

# Loudoun Reliability Engagement Group

## Sixth Meeting Executive Summary Report

The sixth meeting of the Loudoun Reliability Engagement Group was held on April 25, 2023, at 11 AM at Founders Hall in Ashburn, VA.

### Member Organizations in Attendance

- Loudoun Preservation & Conservation Coalition, alternate
- Loudoun Preservation & Conservation Coalition
- Loudoun County Economic Development
- Habitat for Humanity – Loudoun County
- Bike Loudoun
- Piedmont Environmental Council
- Loudoun Coalition of Homeowners and Condominium Associations
- Loudoun Preservation & Conservation Coalition
- Loudoun Wildlife
- Supervisor Turner’s Office
- Goose Creek Association

### Dominion Energy Team

- Brendon Shaw, Dominion Energy External Affairs
- Carter Jones, ERM
- Greg Mathe, Dominion Energy ET Communications
- Greg Vozza, MPR Associates
- Jake Rosenberg, ERM
- James Young, Dominion Energy Environmental Specialist
- John Kascsak, Dominion Energy, Project Manager
- John Mulligan, Dominion Energy Project Manager
- Kathleen Leonard, Dominion Energy External Affairs
- Kristi Moore, ERM
- Matthew Vinson, Dominion Energy Engineer
- Nick Rodriguez, ERM
- Peggy Fox, Dominion Energy Media/Community Relations Manager
- Rob Richardson, Dominion Energy ET Communications Specialist
- Roya Smith, ERM

### Meeting Summary

#### 1. PJM Load Forecast Changes Discussion:

PJM’s 2023 load forecast shows an increase in energy demand accounting for changes in solar, weather, data center needs, residential, etc. As more factors are considered, PJM forecast changes should not be as drastic. Dominion Energy will generate nearly enough energy for the 3.5-gigawatt increase necessary by 2027:

- This isn’t an issue from the energy generation side but rather an issue of having the necessary energy infrastructure to transmit the power to where it is needed.
- Increased energy demand is not necessarily from Dominion Energy generation but provided by Dominion Energy to third parties who purchase the energy.

Emerging technologies, specifically data centers, are the main drivers for increased energy demand. Data centers, electrification, and the greening of energy from renewables contribute to the pressure put on the grid. When asked about the impact of electric vehicles on the grid, Dominion Energy said the effect is negligible, but the system is well suited for it. It was noted that EV usage is a blip compared to (i.e., large data center electric use).

The estimates provided in the PJM forecast are created using a specific methodology. This area of Loudoun County remains the center of Data Center Alley, which is currently served by a 230 kV transmission network.

Question	Answer
Why was there a significant increase in the 2023 PJM forecast?	Forecasts are fluid. PJM’s methodology is evolving and adjusting to many external factors (e.g., solar, data centers, efficient household appliances). Dominion Energy’s forecasts are more accurate than PJM’s, so PJM is adjusting how they forecast. More

	accurate forecasts are good because e Dominion Energy can only build to the PJM forecast.
How does NOVEC get involved?	NOVEC is Dominion Energy’s customer. Dominion Energy Transmission serves NOVEC’s distribution territory.
Is Dominion Energy the only power producer?	Dominion Energy is the sole provider of transmission in two-thirds of Virginia.
Where will the new power for these forecasts come from?	A power generation plan comes out each May and addresses the generation needs via its own generation or power purchasing.
To what extent do electric vehicles impact the forecast?	EVs are incorporated into the forecast; however, data centers are a more significant factor now. The three driving factors are: <ul style="list-style-type: none"> <li>• More cloud-based storage</li> <li>• Electrification – more things using electricity</li> <li>• Decentralized renewable sources of power</li> </ul>
Have there been any changes in residential demand?	Not really, which suggests increased efficiency. Most of the forecast shift across Virginia is driven primarily by data center growth. Dominion Energy is upgrading the existing 230 kV network to 500 kV to reach Data Center Alley.
Will these two new transmission corridors satisfy the need for new energy infrastructure?	Power demand usage is never static. The work is never done. There will be more projects as growth continues.

## 2. Aspen to Golden Routing:

LREG members asked ERM to create and share an online mapping and comment platform. Web map feedback was positive; however, more understanding was needed for the different map layers. Attendees liked seeing the different constraint layers and wanted to know if NOVEC Right-of-Way (ROW) could be included in the map layers.

Matt Vinson described the Right-of-Way (ROW) requirements:

- 150 ft wide
- Spans between structures range from 800 ft to 1000 ft
- Structure height is a factor, with the average structure height around 135 feet for conceptual design. Some projects need to be around 150 ft.
- Structure location is critical to minimizing impact but must be considered with the other factors, including structure height, right of way width, and span length.
- LREG members asked if VDOT would grant access for colocation along the Dulles Greenway. Jake Rosenberg was unsure but agreed to inquire.

The State Corporation Commission (SCC) requires a report of the number of dwellings 100 ft, 250 ft, and 500 ft from the center line of the ROW. Crossing the Potomac as a route does not seem viable due to the complexity of large span lengths, tall structure heights, and the need for horizontal directional drilling (HDD). Additionally, there have been modifications to data center setbacks and reduced available corridors. ERM needs to explore the feasibility of a number of these factors.

- Underground routes are significantly more expensive, and SCC may not approve an underground option due to cost.

