# **Biomass Research and Development Technical Advisory Committee**

Holiday Inn Missoula Downtown 200 South Pattee Missoula, MT 59802 June 25-26, 2019

# **Quarter 2 Meeting Summary**



#### I. Purpose

On June 25-26, 2019, the Biomass Research and Development (R&D) Technical Advisory Committee ("Committee") held its second meeting of 2019. The Committee's 2019 theme is "Year of the Tree." This meeting focused on woody biomass issues in the Western U.S. Presentations were heard from individuals of the U.S. Forest Service, Willis Enterprises, Bitterroot Resource Conservation and Development, Governor's Office of Montana, Kettlehouse Brewery, Wooden Haus Supply, and the Montana Forest Collaborative Network. The Committee also received and updates from the U.S. Department of Energy's Bioenergy Technologies Office (BETO). See Appendix A for a list of Committee attendees and Appendix B for the meeting agenda. Appendix C contains a summary of findings from the Committee. Meeting presentations can be viewed on the Biomass R&D Board website.

### **II. Roaring Lion Fire Site**

Byron Bonney, Forester, Bitterroot Resource Conservation and Development

- Presented on the effects of the 2016 Roaring Lion Fire
- Discussed efforts to mitigate risk of wildfire
- Examined differences between home sites that enacted mitigation efforts and those that did not





# **III. Marshall Woods Restoration Project (PowerPoint)**

Jennifer Hensiek, Missoula District Ranger, U.S. Forest Service

- Presented on efforts to restore the Marshall Woods section of Lolo National Forest
- Project has four main goals:
  - o Restore functioning ecosystems by enhancing natural ecological processes
  - Emulate fire's natural role on the landscape through vegetative treatments including prescribed fire
  - Provide education opportunities to build support for restoration
  - o Provide for diverse trail-based recreation opportunities and reduce road density





# **IV. Briefing on Biomass in Montana**

Patrick Holmes, Natural Resources Policy Advisor to Governor Bullock

- Talked about the impacts that wildfires have had on biomass resources and the Montana economy.
- Looked at ways Montana is attempting to energy and the current limits of infrastructure.
- Discussed Governor's Bullock's Forests in Focus 2.0 Plan.

# V. Willis Enterprises (PowerPoint)

#### Rich Lane, Log Buyer

- Toured chipping plant at site of former lumber mill
- Produces wood chips and bark
- Products travel roughly 150 miles by truck and 350 miles by train





# **VI. KettleHouse Brewery**

Tim O'Leary, Founder

- Toured brewing and canning facility
- Examining logistics and economics of utilizing a biomass reactor



#### **VII. Welcome**

Doug Faulkner & Kelly Tiller, Committee Co-Chairs

- Provided an overview and background of the Committee, including its purpose, and the goal of the meeting, which was to determine the current state and scope of woody biomass in the Western U.S. to support "The Year of the Tree."
- The Q1 Recommendations were reviewed to inform the purpose of the meeting.
- There was an update on the appointment of new members.

### VIII. DOE Updates and Biomass R&D Activities (PowerPoint)

Ian Rowe, Technology Manger, Bioenergy Technologies Office, DOE

- Dr. Rowe provided updates on behalf of DOE's Bioenergy Technologies Office (BETO).
- Notified the Committee of the next Biomass R&D Board Meeting, scheduled for August 15th at DOE Headquarters in Washington, DC.
- The <u>Bioeconomy Initiative Implementation Framework</u> was launched in March 2018.
- <u>Solicitation</u> for new members to the TAC were accepted until June 30, 2019.

### **IX. Forest Collaboratives in Montana**

Tim Love, Executive Director, Montana Forest Collaboration Network

- Organization focused on central and western Montana that assists with collaboration in forest and grassland restoration, conservation, and resource utilization.
- Strong focus on environmental analysis and collaborative agreements.
- Good Neighbor Authority allows the USDA Forest Service to enter into agreements with state forestry agencies to do the critical management work to keep forests healthy and productive.

## X. Engineered Building Products from Small-Diameter Wood (PowerPoint)

Patrick Clark, Owner, Wooden Haus Supply, Inc.

- Supplier of Cross Laminated Timber Building System components.
- Used to produce pre-made buildings and structures.
- Currently more prevalent in European markets.

#### **XI. Public Comment**

• There were no public comments.

### XII. USDA Forest Service Wood Innovations Program (PowerPoint)

Julie Kies, Wood Innovations Coordinator, Northern and Intermountain Regions, U.S. Forest Service

- Program focuses on developing and expanding the use and manufacturing of wood and biomass products to support forest management, economic development, and wise resource use.
- Reduces risk of wildfires while providing source for green building, renewable wood energy, and other value-added products.

#### **XIII. Subcommittee Breakouts**

- There are three standing subcommittees: Conversion, Sustainable Feedstocks Production and Logistics, Products, Markets, and Systems Group
- For this meeting the members were split into 2 subcommittee groups to summarize the findings of the site visit and examine what additional information would be useful to formulate recommendations.

