

**Biopower Work Group  
EcoComplex Comments  
August 6, 2013**

**a. Eligible Technologies**

The Biopower Workgroup should consider the technologies which are feasible to convert Class I biomass to energy technologies as referenced in N.J.A.C. 14:8-2.5, as eligible technologies. The eligible technologies that should get priority can be listed as follows:

**1- Anaerobic Digestion of Food Waste for Electricity Generation and Other By-products:** Electricity generated by the combustion of gas from anaerobic digestion of food waste is defined as Class I renewable energy. Anaerobic Digestion (AD) is commercially available and widely utilized in Europe. However, it is still considered an emerging technology in the U.S and not widely practiced. It is important to give a priority to fund AD projects in New Jersey to generate power from food waste instead of sending the food waste to the landfill or for utilization outside NJ. The ADs can be located either close to large food waste generation sources such as institutional or commercial food waste generators (universities, hospitals, hotels) or next to the existing landfills and WWTPs to utilize their infrastructure already in-place such as roads scales, heavy equipment and bio-methane collection and utilization equipment. Incentivizing the projects which co-locate ADs with existing and active landfills or at waste water treatment plants (WWTP) would provide sustainable opportunities for power generation.

**2- Power Generation from Landfill Gas and WWTP:** The N.J.A.C. 14:8-2.5 defines electricity generation from both the combustion of landfill gas and biogas generated at WWTPs as Class I renewable energy. Therefore the second priority should be given to the projects on electricity generation at these facilities.

**3- Class I Biomass Combustion:** Electricity produced through the combustion of several types of clean, untreated wood is required to obtain a sustainability determination from NJDEP. If combustion of clean wood for electricity generation projects are combined with CHP technology for funding, these projects should get priority consideration for funding if the projects meet the sustainability determination requirement.

**4- Class I Biomass Gasification:** Similar to Class I biomass combustion, If gasification of clean wood for electricity generation projects are combined with CHP technology for funding, these projects should get priority consideration for funding if the projects meet the sustainability determination requirement.

In addition, the EcoComplex recommends that co-firing of biomass waste with coal should be considered for funding either in FY 14 if co-firing policy can be amended or in the following funding opportunities in coming years. This option would also provide a quick solution to “Super Storm Sandy” created biomass waste problem. The waste generated by the storm is a mixture of clean and treated wood and it would be beneficial for the State to consider allowing this biomass waste to be utilized at a coal burning power generation units.

New Jersey does not grow biomass as a renewable energy feedstock however, the state generates large amounts of waste and ~ 74% biomass is available in the waste. The EcoComplex team recommends that the state should consider utilizing waste for energy generation by encouraging the utilization of emerging innovative energy technologies in FY 15 and following funding cycles. The State should partner with the higher education institutions to verify the emerging technologies to lead the region to solve this wide spread waste problem.

**b. Incentive Structure and Caps**

To the extent possible, incentive structures that are available for biopower projects should be designed to help facilitate its financing. Project financiers are risk adverse and anything that can be done to provide some certainty

in the business plan, like incentives that are at a fixed, bankable rate, will help in the financing process. This would include maintaining a fixed schedule of funds per kW capacity. Much like the initial solar energy program, this type of fixed incentive structure is needed for the biopower program to get a critical mass established in the state. Going to a competitive process at this point will delay and discourage biopower development in NJ.

The REC value for biopower energy should also be fixed at a listed price over the next 10 years. This will help with project financing because it would help to mitigate the risk of price volatility in the wholesale electric market.

**c. Solicitation Structure, Timing and Frequency**

Solicitations for submittal on a quarterly basis will be fine. The timing should be based on the State's fiscal year to help potential project developers better understand the current incentives.

**d. Application Criteria and Process**

The technology description criteria for the NJBPU application should stress verification that the technology will perform as described. A performance guarantee from the technology provider should be requested. In addition, obtaining the **“sustainability determination”** from the NJDEP, for the relevant projects, is an essential requirement to make the initial funding allocation decision. The applicant should either attach the sustainability determination to the application or understand the requirement that the project should meet the sustainability determination and the determination document should be submitted by a certain date to NJBPU to make its decision. The awardee should also understand that, in addition to sustainability determination, obtaining necessary NJDEP permits is a requirement to receive the actual funding.

Applicants should be allowed to “stack” the various BPU program benefits for a given project. For instance, if a biopower project is also utilizing CHP, the applicant should be allowed to apply and receive full support from both programs. If this considered as “double dipping”, at least the project should receive one full and another partial funding from both programs to encourage both CHP and renewable energy to power development.