering that a priority and goal of the action team is to generate projects and get tools into the hands of individuals and businesses to help in driving biomass thermal project forward or fill gaps in information needed. All in an effort to make it easier to implement biomass for thermal uses. She further added that the projects can be driven by the one of the three action teams specifically or can be moved forward collectively by all three action teams. If you have project ideas, please let either her or Alan know.

In addition, Becky noted that rotation of the action team facilitation began January 1 and will continue throughout 2018. Efforts will also continue to fill the vacant action team chair positions.

VIII. CURRENT HAPPENINGS / NEEDS OF THE INDUSTRY

Becky Philipp encouraged participants to share information on activities in their respective areas or where gaps in information exist. A summary of information shared by participants follows:

- Dan Svedarsky commented on the termination of Xcel Energy's long-term power purchasing agreements and the subsequent impact on Benson Power and the Laurentian Energy Authority resulting in their phase outs. He noted his disappointment in the situation stating that these are one of the best examples of a biomass/electricity generation arrangement in Minnesota. He wondered if there are "resuscitation attempts" that would be worthwhile. Dan was encouraged to reach out directly to Scott Dane, Executive Director of the Associate Contract Loggers and Truckers of Minnesota, Inc. (ACLT), to discuss further.

IX. STEERING COMMITTEE UPDATE

Becky Philipp reported the last call of the HTM Steering Committee was held on February 8, 2018. The next call is scheduled for March 8, 2018. A summary of the February call highlights follows:

2018 HTM Conference Planning

- Work is underway on the 2018 HTM Conference planning. The conference is scheduled for May 1-3 at the Black Bear Resort Casino in Carlton, MN. **Sponsorships are being sought.** Two SWET Sponsorships have been secured to date. If you know of potential sponsors or would like to help with this effort, please contact Brian Brashaw or Becky for additional information.

- Tim Portz has been contracted by HTM for strategy planning related to the conference. Program development is underway with a draft presented to the Steering Committee during the last monthly call. Tim is in the process of securing speakers/presenters and moderators. Dana Ellis of Ellis International has also been contracted with for conference management services.

Activities Update

- HTM is organizing a collective effort to solicit steering committee members, specifically from the biomass thermal industry sector, as well as action team chairs for the BR&D and BCT action teams. Time will be devoted to this effort during the 2018 HTM Conference & Expo. More information in that regard is forthcoming.
 - New Executive Committee members were approved during last steering committee call, as follows. Becky also noted that as of March 1 she will no longer be serving on the HTM Executive Committee, however, will continue to serve on the steering committee.
 - Chuck Gagner, President (Woodmaster/Northwest Manufacturing, Red Lake Falls, MN)
 - Stacy Cook, Vice President (Koda Energy LLC, Shakopee, MN)
 - T.J. Morice, Secretary/Treasurer (TNT Ventures LLC, Wisconsin)
 - At-large Members: Chris Wiberg (Timber Products Inspection/Biomass Energy Lab, GA/MN) and Bruno Zagar (Fond du Lac Reservation, Carlton, MN)
- HTM Newsletter items due to Brian Brashaw by the end of the day today. The newsletter will go out on February 21.

X. NEXT CONFERENCE CALL

Becky Philipp reminded action team members of the next monthly **joint HTM action team** call scheduled for Tuesday, March 20, at 1:30 p.m. (CST). Bruno Zagar volunteered to facilitate the call. Bruno is an Environmental Specialist/Energy Project Manager at **Fond du Lac Reservation** and also serves on the HTM Executive and Steering Committees.

Call invites are forthcoming for the March through December 2018 monthly calls. A reminder was provided to participants that if the invite is declined, none of the monthly call dates will be posted respective calendars. Rather, if not available for a monthly call, accept the series but decline the occurrence for the month affected.

Participants and team members were thanked for being on the call and encouraged to continue to participate as schedules allow. She and Alan look forward to continuing to work with the team going forward.

NEXT STEPS/ACTION ITEMS

Following is a recap of next steps/action items:

- **Becky Philipp** to distribute call invites for the monthly joint action team calls for March through December 2018.
- **Becky Philipp** to distribute additional policy update information via email.

The call concluded at 2:38 p.m.

Prepared by: Becky Philipp, AURI