

June 23, 2024

# **COMMENTS BY PROTECT FAUQUIER TO THE DEPARTMENT OF ENERGY ON NIETC CORRIDOR PROPOSAL – MID ATLANTIC**

We are providing comments on the Mid Atlantic NIETC corridor designations on behalf of the 1,600 members of Protect Fauquier. Protect Fauquier is a nonprofit in Fauquier County VA. We formed in 2022 to protect and preserve our rural landscape, culture, and agri-tourism economy from the adverse impacts of data centers and transmission lines.

Protect Fauquier is aware of the need to improve the nation's electricity grid, to achieve interconnectivity across regions, to integrate new clean energy sources into the grid, and to improve grid reliability and resilience. We support those important goals.

However, as in any worthy goal, there are multiple paths to achieve them, plus multiple impacts and issues to be dealt with.

We believe that DOE has chosen a path that is excessively reliant on building new transmission lines and enabling the excessive electricity demands of data centers. We believe DOE's path fails to adequately assess the unprecedented level of data center load demand, will have significant adverse impacts on our County and the Mid Atlantic region, will lead to a significantly higher and unjust cost burden on residential ratepayers, will inflict major unnecessary environmental and community impacts through transmission line expansion, and fails to take steps to rein in data center electricity demand (as DOE has done in other sectors, from lightbulbs to appliances to buildings).

Protect Fauquier's specific comments fall in three categories:

## **NIETC ROUTINGS THAT ADVERSELY AND UNJUSTLY AFFECT FAUQUIER COUNTY, VIRGINIA**

## **DOE'S FAILURE TO ADEQUATELY DEAL WITH EXPLOSIVE DATA CENTER ELECTRICITY DEMAND IN THE MID ATLANTIC**

## **INADEQUATE PUBLIC NOTICE AND INFORMATION**

We will address each in turn.

## **NIETC ROUTINGS THAT ADVERSELY AND UNJUSTLY AFFECT FAUQUIER COUNTY, VIRGINIA**

For many decades, Fauquier County has practiced careful land use planning and land conservation. The county Board of Supervisors and county residents are committed to preserving and conserving open space, scenic attributes, and quality of life to avoid the development, commercialization, suburbanization,

industrialization, and transmission lines that have overwhelmed counties to our north. We have two major concerns with the Mid Atlantic NIETC corridor proposal:

1. **The “Stub” transmission line into Fauquier County:** We are adamantly opposed to the “stub” of a transmission line that your NIETC maps show entering Fauquier County and extending southeast toward Fiery Run – terminating in the middle of forest. What possible national interest is there in this stub? What national need is this transmission “stub” serving? Is it a set-up for some future transmission line? In prior communications we have asked DOE NIETC staff to provide an explanation for the “national interest” in this stub. DOE’s response provided no justification, no explanation, no national interest attached to this particular stub line. Without such a justification, this stub has no basis for inclusion in a national interest designation. Please delete it. Moreover, we would vehemently object if DOE subsequently develops some national interest designation. In that unlikely case, you have an obligation to provide notice and opportunity to comment.
2. **Potential NIETC Line Shifts from adjacent counties into Fauquier:** Protect Fauquier is aware there is substantial public opposition by Loudoun County residents to new transmission corridors in Loudoun County, particularly for the MARL line in western Loudoun, which is encompassed in the DOE Mid Atlantic NIETC proposal. There is also significant and growing opposition to new transmission lines in Prince William Counties. If that resistance leads you to contemplate shifting NIETC lines into Fauquier, don’t even consider it. Such new lines would be to meet the explosive electricity demand of data centers that have been profligately approved in Loudoun and Prince William Counties. Fauquier County has been prudent and cautious with allowing data centers in the county, at the cost of foregone revenue. Loudoun and Prince William County governments have thrown caution to the winds and approved enormous data centers – and are reaping hundreds of millions in tax revenues. Fauquier County citizens will never acquiesce to transmission lines scarring our landscape and way of life just to serve data centers that are enriching other counties. We will resist such transmission lines intensely, for as long as it takes, and by all possible means. We also point out that any such re-routing would be more circuitous, and would therefore increase construction costs, ratepayer costs, environmental and community impacts, line loss due to increased distance, and vulnerability of the longer line to storms and outages.

