Hydro Dynamic Engineering, LLC

March 7, 2013

Connecticut Legislature - Energy and Technology Committee

Comments regarding House Bill 6535 -
Redefining Class I Renewable Energy Sources

Thank you for considering these comments offered in favor of the Bill.

I am the owner of Hydro Dynamic Engineering, LLC, a firm that earns more than 80% of its annual sales by installing and maintaining geothermal heat pump systems. I am also the Vice President of the Connecticut Geothermal Association, which was established to promote geothermal heat pump technology, and to help educate others about geothermal heat pump systems. I have been designing and installing geothermal heat pump systems for over thirty years.

Why to support this legislation

- Allowing Class I Renewable Energy Credits for thermal renewable energy is consistent with Governor Malloy's stated goal of expanding the definition of Class I renewable energy sources.
- Geothermal heat pumps truly extract useful thermal energy from the earth. That thermal energy is renewed each year by heat from the sun, and the extracted energy is readily measured and reported, and it is verifiable by independent entities. The quantity of heat extracted is easily converted to megawatt hours (Renewable Energy Credits) by simple arithmetic.
- Making Class I Renewable Energy Credits available to homeowners and others, who own geothermal heat pump systems, provides them with some help to pay back the relatively high initial cost of installing these systems.
- Promoting the geothermal heat pump industry supports American jobs, and especially local Connecticut jobs. Most geothermal heat pumps are manufactured in the USA. Many components of geothermal heat pump systems are manufactured here in Connecticut. And, of course, the systems are designed and installed by local tradesmen working in small businesses in Connecticut.
- Adding thermal renewable energy to the Class I RECs will introduce more competition for those RECs, driving down their cost. This will make renewable energy credits more affordable for Connecticut's electric utilities and their ratepayers.
- Firms are established and ready to measure, aggregate and trade thermal renewable energy credits.

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Cautions

- To be eligible for Class I RECs, geothermal heat pump systems should only be designed and installed by persons who can demonstrate that they are trained in their proper design and installation procedures. This is because their source of thermal energy, meaning the means by which they are coupled to the earth, is unique to every project. The successful operation of each system depends on adequate design of its earth-coupling subsystem.
- Do not use the term "metering" in the legislation, because that is one of the reasons that the New Hampshire program has not been implemented yet.
- Do not make reference to "energy saved" by thermal energy systems, because that is one reason that the Maryland program has not been implemented yet.
- Keep it simple. Thermal renewable energy should be measurable by straightforward and simple means that are independently verifiable. Estimates and assumptions should not be allowed for any candidate.

Geothermal heat pump systems save energy and they save their owners money because most of the thermal energy they provide is extracted from the earth. It is truly renewable because the ultimate source of that thermal energy is the sun.

Respectfully Submitted

John F. Sima III