



March 5, 2020

**Testimony presented to the Connecticut Energy and Technology Committee**

**These comments are submitted regarding Governor's Bill No. 10  
An Act Concerning Certain Recommendations Regarding Climate Change**

Thank you for considering these comments. My name is John Sima. My family business is operated as Hydro Dynamic Engineering, LLC in Southington, CT. I am a Connecticut-registered professional engineer. I have successfully designed, installed and maintained geothermal heat pump systems for forty years. I am a member of the Connecticut Geothermal Association.

Governor's Bill 10 includes optimistic goals for the reduction of greenhouse gasses during the next 50 years. Geothermal heat pump heating and cooling systems should be a part of the solution that will achieve those goals. Please beware that there is language in the Bill that might be misinterpreted to make the widespread adoption of geothermal heat pumps difficult.

Please refer to lines 60-68 of the Bill, which state that proposals for passive demand reductions, like energy efficiency, must be in addition to the projected electric demand reductions of the conservation and load management programs. The inference here is that energy efficiency measures must not increase electric demand.

Geothermal heat pumps use electricity, so some might argue that promoting them will increase electric demand. That is not true. In the winter heating mode, geothermal heat pumps use most of their electricity at night. This is otherwise a time of low demand, so peak demand is not increased. In the cooling (air conditioning) mode, geothermal heat pump systems use about half of the electricity that air-source air conditioners and heat pumps use, so geothermal heat pump systems reduce the summer peak demand.

Geothermal heat pump systems, if installed correctly, dramatically reduce our emission of carbon dioxide (greenhouse gasses). Proper installation of these systems needs to be promoted using incentives, like those adopted by Connecticut's neighboring States – New York and Massachusetts. Those incentive programs require that the designers of geothermal heat pump systems prove themselves to have the special knowledge needed to properly install geothermal heat pump systems. Any program that incentivizes geothermal heat pump installations needs to include these safeguards.

Respectfully Submitted

A handwritten signature in black ink that reads 'John F. Sima III'.

John F. Sima III