Dominion Energy has spoken with at least four Board of Supervisors to understand the County’s perspective on routing along Route 7. The routing was not preferred initially by the County. However, alternate locations were discussed and determined to be more impactful:

- Extent of planned developments along both sides of Route 7.
- Still reviewing structure locations with the amount of Loudoun Water infrastructure, gas distribution, and fiber utilities.
- The Loudoun County Planning Commission initially denied Toll Brothers' development along Route 7. There is a historic slave cemetery in this area, and their buffer needs to be protected.

Question	Answer
How would Goose Creek be crossed?	<p>Avoid wetlands when practical, emerging factors on how to mitigate the impact.</p> <p>150' width ROW for 500kv overhead for the clearance of the conductors. Placing structures in key locations to minimize impact. Width, height, and span length all impact one another. The average structure height is 130'-135'. Balance is key.</p>
Is collocation along the Dulles Greenway feasible?	<p>Many constraints limit a 150' right of way. Dulles Greenway has many constraints, including:</p> <ol style="list-style-type: none"> <li>1. Would the operator grant the ROW?</li> <li>2. How to get from the Greenway up to Data Center Alley?</li> <li>3. There are many homes abutting the Greenway.</li> <li>4. Difficult to route to/from and end/start points on the Dulles Greenway.</li> <li>5. Many crossings of existing 230 kV lines.</li> </ol>
Is there actually a 150' wide ROW opportunity along Route 7? It seems like routing along Route 7 would tear up many homes and green space.	<p>The routes are evolving as we learn more. A route near, under, or along the Potomac would create high levels of disturbance. Along Route 28, there is a lot of buried infrastructure.</p> <p>Future development along Belmont Ridge Rd limits ROW opportunities.</p>
What has been the reaction from the Loudoun County Supervisors to the Route 7 option?	<p>The Supervisors are generally opposed, but the other options are even less appealing.</p>
Have you done the cost analysis of each alternate route?	<p>ERM is studying and developing routing options, so it is too soon to provide an accurate cost analysis. ERM is looking at conceptual routes for underground, but Dominion Energy has never done an underground 500 kV transmission line. – Underground transmission lines are known to be significantly more expensive than overhead options.</p> <p>A permanent underground ROW to cross Goose Creek would need to be 700' wide.</p>
Regarding the feasibility of alternatives, are there other corridors or additional smaller transmission lines to solve the issue?	<p>Dominion Energy needs to get 500 kV transmission lines to Data Center Alley from the backbone 500 kV corridor.</p>
How much would the average rate payer's bill increase from this project?	<p>Electric bills have a rider for all Dominion Energy zone projects. Each year projects roll off and come onto the rider, so it's challenging to identify how much an individual's bill would be impacted.</p>
Doesn't Dominion Energy have the ability to tell data centers what to do with their land to cross where the lines need to go?	<p>Dominion Energy has worked with data centers to preserve the Goose Creek buffer. There is no</p>

	mechanism to tell them what to build when zoning is by-right.
Can Dominion Energy advise developers on the best way to build to mitigate costs?	Dominion Energy is still working with Vantage Data Center to find a way to accommodate; however, Vantage doesn't have to accommodate Dominion Energy.
Can there be a generation source in Data Center Alley?	Generation within Data Center Alley would be a solution, but it is not viable.

### 3. North vs. South Route 7:

There is no preference aside from finding the least impact. The location of Loudoun water lines/other existing utilities requires consideration. Attendees suggested creating recreational components like walking paths, which may help the Board of Supervisors see positives in the routes.

The Toll Brothers site and historic slave cemetery is a complicated area that needs further fleshed out. North vs. South of Route 7 needs to decide whether it is best for future developments.

It was mentioned that based on the size and frequency of the meetings, it seems like the general public doesn't get the ability to see the information presented or give their opinion. ERM mentioned that everybody in attendance was asked to join because they're key members of the community and are there to represent the various interests of Loudoun County.

Members shared concerns about communication with homeowners regarding why they're bearing the cost of the increase in electric requirements driven by data centers. It was noted that PJM uses the project's total cost and calculates how much will fall on Dominion Energy customers. The Loudoun Preservation & Conservation Coalition mentioned the need for residents to understand their associated burden from these projects, even though data centers are also paying for their electricity. All energy users pay their fair share.

Question	Answer
Would a bike trail be part of the plan for a Route 7 option?	It has been done in the past and could be an option.
What is the public outreach strategy?	The LREG is vital in helping to develop the project before a public release.
Are subdivisions a layer available on the platform?	Yes, let us know if it's not.
Why are residents paying for a data center issue?	Capital projects are pooled among PJM projects, and Dominion Energy customers pay based on usage.

### 4. Takeaways:

- Jake mentioned he could provide house count numbers for the next LREG meeting as part of the routing analysis.
- Schedule:
  - End of May announcement - 40,000 people near and along Route 7 are expected to receive a postcard. This includes a USPS saturation where multiplexes get a postcard for all residents, not just property owners. The postcard will not show routes but provide contact and project area map information.
  - 2nd week of June - letter and map with routes will be mailed.
  - 3rd week of June - Virtual open house meeting
  - End of June - In-person open house
  - End of August - final open house before filing
  - Q4 -SCC filing
- Group voted to have additional LREG meetings: June 1 (before the first open house) and July (following the first open house).