

**FAX
To**

Department of Energy

202-586-8008

**Request for Rehearing
Mid-Atlantic National Interest Electric Transmission Corridor**

**DOCKET Number
2007-OE-01**

From

**Carol Ferguson
Prince William County, Virginia**

7 Pages (including this page)

TO: Department of Energy via FAX 202-586-8008

FROM: Carol Ferguson, 15230 Championship Drive, Haymarket, VA 20169

ATTN: DOCKET 2007-OE-01

Request for REHEARING regarding the designation of the Mid-Atlantic National Interest Electric Transmission Corridor. Original comment submitted July 2, 2007. Comment tracking number is 80796.

I am writing to request a rehearing of the designation of the Mid-Atlantic National Interest Electric Transmission Corridor as concerns in my original comments submitted July 2, 2007, have not been considered. Original comments attached. Despite strong objections from local, state, and federal elected officials as well as citizens who would be affected, the Department of Energy (DOE) has issued an order designating a Mid-Atlantic Area NIET Corridor.

DOE must not be allowed to supersede states' rights to site transmission lines. It would appear it was not the original intent of Congress when passing the Energy Policy Act of 2005 to give DOE the authority to take over the power granted to states to site transmission lines. Just ask Congress about their original intent. Federal elected representatives would not be objecting if this was the original intent of Congress. This is an abuse of power and an encroachment upon states rights.

Adequate consideration has not been given to alternatives. Did Dominion Power look into alternatives such as the NaS battery? See attached US TODAY article stating, "Using so-called NaS batteries, utilities could defer for years, and possibly even avoid, construction of new transmission lines, substations and power plants, says analyst Stow Walker of Cambridge Energy Research Associates."

Did Dominion Power look into investing in renewable energy systems and small scale decentralized generation technologies analyzed by Benjamin Sovacool from the Virginia Polytechnic Institute and State University? See attached article regarding Benjamin Sovacool.

Many alternatives are available. Dominion Power and PJM must be required to exhaust all possible alternatives before allowing action that would have profound negative effects on states' rights, local land-use planning, environmental and historic resources. The order designation of the NIET Corridor undercuts any motivation for utilities to develop balanced electricity solutions including conservation, additional generation and demand response. Dominion Power and PJM must demonstrate they have explored and exhausted all possible alternatives before resorting to the devastating destruction that comes with the construction of transmission towers.

PJM Interconnection should be required to submit their full plan for the regional energy grid with all routes they will propose and not apply for approval of interstate projects piecemeal (PEPCO, Dominion Power, TRAILCO, etc.). PJM already knows a number of proposals they plan to make. Communities must be able to see the full picture. Upon seeing the complete picture with all proposed projects, the states and even DOE may see the proposals are not in the best interests of Virginia's citizens and see the proposals for what they are about--big business and profit.

Thank you for your consideration.

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Sullivan, Robert G.

From: NIETCwebmaster@anl.gov
Sent: Monday, July 02, 2007 8:24 PM
To: NIETCwebmaster@anl.gov
Subject: Receipt: NIETC and Congestion Study Comment 80796

Thank you for your comment, Carol Ferguson.

Your comment has been successfully received and entered into the comment tracking system. Please note that there is no need to send a duplicate set of comments via mail or other means.

The comment tracking number that has been assigned to your comment is 80796. Once the comment document has been published, please refer to the comment tracking number to locate the response.

Comment Date: July 2, 2007 08:23:53PM CDT

NIETC and Congestion Study
Comment: 80796

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Corridor(s) for Comment: Mid-Atlantic Area National Corridor

Comment Submitted:

Our family overwhelmingly opposes DOE's efforts to override state authority to site transmission lines. Authority to site transmission lines should remain with the state. Backstop authority replaces and supersedes state authority. Under the new provisions of section 1221, states are given a token first role while, in reality, state authority will be undercut with newly imposed time constraints that ensure that federal authority is a likelihood in nearly all cases. The provisions which created this new backstop siting authority specified that it can be requested after one year has elapsed from the time an application is submitted. This usurping of state control does not require that the state process was flawed in any respect. Power companies can request FERC backstop oversight simply because they have no patience for the traditional lawful and appropriate state processes.

There has not been an adequate consideration of specific alternatives to new transmission lines, including a full range of demand management and peak demand reduction measures; energy conservation measures; and alternative transmission technologies and upgrades. Transmission expansion is not the only solution; conservation, energy efficiency, and demand management are viable resources. California has demonstrated the feasibility of demand side management resources (essentially, conservation). A comprehensive assessment of the potential of lower cost, non-polluting demand resource options is needed. It is the Department of Energy's responsibility to foster an energy policy that will be environmentally responsible. Smart grid technology, demand management, upgrading existing infrastructure, and conservation can provide time for our nation to move to renewable, clean, and distributed generation.

