

Seeing the
— FOREST —
for the Trees
FUTURE POTENTIAL FOR
BIOMASS ENERGY IN MARYLAND

BIOMASS ENERGY SYSTEMS -
OPERATION

TUESDAY, JUNE 23, 2020

10:30 AM - 12:00 PM

WEBINAR SERIES: SESSION 4

For more information visit
MDCLEANENERGY.ORG/BIOMASS

BIOMASS WEBINAR SERIES OVERVIEW

Forest management is necessary to ensure carbon sequestration for air quality and to protect the Chesapeake Bay Watershed. Management of forests produces woody biomass materials, which are also available in excess from storm debris removal and tree maintenance. This resource is marketable as a good source for thermal energy generation.

This webinar series will highlight available technologies, economic competitiveness, ease of installing and operating biomass energy systems to examine how Maryland commercial and institutional consumers can benefit from the adoption of thermal biomass energy solutions.

During the sessions covering Biomass Energy Systems, presenters will examine system types and operations, emissions, economics, financing, and incentives.

SESSION 4

Woody biomass is already available in abundance in Maryland but, the use of this renewable fuel source for energy, as an alternative to fossil fuels, has not been widely adopted. Best management practices of 'right-sizing' designs for modern current and evolving technologies allow for this type of energy solution to be cost-effective and meet air quality standards.

This session offers a high-level synopsis of various wood energy applications: low temperature boiler, thermal storage, distributed heating, etc. These examples cover diverse uses: industrial processing, university campuses, hospitals, schools, and part-year heating.

By the end of the session participants will have answers to certain questions related to the potential operation of woody biomass-fed thermal energy systems, including:

- Is the feedstock readily available and affordable? Is transportation of feedstock a roadblock to adoption?
- What are right-sized model systems for various applications?
- Are systems economically competitive, viable to install, and uncomplicated to operate?
- How does the technology of related systems meet or exceed Maryland air and water quality requirements for permitting?
- Is access to resources and training for workers available?
- What measures are in place to ensure the use of the system is sustainable?

PANELISTS



Kyla Cheynet
Director of Sustainability
Drax Biomass



Matt Hafner
Lead Engineer,
Chemical Unit, Air Quality
Permits Program
MD Dept. of the Environment



Lew McCreery
Forest Products Technologist
USDA Forest Service



Dan Wilson
Vice President
Wilson Engineering Services, PC

Session Moderator: **I. Katherine Magruder** Executive Director, Maryland Clean Energy Center

This program is offered in association with the Spurring Fossil Free- Biomass initiative, brought to you by the [Maryland Forestry Foundation](#) and [Maryland Clean Energy Center](#) in partnership with the [Maryland Department of Natural Resources](#) and the [Sustainable Forestry Council](#), with funding from the [Maryland Agricultural Education and Rural Development Assistance Fund](#).



SESSION 4 SPEAKER BIOS

I. Katherine Magruder Executive Director, Maryland Clean Energy Center

Ms. Magruder is the Executive Director of the Maryland Clean Energy Center (MCEC), a corporate instrumentality of the state created to advance the adoption of clean energy products, services, and technologies. In addition to administrative and budget management for MCEC she is engaged in government and industry stakeholder relations, event production and innovation advancement.

Kathy has led efforts to launch programs designed to provide access to capital for energy projects including the Maryland Home Energy Loan Program, Maryland Clean Energy Capital Program, and MD- PACE: a statewide initiative enabling commercial property assessed clean energy lending to occur in Maryland.

Dan Wilson Vice President, Wilson Engineering Services, PC

Dan is a Vice President at Wilson Engineering Services, PC (WES). WES is a full service engineering firm operating in the energy and environmental sectors, and is a national leader in the development of renewable thermal and combined heat and power projects and programs. Dan has overseen WES's role in over 100 renewable thermal and combined heat and power, anaerobic digestion, district heating, and energy efficiency projects. WES's role in these projects has included concept development, feasibility study, finance / business planning, design, permitting, construction management, commissioning, and operations. Prior to founding WES in 2008, Dan was an engineering project manager at Gahagan & Bryant Associates, Inc. Dan is a registered professional engineer and holds a BS in Agricultural and Biological Engineering from Penn State University and a Master of Civil Engineering from Johns Hopkins University. Dan is the current Chairman of the Biomass Thermal Energy Council.

Lew McCreery Forest Products Technologist, USDA Forest Service

Mr. Lew McCreery is the Acting Director of the FS Wood Education and Resource Center (WERC) and Regional Wood Innovations for the USFS Eastern Region.

As Acting WERC Director Lew focuses on maintaining a strong and vibrant hardwood industry throughout the 35-state eastern hardwood region served by WERC.

As Wood Innovations Coordinator, Lew oversees efforts to increase the use of wood for energy and value-added products across the 20-state region. Lew also manages the WERC Wood Energy Technical Assistance Team that provides hands-on assistance to building owners interested in using wood energy in their facility. The Team focus is on implementing high efficiency projects that meet the owners needs while minimizing project costs. The WERC Team has helped more than 100 building owners implement wood energy at their facilities. Projects range in size from systems serving 4,000 sf of conditioned space to projects serving over 1 million sf of conditioned space. Projects included firewood, wood pellets, and wood chip systems. A number of projects included a Combined Heat and Power (CHP) component. The Team also assists owners in the retrofitting and improvement of existing wood energy systems.

Mr. McCreery has worked on wood energy projects since 1985.

Matt Hafner Lead Engineer, Chemical Unit, Air Quality Permits Program, MD Dept. of the Environment

Matt Hafner is the Lead Engineer of the Chemical Unit for MDE's Air Quality Permits Program. He has been writing permits for the Department since 2011 for a wide range of sources. In addition to writing pre-construction permits, State operating permits, and Title V - Part 70 operating permits, Matt assists other engineers with technical reviews of applications and reviews draft permits. Matt has a B.S. degree in Chemical Engineering and a Master's degree in Civil and Environmental Engineering from the University of Maryland, College Park.

Kyla Cheynet Director of Sustainability, Drax Biomass

Kyla leads Sustainability for Drax US Operations. In her role she oversees program development, certification, and conservation initiatives for Drax Biomass pellet operations in the US Gulf South. Kyla also supports Drax's wider supply chain, working with pellet suppliers in the US and Canada to assure biomass sustainability requirements are met. Kyla holds a MS in Forest Management and a BS in Wildlife Management from Virginia Tech and has been actively engaged in the forest industry across the southern US for over 20 years. Prior to joining Drax she worked in forest management and sustainability for MeadWestvaco, Plum Creek, and Weyerhaeuser.