## **DOE’S FAILURE TO ADEQUATELY DEAL WITH EXPLOSIVE DATA CENTER ELECTRICITY DEMAND IN THE MID ATLANTIC**

DOE has failed to grasp and deal with the elephant in the Mid Atlantic room: Massive and explosive data center electricity demand. DOE clearly has not assessed the level of that demand, both presently and over the next 10+ years. From all the available data on existing, approved, and pending data centers in northern Virginia, we see no plausible way that demand can be met by expanding transmission lines, substations, and power generation plants.

**The evidence of excessive and unsustainable data center electricity demand:** Dominion Energy-VA (the largest electricity provider in VA) has publicly stated that 24% of electricity sales was to data centers in 2023. Dominion Energy-VA also indicated in April 2024 that data center load is expected to quadruple. QUADRUPLE. NOVEC, another major VA electricity provider indicates even higher data center load demand and projected growth. We would like to see the evidence that DOE has adequately

accounted for this level of data center demand and projected the level of additional transmission lines, substations, and power generation that will be required to enable this demand. We do not think it is physically possible to meet this level of demand within the time frames that data centers will be operating. And we believe the costs and impacts from attempting to simply meet all this demand, including through NIETC designations, are unacceptable.

To further make this point: A single data center campus in nearby Prince William County (the Prince William County Digital Gateway - PWCDG) is estimated to impose a 3 gigawatt load on the grid. Compare that to Dominion's Lake Anna nuclear power plant, and to all the energy projected from Dominion's massive offshore wind farm:

**3.0 GW = Projected load for Prince William County Digital Gateway**  
**1.9 GW = Dominion's North Anna Nuclear station**  
**2.6 GW = Dominion's major pending offshore wind farm**

The PWC DG is just ONE data center campus among hundreds of built, approved, and proposed data centers in northern Virginia. Other major new data centers are popping up at least weekly as approvals or proposals. These are on top of the electric load of scores of operating data centers in Loudoun, Prince William, and Fairfax.

**The “supersizing” effect of AI:** Add to this metastasizing electricity load the "supersizing" effect of AI, in which AI operations consume 6-10 times as much electricity as normal data center operations.

**Utility company profit motivation:** Electric utilities are all too ready to ride this load growth because it will lead to commensurate increase in utility profits – even when those utilities know they cannot provide that level of energy in the needed timeframes. DOE cannot expect utility companies to be unbiased participants in the NIETC process. DOE should expect utility companies to favor capital-intensive policies that will increase utility profits, and to resist policy alternatives that slow down data center load growth.

Does DOE seriously believe that the explosive level of data center electricity demand can and should be accommodated by simply building more transmission lines, more substations, and more power generation plants? Even if it were physically possible (which is doubtful), what is the cost? What is the cost for construction of this new infrastructure? What is the cost in air pollution? What is the cost in impacts on Virginia's environment, historic sites, landscape, and quality of life?

**A policy of enabling:** DOE's NIETC approach seems to be to merely acquiesce and enable data center electricity demand – rather than force the industry to adopt technologies and practices that would reduce unacceptable impacts on our grid and our countryside. DOE seems set on transforming the grid – but ignores the unsustainable and irresponsible growth in demand from data centers.

**Start over:** We call on DOE to withdraw the Mid Atlantic NIETC proposal and start over. We challenge DOE to develop and publicly share the data as to present and future data center electricity demand in northern Virginia and the Mid Atlantic – and then indicate how DOE expects that demand to be met – at what cost to ratepayers – and over what timeframe. Include assumptions as to the growth of AI, which is 4-8 times as energy intensive as normal data center operations.