There has not been an assessment of impacts on the environment, a requirement by the National Environmental Policy Act which is reasonable given the demonstrated potential impacts on historic, scenic, natural, and cultural resources in the proposed corridor. Once a corridor is designated it will be too late to protect Virginia's treasured

landscape. Establishing transmission corridors, clear cutting thousands of acres of privately owned land for transmissions lines, and fostering the use of coal is unnecessary.

The Department of Energy (DOE) has pandered to energy companies and their representatives. Over a one-year period, the DOE held over 60 outreach meetings within the energy industry, yet offers approximately 49 million citizens a handful of public meetings and a mere 60 days of input. On March 29, 2006, the DOE held a technical conference in Des Plaines, Illinois, with panelists and attendees insulated in an interactive setting that included various question and answer sessions. On March 15, 2007, the DOE held a public meeting in Arlington, Virginia, where citizens were allotted a mere two minutes each to bring their concerns before a stoic panel of three. The entire process has desecrated the values of our democracy.

Questions about submitting comments over the Web? Contact us at:
NIETCwebmaster@anl.gov or call the NIETC and Congestion Study Webmaster at (630)252-6182.

Virginia Polytechnic Institute

Study: Best Energy Strategies To Meet Demand For Electricity Are Green, Small And Local 9/25/2007

The wisest energy strategy for the United States, and indeed other countries facing similar challenges, is to move away from their reliance on large-scale centralized coal and nuclear plants, and instead, invest in renewable energy systems and small scale decentralized generation technologies. According to Benjamin Sovacool from the Virginia Polytechnic Institute and State University, these alternative technologies are simultaneously feasible, affordable, environmentally friendly, reliable and secure. His analysis (1) and recommendations are published in Springer's journal *Policy Sciences*.

The electricity sector as it currently operates is at the mercy of natural disasters, price fluctuations, terrorist attacks and blackouts. Coupled with other, more long-standing problems such as increasing levels of pollution, growing vulnerability and inefficiency of transmission and distribution networks, and rising electricity prices related to disruptions and interruptions in fuel supply, these challenges add to the need for an evaluation of alternative energy technologies.

Sovacool studies in detail the current technological composition of, and challenges faced by, the American electric utility industry. He then evaluates the broad portfolio of energy technologies available to American electricity policy makers, against five criteria: technical feasibility, cost, negative externalities (or impact on human health and the environment), reliability and security.

Sovacool's detailed analysis shows that three other sets of technologies – energy efficiency practices (like more efficient appliances), renewable energy systems (such as generators that create electricity from sunlight, wind, and falling water), and small-scale distributed generation technologies (such as generators that produce decentralized and modular power close to its point of consumption) – appear to offer many advantages over large and centralized nuclear and fossil fueled generators.

Sovacool's paper shows how these alternative approaches can offer policy makers solutions to curb electricity demand, minimize the risk of fuel interruptions and shortages, help improve the fragile transmission network, and reduce environmental harm. He concludes that "it is these miniature generators – not mammoth and capital-intensive nuclear and fossil fuel plants – that offer the best strategy for diversifying electrical generation in a competitive energy environment."

1. Sovacool BK (2007). Coal and nuclear technologies: creating a false dichotomy for American energy policy. *Policy Sciences*; 40:101-122 (DOI 10.1007/s11077-007-9038-7).

New battery packs powerful punch

By Paul Davidson, USA TODAY

Batteries have long been vital to laptops and cellphones. They are increasingly supplying electricity to an unlikely recipient: the power grid itself.

Until recently, large amounts of electricity could not be efficiently stored. Thus, when you turn on the living-room light, power is instantly drawn from a generator.

* A new type of a room-size battery, however, may be poised to store energy for the nation's vast electric grid almost as easily as a reservoir stockpiles water, transforming the way power is delivered to homes and businesses. Compared with other utility-scale batteries plagued by limited life spans or unwieldy bulk, the sodium-sulfur battery is compact, long-lasting and efficient.

* Using so-called NaS batteries, utilities could defer for years, and possibly even avoid, construction of new transmission lines, substations and power plants, says analyst Stow Walker of Cambridge Energy Research Associates. They make wind power — wildly popular but frustratingly intermittent — a more reliable resource. And they provide backup power in case of outages, such as the one that hit New York City last week.

