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Putting thermal energy on level ground with solar, wind

But the concept faces uphill road past business, environmentalists

BY ANDREW KITCHENMAN

A LEADING LEGISLATOR on energy issues is looking to expand the concept of energy credits beyond solar and wind power, but whether thermal energy gets the same standing as its more celebrated contemporaries remains to be seen.

Assemblyman **Upendra J. Chivukula** (D-Somerset) is writing a bill that would create alternative thermal energy credits, which would pay for energy from solar thermal, geothermal and biomass generators, as well as the heat produced by combined heat and power, or CHP, generators.

The program would be funded by payments from large-scale energy producers, with roughly 5 percent of state energy use being carved out for the program, similar to carve-outs for solar and wind power.

"A concept like this would try and bring some equity," said **Joe Sullivan**, vice president of energy policy and development at **Concord Engineering** and a Board of Public Utilities veteran.

Yet Sullivan said he's doubtful thermal will get a dedicated slice of the state energy pie, with BPU President **Lee Solomon** opposed to "picking winners and losers."

Chivukula said the federal government already provides energy efficiency tax credits for companies that generate energy from

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thermal or biomass sources, but New Jersey is missing an opportunity because "we don't recognize any energy that is thermal," though the BPU does provide rebates for some biomass and thermal projects.

Chivukula said manufacturers and other companies that generate heat in their production processes can reduce their energy consumption using thermal energy. For instance, scrap metal companies can use the heat from melting metal to generate steam and electricity, and hot water heaters can be warmed by solar thermal.

Sullivan said the concept addresses an inherent problem in renewable energy incentives — namely, how to encourage projects that reduce consumption, but don't produce electricity. It also could be a fruitful way to recover energy that is generated, but never put to use — "a tremendous opportunity, at the state level and nationally."

The proposal takes a different approach to an idea already being explored by the BPU: creating a market for energy efficiency that would count toward state renewable energy goals.

"The BPU has supported thermal energy, and we incentivize some types of thermal energy," BPU spokesman **Greg Reinert** said, adding that the board supports having an energy-efficiency portfolio standard.

But the Chivukula plan could raise eyebrows among environmentalists, said **Frank A. Felder**, director of Rutgers University's Center for Energy, Economic & Environmental Policy, especially if CHP — which includes natural gas power — is included. If so, "the New Jersey renewable portfolio standard is no longer renewable, or purely renewable," Felder said, referring to the 2020 goal.

Chivukula said while CHP may not be in the same category of renewable energy as solar power, New Jersey can create a new alternative power class to meet its goals.

There are other challenges, too. One would be getting the business community on board, since the potential for higher energy costs exists, due to the credits, Sullivan said: "Anything that increases costs is perceived by the business community as negative."

Another challenge to implementing such a system, Reinert said, would be converting thermal energy into a measurement comparable to electric power. Felder said the state needs to first assess its technical potential for thermal energy before committing to benchmarks.

Chivukula plans to introduce the bill as soon as September.

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