Loudoun Reliability Engagement Group

Nineteenth Meeting Attributed Summary Report

December 10, 2025

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1. MEETING DETAILS

The Loudoun Reliability Engagement Group's (LREG) 19th meeting was held on Wednesday, December 10, 2025, from 11:00 a.m. to 1:00 p.m. at Springhill Suites by Marriott Dulles Airport, in Sterling, Virginia.

1.1 MEMBER ORGANIZATIONS IN ATTENDANCE

- Loudoun County Preservation and Conservation Coalition
- Loudoun Water
- Loudoun Coalition of Homeowners and Condominium Associations
- NAIOP
- Loudoun Chamber of Commerce
- Piedmont Environmental Council
- Loudoun Wildlife Conservancy
- Loudoun Economic Development

1.2 OBSERVERS

- Loudoun County Supervisor Saines' Office
- Loudoun County Supervisor Briskman's Office
- Loudoun County Supervisor Randall's Office
- Loudoun County Supervisor Glass Chief of Staff
- Loudoun County Department of Planning & Zoning
- Loudoun County Supervisor Letourneau's Office
- Loudoun County Supervisor TeKrony's Office

1.3 ABSENT ORGANIZATIONS

- Bike Loudoun
- Black History Committee (Friends of Thomas Balch Library)
- Goose Creek Association
- Loudoun County Department of Equity & Inclusion
- Loudoun Fire and Rescue
- Loudoun Habitat for Humanity

1.4 PROJECT TEAM

- Aisha Khan, Dominion Energy
- Brady Johnson, Dominion Energy
- Cheryl Taylor, Dominion Energy
- Christa McDonald, Dominion Energy

- Jared McPherson, Dominion Energy
- Kathleen Leonard, Dominion Energy
- Mercedes Fallen, Dominion Energy
- Rob Richardson, Dominion Energy
- Sean Doherty, Dominion Energy
- Stefan Brooks, Dominion Energy
- Stephen Hudson, Dominion Energy
- Ashley McLeod, ERM
- Carter Jones, ERM
- Grace Keyes, ERM
- Nicole Roemer, ERM
- Roya Smith, ERM
- Kristi Moore, Knowles Communication Strategies

2. MEETING SUMMARY

2.1 WELCOME AND INTRODUCTIONS

Kristi Moore opened the meeting by reviewing the agenda item by item and welcoming participants to the 19th meeting of the Loudoun Reliability Engagement Group. She reiterated the group's purpose: to provide community perspectives and input to inform routing decisions and future filings with the State Corporation Commission. Kristi explained the roles of the project team, group members, and observers, and encouraged participants to keep comments concise to allow the full agenda to be completed. Attendees then introduced themselves, sharing their names and organizational affiliations.

2.2 LOUDOUN RELIABILITY LOOP UPDATE

Sean Doherty provided a high-level status update on the Loudoun Reliability Loop, noting that the loop is intended to serve both current and future electric load demand in Loudoun County. He shared the current status of related projects:

- Wishing Star to Mars is under construction.
- Aspen to Golden has been approved by the Virginia State Corporation Commission (SCC).
- Golden to Mars is currently under SCC review.

Sean noted that this update was intended as a brief touchpoint rather than a detailed discussion. There were no questions from the group.

2.3 GAS INSULATED SUBSTATIONS

Jared McPherson introduced himself and explained his role as a subject-matter expert in Gas-Insulated Substations (GIS). He outlined his presentation, which covered the definition of GIS, comparisons between GIS and air-insulated substations (AIS), and the characteristics of sulfur hexafluoride.

Jared explained that a Gas Insulated Substation is a fully enclosed substation that uses gas rather than air for insulation. GIS facilities require significantly less space than AIS facilities, and their enclosed design protects equipment while providing increased safety, reliability, and enhanced physical and personnel security. He showed photos of typical 230 kV and 500 kV GIS installations, along with diagrams comparing GIS and AIS breakers, bus bars, and disconnect switches to illustrate space requirements and electrical clearances.

Jared noted that Dominion Energy generally prefers AIS over GIS because AIS is three to four times less expensive, equipment is more readily available, the design is simpler and proven, and AIS can be installed and expanded more quickly. He emphasized that AIS remains the preferred option when sufficient land is available, while GIS is used selectively in constrained locations where space, security, or site conditions limit feasible alternatives. Kathleen Leonard emphasized that GIS is a tool in the toolbox, not a rule for all substations.

