

VINEYARD



GAZETTE

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Letters to the Editor

Letter to McCain
Editors, Vineyard Gazette:

Dear Senator McCain,

I read with interest an article in last week's Vineyard Gazette about your "Stimulus Check-Up" and the inclusion of the Vineyard Power "Smart Grid" program in your list of 100 "silly and shortsighted" projects.

Indeed. I feel that the current effort to modernize the American electrical grid into a "Smart Grid" by the GridWise Alliance and the Department of Energy is a priority for this country and will create jobs.

A "smart" American electrical grid will set up two-way communication between a utility and its "smart grid" customers' home appliances and heating and cooling systems.

During periods of high demand, a utility would be able to reduce electricity use by its "smart grid" consumers and reward them with lower rates. For example, this could mean that a utility would ask a customer's water heater to heat up to a slightly lower setpoint or an AC system to cool a house to 75 F instead of 72 F.

The idea is that most of these "sacrifices" would in fact be invisible to the consumer but would offer many benefits. The reliability of the grid (much of which is fairly old and working beyond its original capacity) would be improved, consumers would save money, energy efficiency would be encouraged through thoughtful electricity use, and America would be more secure through reduced foreign fossil fuel imports.

I don't see where any of this is energy savings "Big Brother style". Building this new "smart grid" communications infrastructure will create new "green collar" jobs as utilities move their systems into the 21st century.

Perhaps a bit of history will help illuminate the situation (unearthed relatively easily by this humble mechanical engineer)....

In the 1940s, the visionary Philip Sporn and his colleagues at American Electric Power (destined to become one of the nation's largest utilities) developed and built the modern electrical grid to serve the industrial might of America. Their efforts made our growth and world leadership a reality. They also looked into the future to see how the grid could be made more efficient, more reliable, and economical for its users.

In 1947, they proposed, developed, and installed residential heating systems using electrically powered heat pumps. These heat pumps used air for a heat source, heated water in a storage tank for off-peak energy storage, and interlocked with other household appliances to control overall energy demand from a residence.

Their frustration was not having an "Internet" to allow two-way communication between homes and the utility to permit the homeowner to choose between optimum comfort and optimum efficiency through adjusted electricity use.

Fast forward to 2009 (62 years later):

Two months ago, at Living Local (the annual Vineyard energy fair), we unveiled the Daikin Altherma, the latest heat pump from Europe (by way of Japan).

Built from the ideas from 1947 of Philip Sporn and his colleagues, it uses air as its heat source, heats water in a storage tank for off-peak energy storage, and comes **factory equipped** with a connection for the local utility to allow the homeowner to choose what level of optimum comfort or optimum savings they desire through their level of electricity use by the heat pump.

I, for one, am tired of having a relentless stream of innovation from this country be discarded or forgotten through a lack of vision and support from our leaders only to be developed and exploited by Europe and Asia.

Through the efforts of the Department of Energy and the Vineyard Power group, we have a local opportunity to join the "smart grid" effort and directly affect our energy use through the intelligent management of the electricity we use.

By making the development of a "smart grid" a priority, I see an opportunity to help make America once again be a world leader in energy innovation, research, and efficiency.

Sincerely,

Brian K. Nelson, M.S.M.E., Nelson Mechanical Design, Inc., Vineyard Haven, MA