### **XIV. Closing comments**

- Specific recommendations will be made during the Q4 meeting.
- The Co-Chairs wrote a summary of the events and findings from the Q3 meeting (Appendix C)
- Plans for the Q3 Meetings were discussed, specifically around a possible site visit to North Carolina to examine woody biomass of the Southeastern U.S.

# Appendix A: Committee Member Attendance—June 25-26, 2019

Co-Chairs	Affiliation	Attended
Kelly Tiller	Genera Energy Inc.	Yes
Doug Faulkner	Leatherstocking, LLC	Yes
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Members	Affiliation	Attended
Charles Abbas	IBiocat	Yes
Rob Anex	University of Wisconsin, Madison	No
Brent Bean	United Sorghum Checkoff Program	No
Jacques Beaudry- Losique	Algenol Biotech LLC	No
Esteban Chornet	Enerkem	No
Katrina Cornish	Ohio State University	No
William Frey	Georgia-Pacific	Yes
Jerry Gargulak	Borregaard-Lingotech	No
Aviva Glaser	National Wildlife Federation	Yes
Beth Hood	Arkansas State University	Yes
Raymond Huhnke	Oklahoma State University	No
Randy Jennings	Tennessee Department of Agriculture	No
Madhu Kanna	University of Illinois at Urbana-Champaign	No
Alan Keller	POET	Yes
Michael Lidisch	Purdue University	No
Pete Madden	Drax Biomass	Yes
Michael McAdams	Advanced Biofuels Association	Yes
Shelie Miller	University of Michigan	No
Manuel Garcìa Pèrez	Washington State University	Yes
Tim Rials	University of Tennessee-Knoxville	Yes
Matthew Rudolf	SCS Global Services	No
Susan Rupp	Enviroscapes Ecological Consulting, LLC	No
Basudeb Saha	University of Delaware	No
Patricia Scanlan	Scanlan Environmental LLC	No
Steve Searcy	Texas A&M University	No
David Shonnard	Michigan Technical University	Yes
Larry Sullivan	The Citadel	Yes
Valerie Thomas	Georgia Tech	Yes
Michael Wolcott	Washington State University	Yes

Total – 15 of 31 Members present

# Appendix B: Agenda—June 25-26, 2019

#### Agenda Public Meeting of the Biomass Research and Development Technical Advisory Committee June 25-26, 2019

DAY 1	Technical Advisory Committee Meeting	June 25, 2019
7:30- 8:30 am	Purchase Breakfast	
8:30	Depart Missoula by Motorcoach	
8:30 - 10:00	Transit	
10:00 - 11:00	Roaring Lion Fire Site 439 Roaring Lion Road Hamilton, MT	Byron Bonney, Forester, Bitterroot Resource Conservation and Development
11:00 – 12:00pm	Transit	
12:00 - 1:00	Marshall Woods Project/Wildfire Adapted Missoula	Jennifer Hensiek, Missoula District Ranger
1:00 - 1:30	Transit	
1:30 - 2:30	Lunch Holiday Inn 200 South Pattee, Missoula, MT	Patrick Holmes, Natural Resources Policy Advisor to Governor Bullock
2:30 - 3:00	Transit	
3:00 - 4:00	Willis Enterprises 8651 Bonner Mill Road, Bonner MT	Rich Lane, Log Buyer
4:00 - 5:00	Kettlehouse Brewery: Wood Biomass Energy Vision, Resource, and Community 605 Cold Smoke Lane, Bonner, MT	Tim O'Leary, Founder

DAY 2	Technical Advisory Committee Meeting	June 26, 2019
8:00 – 8:30 am	Welcome and Continental Breakfast	
8:30 - 8:45	Update on DOE Activities	Ian Rowe,
		DOE, BETO
8:45-9:45	Forest Collaboratives in Montana	Tim Love, Executive Director, Montana Forest Collaborative Network
9:45-10:15	Coffee Break	
10:15 - 11:15	Engineered Building Products from Small-Diameter Wood	Patrick Clark, Wooden Haus Supply, Inc.
11:15 - 11:45	Discussion	Full Committee
11:45 – 12:00pm	Public Comment	
12:00 - 1:00	Lunch	
	USDA Forest Service Wood Innovations Program	Julie Kies, US Forest Service
1:00 - 2:30	TAC Subcommittes	Subcommittees
2:30 - 3:30	Full Committee Discussion	Full Committee
3:30- 4:00	Summary and Adjournment	

#### <u>NOTES</u>

<sup>1</sup> Full Committee Meetings, Presentations, and Public Comment Hearings are open to the public.

<sup>2</sup> Subcommittee Meetings are closed to the public.

<sup>3</sup> Meals and Break Service are closed to the public and provided for Committee Members only.