Jared explained that the insulating gas used in GIS equipment is sulfur hexafluoride, which is odorless, colorless, man-made, six times heavier than air, noncombustible, and non-ozone-depleting. Dominion monitors SF6 using gas density alarms and low-gas alerts, and field

technicians use gas detection tools to identify potential leaks. Dominion partners with specialized vendors for monitoring and maintenance, and equipment suppliers guarantee leak rates of less than one percent.

Jared concluded by reiterating the key points of his presentation.

2.3.1 QUESTIONS AND DISCUSSION

An LREG member asked for clarification on the footprint differences shown in the diagrams. Jared revisited the diagrams and described example dimensions, noting that a 230 kV AIS facility can be approximately four times the size of an equivalent GIS facility. Brady Johnson added that GIS is roughly one-quarter the footprint of AIS and that GIS substations are currently in use in Loudoun County, including locations where land constraints would otherwise limit solutions.

In response to a question about how standard GIS technology is, Jared confirmed that it is widely used across the United States and internationally.

An LREG member asked how much land GIS substations typically require. Stephen Hudson responded that the GIS facilities currently being built in Loudoun generally range from 5 to 20 acres, depending on equipment requirements. Another LREG member expressed concern about the cumulative land use impacts of substations associated with continued data center growth in the county.

An LREG member asked whether all substations in Loudoun County are now GIS. Brady Johnson responded that GIS is used as needed and that AIS remains an option when sufficient land is available.

One LREG member asked how many GIS substations currently exist in Loudoun County. Jared estimated approximately ten, noting that proportions vary depending on where transmission lines terminate.

Another LREG member asked about safety features and leak response. Jared explained that SF6 gas levels are continuously monitored, and when alarms are triggered, technicians are dispatched to investigate and address the issue.

That same LREG member also asked about situations where GIS may not be appropriate. Sean Doherty cited cost, equipment availability, and expansion limitations, while Brady Johnson added construction time as an additional factor, reiterating that AIS is generally preferred when feasible.

A different member of the LREG asked about the cost of GIS facilities. Brady Johnson noted that GIS substations can cost more than $100 million to construct. Stephen Hudson added that Dominion has a fiduciary responsibility to act on behalf of ratepayers when selecting infrastructure solutions.

2.4 LINE 514 CORRIDOR UPGRADE UPDATE

Stephen Hudson introduced himself and reminded the group that the Line 514 project had previously been discussed in August. He explained that the project originated in 2020 as an end-of-life rebuild and later incorporated additional PJM-driven transmission projects to be collocated

within the same corridor. Using a PJM map, he highlighted Dominion's portion of the project, which extends approximately three miles between the Potomac River and the Luck Stone Quarry.

Stephen explained that the project includes rebuilding the existing line and adding two new 500 kV lines for NextEra and PEPCO. Sean Doherty noted that there is also an existing distribution line in the corridor, but that work is separate from this project.

2.4.1 QUESTIONS AND DISCUSSION

An LREG member asked whether there have been delays in Maryland. Stephen Hudson responded that utilities are maintaining their current filing schedules despite opposition.

They also asked about the status of the MARL route. Stephen explained that it is a complex, non-Dominion project and that he was not closely familiar with its progress.

An LREG member asked whether the corridor would include two 500 kV lines and a 230 kV line. Stephen confirmed this, noting that one of the 230 kV lines does not run the full length of the corridor.

Stephen shared that field teams have inspected existing structures and identified corrosion on steel plates caused by moisture trapped over the years. In February 2026, crews will climb, inspect, and repair existing structures. This work will be low impact, remain within the existing right-of-way, and is expected to last four to six weeks.

Another LREG member asked whether this work would involve a separate mailer. Stephen confirmed that a separate notification will be sent to inform the community.

Sean Doherty added that this activity is part of why the project is not solely a reliability effort. He noted that a mailer for the January 13 in-person community meeting has been sent, HOAs in the project area have been contacted, and elected officials have been briefed. Although the project was filed several years ago, community engagement has been restarted. The in-person meeting will be held on January 13, the virtual meeting on January 15, and the SCC filing date is March 2026.

Some LREG members asked about the project website, and Sean directed participants to dominionenergy.com/line514.

