

# HOW NEWBIO CAN HELP ENABLE GROWTH OF THE BIOMASS HEAT AND CHP SECTOR

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Breakout Discussion Group:

Kewsi Boateng	Damon Hartley	Kimberlee Marcellus
Dan Ciolkosz	Ed Johnstonbaugh	Long Nguyen
Eric Fabio	Paul Lewandowski	Doug Schaufler
Barry Forgeng	Weiguo Liu	Sabrina Spatari
Michael Hamann	Dave Maciejewski	

## INTRODUCTION

The biomass heat and chp sector is the most successful example of biomass energy in the Northeast United States. Consequently, promoting the growth of this sector has the greatest potential to be a successful effort. We strongly encourage NEWBio to devote time and resources towards enabling growth of this sector. Our specific recommendations for research, extension, and education are as follows.

## RESEARCH

Clean wood chips are essentially the only effective feedstock for this sector<sup>1</sup>. Consequently, a significant barrier to growth of this sector is the fuel inflexibility of Commercial Scale combustion equipment. If NEWBio researchers were able to discover system principles that allow for combustors that can effectively combust a variety of woody and herbaceous fuels, that would be a remarkable enabler of industry growth that would open up NEWBio crops (especially miscanthus and switchgrass) to a whole new market.

Another research need lies in the area of economics. There is a need to study and characterize the monetary and non-monetary economic characteristics of biomass based commercial scale distributed heat and CHP systems. This information will inform the decision making process as companies, organizations, and communities consider potential biomass energy projects.

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<sup>1</sup> While wood pellets and grass pellets have been tried, their greater price (~\$250/dry ton vs ~\$70 per dry ton) makes them a non-option for almost all commercial scale biomass heat and CHP scenarios. In addition, the high ash content and tendency to slag and foul makes herbaceous material more problematic than woody material.

A third research need lies in the area of policy. There is a need for us to better understand how different policies serve as a benefit or detriment to the industry. This information would be extremely valuable for industry and community groups wishing to promote effective government support of the industry.

Lastly, there is a need for research to identify the characteristics that are ideal for expansion of the industry, so that wise decisions can be made about project development.

## EXTENSION

There is a need for extension efforts to enlighten the public about the implications of public policy on biomass heat and CHP systems, as well as to reach out to ideal candidates for biomass heat and CHP. We need to better explain the benefits of biomass heat and CHP to the public, and also use real project case studies to celebrate successes that demonstrate the normal market viability of biomass projects.

## EDUCATION

The greatest educational need for this sector is to educate the community about the nature of commercial scale biomass combustion – renewability aspects, ecological aspects, technological aspects, and economic aspects. A balanced presentation is needed if the community at large is to make wise choices with respect to energy.