## **Appendix C: Q2 Committee Summary**

Source:Biomass R&D Technical Advisory CommitteeAdvisory To:Biomass R&D BoardReport Date:6/26/2019 (Q2 2019)



Issue: Findings of the Committee on Opportunities for Woody Bioenergy in the Rocky Mountain/Pacific Northwest Re

The Committee declared 2019 its *Year of the Tree*, intending to focus on new and emerging opportunities for using forests to support bioenergy and bioproducts industries while promoting healthier and safer forest management. We effectively launched this effort in our fourth quarterly meeting of 2018 when we identified regulatory barriers to advanced biofuels and made specific recommendations for breaking down those barriers, with a special focus on the fledgling domestic woody bioenergy sector. Our first quarterly meeting of 2019 explored the intersections between woody biomass utilization for bioenergy and healthier forests, summarizing our findings and laying out the Committee's path forward for the rest of the year. We understood the importance of gaining first-hand knowledge of forest ecosystems and cultures in at least two distinct regions of the country. We wanted to hear from a wide range of local experts about new approaches to old problems—like preventing or diminishing forest fire damage—and about the prospects for using forest materials sustainably for biofuels and bio-based products.

In June 2019 the Committee visited Missoula, Montana, to learn about the mix of experiences and challenges specific to the northwestern U.S., especially with regard to managing public forest lands. The Committee is now also planning a similar site visit for the third quarter to learn firsthand about forest management and opportunities in the southeastern U.S., with a focus on privately owned and managed forest lands. The lessons drawn from these two trips will give the Committee a broad national perspective for our fourth quarterly meeting of 2019 when we will develop our final recommendations to the federal government for improving research, policies and regulations for growing woody bioenergy while also improving forest health.

The visit raised numerous questions for Committee members worthy of future consideration, from possible new roles for private insurance companies to drivers for needed innovation in policies, practices and technologies, to impacts on greenhouse gas displacement. The following set of conclusions synthesizes the general findings of the Committee resulting from the immersive exploration of forest biomass issues and opportunities on public lands in the northwestern U.S., setting the stage for further examination.

#### Scale Is Large

- The sheer volume of available forest resources in the northwestern U.S. is huge. But the region faces daunting obstacles to greater bioenergy and other commercial uses when the material supply would depend on flows from federal lands.
- Wildfires present a tremendous hazard in general and managing this threat in public forests is particularly challenging. The fires are growing more hazardous to humans, animals, and property, while creating broader health hazards from air and water pollution.
- Current practices for economically harvesting woody materials are not sufficient for large-scale treatment of lands with material unsuitable for markets other than biomass. There seems to be little new innovation at sufficient scale, constrained by limited availability of federal and other funds.

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• There are no large-scale solutions—no "home runs" in sight—for increased utilization of trees for biofuels and bioproducts. We believe forward progress in the region will be in the form of small steps.

#### **B** No One-Size-Fits-All Solution

- The complex patchwork of land ownership in the northwest between the private sector, various government levels, and tribal entities creates issues of access and use, and requires resolution through legislation, regulation, and societal acceptance.
- Removal of forest material from public lands to reduce wildfire risks may have potential to supply substantial amounts of biomass for energy and other applications but also faces significant headwinds. For example, a sufficiently sized commercial/industrial market does not exist today to support forest thinning at a meaningful scale, in part because of declining historical markets like the paper industry due to mill closures, but also because social license from the public for doing so is uncertain at best. Public acceptance of such practices might rise from seeing the benefits of sustainable new economic activity in the forests.

#### Multiple Stakeholders Multiplies Complexity

- The multiplicity of uses for forests—including recreation, biodiversity, natural beauty, clean water, and lower carbon emissions—presents great value to the use of federal lands, yet also presents the challenge of balancing multiple interests.
- The easiest forest biomass to access and move also brings the greatest potential objections from the public based on proximity to communities and perceived disruptions to aesthetics and recreation, which has led in some cases to legal challenges to plans developed by the U.S. Forest Service.
- Public involvement and support for new forest management practices are critical for success. Collaborative networks and public-private partnerships have shown great value but are still in the early stages of articulating problems and solutions. There is a big disconnect between economic and environmental opportunities and widespread acceptance of new approaches. Constant and clear

articulation of benefits from forest management and bioenergy growth are the foundation for shifts in public opinion and resultant political actions.

#### Resources are Constrained

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- The U.S. Forest Service wrestles with enormous demands for its many needed services, with tight resources and ever-increasing fiscal demands from fighting forest fires.
- There seems to be little new innovation at sufficient scale in use of very limited federal funds.
- State governments can play important roles in shifting public opinion and improving the business climate, both so necessary for growth in woody bioenergy and forest fire prevention.
- There are exciting new possibilities for the use of wood in the construction industry to save energy, cut building costs and improve indoor air quality. Europe is way ahead in this sector; the U.S. is starting to wake up to rising consumer interest.

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