2.5 GLOBAL PLAZA LOOP UPDATE

Kristi Moore reintroduced Roya Smith, the lead router for the Global Plaza Loop project, noting that the project has changed its name since the last meeting. Roya explained that the project is intended to serve multiple delivery-point substations and to create a 230 kV loop within the study area.

Roya described routing criteria focused on collocating with existing linear infrastructure, including roads such as Old Ox Road and Davis Drive, to fit within a densely developed and constrained study area. She explained that the study area has expanded to approximately four miles in length as the team works to connect five delivery points while minimizing impacts to sensitive resources, including waterways and floodplains. The team is also closely monitoring planned and pending development applications to reduce the potential for future conflicts.

2.5.1 QUESTIONS AND DISCUSSION

An LREG member asked how many routes go near residential areas. Roya responded that the project is entirely within data center alley, with the closest residential proximity occurring near the tie-in to an existing transmission line.

Roya noted that avoiding future development is a key challenge given the study area's density and that VDOT is a major stakeholder. She shared that the project is expected to be announced next year, with public meetings planned for February and March.

An LREG member asked whether undergrounding is being considered. Roya explained that undergrounding has been evaluated but is constrained by space limitations, the density of delivery points, and the need to accommodate future interconnections. Brady Johnson added that undergrounding is not the preferred option and that an underground feasibility study will be shared with the community.

Roya stated that the overall goal is to connect all delivery points into a single loop rather than advancing multiple standalone projects. Sean Doherty added that Supervisor Saines will be briefed before the public announcement.

2.6 AZALEA LANE INTRODUCTION

Kristi Moore welcomed Grace Keyes, lead router for the Azalea Lane project. Grace explained that the project is located southwest of Dulles Airport and is needed to address reliability violations identified by the North American Electric Reliability Corporation, as well as delivery point requests.

Grace described the surrounding land uses, including industrial, commercial, and residential areas. The proposed Azalea Lane substation would be a customer substation, while Reeds Farm is proposed as an NOVEC substation. A double-circuit 230 kV transmission line would connect these substations to the existing grid. Residential areas lie to the north and south of Route 50, with a hospital to the east. The area also includes significant data center development.

Grace identified cultural and community resources within the study area, including the Arcola Quarters for the Enslaved, the Arcola School, an elementary school, planned residential development, and the North Star Boulevard road expansion. She explained that project priorities include avoiding cultural resources and residential areas, remaining on commercial and industrial property, and minimizing impacts to Broad Run. The Azalea Lane substation is proposed as GIS, while Reeds Farm is proposed as AIS. The SCC filing is anticipated by the end of Q2 2026.

2.6.1 QUESTIONS AND DISCUSSION

An LREG member asked about the project’s goal. Grace responded that it is both a delivery point request and a reliability project.

Another LREG member asked where the Google campus is located. Grace replied that it is across the street from the Azalea Lane substation. They noted that the campus was initially proposed as a mixed-use development and expressed disappointment that the area is now dedicated primarily to data centers. An LREG member responded that affordable housing plans in the area are still moving forward and that flex industrial zoning remains planned outside the study area.

One member of LREG asked for the identification of residential areas. Using AGOL mapping, Grace identified residential areas within and adjacent to the study area.

Grace reiterated that the project remains unannounced and under development.

LREG Members also asked about the SCC filing date. Grace confirmed it is targeted for the end of Q2 2026.

2.7 GENERAL DISCUSSION

Kristi Moore opened the floor for general discussion.

An LREG member stated that data centers and energy infrastructure are national issues with political implications and that the cost of infrastructure is ultimately passed on to ratepayers. They cited future generation costs of approximately $99 billion and disagreed with JLARC's conclusion that data centers are paying their fair share. Kristi noted that the group was not the appropriate forum to resolve broader rate policy questions and that these issues are likely to be a common topic during the next legislative session.

Another LREG member requested a future presentation that condenses information on approved PJM projects, the HVDC proposal, and the Integrated Resource Plan to better understand how they relate to one another. Sean Doherty responded that the IRP is updated annually, was last presented to the group in August 2025, and that the next update will occur in the fall of 2026.

2.8 CLOSING

Kristi Moore noted that this was her final meeting facilitating the Loudoun Reliability Engagement Group after more than three years working with the group. She thanked members for their sustained engagement and introduced Ashley McLeod as the new facilitator moving forward. Ashley will coordinate with Dominion Energy to determine the date and agenda for the next meeting.

The meeting adjourned at 12:56 p.m.