We believe that a rigorous, objective analysis of the present and impending data center electricity load will make clear that it is in the national interest to adopt aggressive policies to restrain the growth of data center electricity demand through:

- National research and development of new technologies that substantially reduce the energy intensity of data center operations;
- Mandates and incentives imposed on the data center industry to dramatically lower electricity consumption;
- Mandates and incentives for waste heat recovery and reuse at data centers;
- Cost allocation and pricing that motivates data centers to rapidly become more energy efficient;
- Working with states to maximize siting of data centers (a) where underutilized energy is available; (b) close to clean energy sources; and (c) in climates and locations that lower the energy requirements for data centers; and
- Mandates and incentives to propel use of onsite energy, especially geothermal.

DOE has mandated measures in other industries, including the elimination of incandescent light bulbs, but to our knowledge has no such policies aimed at the enormous and growing energy demand and energy intensity of data centers.

The Federal government is forcing out incandescent light bulbs to save energy – but basing a NIETC program on “whatever you want” for data centers?

**Reform electricity rate structures that compound the problem:** We call on DOE to start over by working with FERC and state regulatory agencies to reform electric rate structures that pander to data centers and other "bulk" users. These electric rate structures fuel the problem, rewarding larger and larger electricity use – ergo more and more transmission lines, substations, and power generation plants.

According to DOE's own data, these are the average rates charged to different user groups in the state of Virginia in March 2024:

<b>Residential customers</b>	<b>14.72 cents/KWH</b>
<b>Commercial customers</b>	<b>9.07 cents/KWH</b>
<b>Industrial customers</b>	<b>8.53 cents/KWH</b>

We recognize that electricity cost allocation and rate setting are complex. However, rates like these reward big energy users, especially data centers, and do so at the cost of residential customers. It rewards inefficiency and even greater electricity use.

We call on DOE to work with FERC and state regulatory agencies to reform rate structures that reward higher and higher electricity usage and that cause residential customers to subsidize bulk users. Ensure that rate structures require large users, like data centers, to pay the costs for transmission lines, substations, and power generation that are primarily for data centers – whose operators are among the most profitable corporations in the world.

**Grid Enhancing Technologies (GETS) and advance reconductoring:** Finally, we call on DOE to take a much stronger hand in working with FERC, state regulatory agencies, and utilities to maximize the use of Grid Enhancing Technologies and advance reconductoring. DOE and other Federal and state agencies have failed to adequately ensure maximum implementation of Grid Enhancing Technologies and advanced reconductoring – despite ample evidence that these technologies can significantly increase capacity of existing transmission lines and at far lower cost than building new transmission lines. We know that DOE is aware of the foot-dragging by utilities in this area, in part because these strategies yield

much less profit to monopolistic utilities than building new lines. European countries have a decade or more of success in this area. Reputable research organizations in this country have repeatedly documented the substantial merits of GETS and reconductoring. Accordingly, we ask that DOE suspend efforts to force new NIETC transmission lines in any corridor or region until DOE can certify that all reasonable GETS and reconductoring technologies have been implemented in the relevant geography. This will not cause significant delays because GETS and reconductoring can be implemented relatively quickly – while new transmission lines will require 5-10 years or more to complete the regulatory, political, and environmental review process.

## **INADEQUATE PUBLIC NOTICE AND INFORMATION**

DOE's public notice and information are woefully inadequate. As best we can tell, DOE did not notify landowners in the affected corridors. As best we can tell, DOE did not put notices in local papers. And we know that DOE is not conducting open public hearings or information sessions in the communities that will be affected by NIETC proposals. Moreover, DOE has not provided necessary information to support its NIETC proposal – not even the GIS coordinates for the proposed NIETC corridors. Nor has DOE provided specific information to justify “national interest” designation.

We ask that you start over and provide the specific supporting information on national interest for each corridor and “stub.” We ask that you conduct meetings – both virtual and in person – to present the information, take questions, and be responsive – at multiple locations for each proposed NIETC segment. We particularly request a public meeting in Fauquier County VA to allow our many impacted and interested citizens to learn directly from you what your proposals are, what the justifications are, and to answer questions.

## **DOE LIST OF INTERESTED PARTIES**

Please put Protect Fauquier and each of us individually on the DOE list of “Interested Parties,” so that we have the right to continue to engage in the NIETC process.

Sincerely,

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