March 5, 2026
3/3/2026 2:57 PM

SB596-HB940.LargeLoadCustomers.Pavlak. INFO

Oral & written testimony

Good afternoon Mr. chairman Madam vice chair. My name is Alex Pavlak I'm a PhD engineer from Severna Park and the chairman of the Future of Energy Initiative.

One of our fortes is the Art of Systems Architecting. Goven a set of building blocks, such as wind, solar, storage and nuclear, how do they fit together to deliver reliable affordable power? What is the system architecture?

Today's topic is large loads. Integrated System Operators ARE NOT THINKING STRATEGICALLY. They are trying to accommodate large loads within the architecture of the legacy power grid. Beyond a certain modest size, retaining a single integrated solution will frustrate everyone.

The legacy power grid is the product of 144 years of evolution. It employs thousands of independent generators to reliably and affordably serve millions of small loads.

The emerging requirement is for huge loads with unique profiles and a reliability requirement substantially greater than that the legacy power grid.

Our main conclusion is that two separate systems will be simpler and cheaper than a single integrated system. One system is a refined version of the legacy system. The second will be off-the-grid 10 GW scale nuclear energy complexes located where there is environmentally acceptable cooling.

Maryland needs a strategic plan to capture this business.

The concept study is published here:

https://www.futureofenergyinitiative.org/Pubs/5nines.pdf

And a 6 min video summary is published here.

https://youtu.be/gpjMeHL8nKQ

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