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Dave B

## **Suggested Evaluation Criteria for Biomass Power Plant**

**Maximize system life-cycle efficiency through tri-generation of electricity and production of value-added co-products and / or energy services.**

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**From:** bruderly [mailto:bruderly@bellsouth.net]  
**Sent:** Monday, March 24, 2008 9:22 AM  
**To:** Pegeen Hanrahan (mevyleen@aol.com)  
**Subject:** GRU Evaluation Criteria -- Maximize System Life-Cycle Efficiency

Pegeen

The evaluation criteria for the new biomass power plant do NOT place sufficient emphasis on overall system efficiency or life-cycle efficiency.

The three top ranked proposals are each listed as conventional steam plants. This means that 2/3 of the energy in the wood fuel will be wasted.

We can do much better.

An integrated biorefinery using advanced co-gen and tri-gen technology can use more of the energy available in the biomass fuel by using waste heat to make more electricity or to make a value-added co-product, like ethanol or other value-added products. An integrated biorefinery will reduce wasted thermal energy to only 1/3 of the energy available in the biomass fuel.

In other words, I am asking you to fight for criteria that will motivate staff to seek a project design that will maximize life-cycle system efficiency. In my opinion a cost-effective, reliable plant can be built that will achieve 60 to 70% life-cycle thermal efficiency with available technologies and co-products.

For example, an integrated biorefinery could provide steam for ethanol and biodiesel production. Other options would include steam and hot water for heating, air-conditioning and process uses at the planned development on adjacent Plum Creek property that is now in planning process for intense commercial-residential development.

In a greenhouse gas constrained business environment life-cycle efficiency and life-cycle emissions are the single most important evaluation criteria.

Please fight to give life-cycle efficiency much more weight in the evaluation process.

Help Commissioners understand that pushing the staff to be more creative and flexible on this matter will promote innovation, increase revenues, keep energy costs low and create additional benefits for this community.

Thank you.