Such benefits are critical, because power demand is projected to soar 50% by 2030 and other methods of expanding the power supply are facing growing obstacles. Congress is likely to cap carbon dioxide emissions by traditional power plants to curtail global warming. Meanwhile, communities are fighting plans for thousands of miles of high-voltage transmission lines needed to zap electricity across regions.

A test case in West Virginia

American Electric Power (AEP), one of the largest U.S. utilities, has been using a 1.2 megawatt NaS battery in Charleston, W.Va., the past year and plans to install one twice the size elsewhere in the state next year. Dozens of utilities are considering the battery, says Dan Mears, a consultant for NGK Insulators, the Japanese company that makes the devices.

* "If you've got these batteries distributed in the neighborhood, you have, in a sense, lots of little power plants," Walker says. "The difference between these and diesel generators is these batteries don't need fuel" and don't pollute.

The NaS battery is the most advanced of several energy-storage technologies that utilities are testing. The oldest and most widespread form of energy storage in the USA, pumped hydroelectricity, collects water after it spins a turbine and uses a small amount of electricity to send it back and repeat the process.

Lead-acid batteries — the same kind used in cars — were installed by Southern California Edison in 1988. But the batteries, though inexpensive, typically fill warehouse-size buildings and last about five years. That's because the acid that connects positive and negative electrodes corrodes components.

An NaS battery, by contrast, uses a far more durable porcelain-like material to bridge the electrodes, giving it a life span of about 15 years, Mears says. It also takes up about a fifth of the space. Ford Motor pioneered the battery in the 1960s to power early-model electric cars; NGK and Tokyo Electric refined it for the power grid.

Since the 1990s, Japanese businesses have installed enough NaS batteries to light the equivalent of about 155,000 homes, says Brad Roberts, head of the Electricity Storage Association. In the USA, AEP is using the 30-foot-wide by 15-foot-high battery to supply 10% of the electricity needs of 2,600 customers in north Charleston, says Ali Nourai, AEP manager of distributed energy. The battery, which cost about \$2.5 million,

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is charged by generators from the grid at night, when demand and prices are low, and discharged during the day when power usage peaks.

By easing strains on the grid, especially on the hottest summer days, the battery lets AEP postpone by about seven years the roughly \$10 million upgrade of a substation and reduce the chances of a blackout, Nourai says. After it upgrades the substation, AEP can move the battery to another location.

"Our vision is to have (batteries) throughout our system," he says.

Storing wealth from wind farms

A more intriguing goal is to wring more energy out of the wind farms that are cropping up across the country. Wind typically blows hard at night when power demand is low, producing energy that cannot be used. When demand peaks midday, especially in the summer, wind is often sporadic or absent. NaS batteries could let AEP store wind-generated power at night for daytime use.

Next year, AEP plans to install another NaS battery in West Virginia to provide backup power in case of an outage — the first such application of the technology, Nourai says. The battery would kick in automatically, so customers would see no disruption.

Other utilities are planning or considering the technology. In Long Island, N.Y., a group of utilities plans this summer to install an NaS battery at a bus depot. The battery is charged at night, when power prices are low, and discharged during the day to pump natural gas into tanks to provide fuel for the buses, says Mike Saltzman of the New York Power Authority. That cuts electric costs for the bus company and eases stresses on the grid. Pacific Gas & Electric is leaning toward installing a much larger, 5-megawatt battery by 2009, enough to power about 4,000 homes, says PG&E's Jon Tremayne.

The biggest drawback is price. The battery costs about \$2,500 per kilowatt, about 10% more than a new coal-fired plant. That discourages independent wind farm developers from embracing the battery on fears it will drive the wholesale electricity prices they charge utilities above competing rates, says Christine Reál de Azua, spokeswoman for the American Wind Energy Association.

Mass production, however, is expected to drive prices down, Mears says. He predicts NaS batteries will start to become widespread within a decade.

Meanwhile, other storage devices are gaining traction, too. A group of Iowa municipal utilities plans to use wind turbines to compress air during off-peak hours that will be stored in an underground cavern. The air would be released at peak periods to run turbines and generate power for about 200,000 homes. Another technology, the flywheel, has a massive cylinder that can spin for days after being started by a generator. The cylinder can then activate a turbine to supply electricity for a few seconds or minutes when it's needed, for instance, to head off an interruption to a computer center from a lightning strike.

"We'd like to see storage ubiquitous," says Imre Gyuk, head of energy storage for the Department of Energy, which helped fund the AEP project. "Stick it any place you can stick it."

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