Prince William Energy Engagement Group (PWEEG)

Second Meeting Full Summary

The second meeting of the Prince William Energy Engagement Group (PWEEG) was held on June 26, 2023, at 10 AM in Beacon Hall on the campus of George Mason University in Manassas, VA.

PWEEG Organizations in Attendance

- Manassas National Battlefield Park
- Historic Prince William
- Historic Prince William and League of Women Voters
- The Coalition to Protect Prince William County
- Haymarket Gainesville Business Association
- Piedmont Environmental Council
- NAIOP Northern Virginia
- Prince William County Planning Office
- Prince William Economic Development
- Realtor Association of Prince William County
- Manassas Interfaith Council
- Northern Virginia Building Industry Association
- Prince William Chamber of Commerce

PWEEG Organizations Invited, Not in Attendance

- Prince William Conservation Alliance
- Prince William Soil and Water Conservation
- Prince William County Habitat for Humanity
- Virginia Cooperative Extension – Prince William
- Dar Al-Noor Islamic Community Center
- NAACP – Prince William County
- Prince William County Department of Development Services

Dominion Energy Team in Attendance

- Stephen Precker, Electric Transmission Communications
- Dominic Minor, Economic Development
- Trey Rydel, Transmission Line Engineering
- Amanda Keyes, Project Manager
- Heather Kennedy, Environmental
- Ginny Gills, Environmental
- Brendon Shaw, External Affairs
- Dominic Minor, Economic Development
- Sameera Younus-Khan, Economic Development

ERM Team in Attendance

- Kristi Moore, Stakeholder Engagement, Facilitator
- Bryce Gatling, Stakeholder Engagement
- Kenita Matthews, Stakeholder Engagement
- Roya Smith, Routing and Siting
- Rachel Tippett, Routing and Siting
- Cheryl Dombrowski, Routing and Siting
- Andrea Thornton, Routing and Siting
- Carla Picard, Stakeholder Engagement

Meeting Summary

1. Welcome, Introductions, and Agenda:

Stephen Precker, Dominion Energy, welcomed everyone to the meeting and gave a recap of the last meeting. He shared that the purpose of this meeting is to look at the details of the maps and discuss potential opportunities for adjustments with feedback on routing.

Kristi Moore, ERM, led the group in introductions, covered the agenda, and reviewed the "Team Agreement" developed during the last meeting. She added that for today's table group exercise, the PWEEG members are broken into table groups representing diverse interests to bring various organizational perspectives to the table group discussions.

2. Hornbaker Table Map Exercise:

Andrea Thornton, ERM, presented an overview of the Hornbaker project and talked about connecting existing Dominion Energy lines to the proposed Hornbaker switching station. She oriented the PWEEG members on the location of the routes and the various constraints associated with the project. Constraints reviewed include:

- structure height limitations associated with the Airport Overlay District
- trenchless underground crossings of existing roads and railways that require additional right-of-way (ROW) width
- county-owned land identified for future development
- planned developments within the study area

At this time, the project team is focusing on three routes: two overhead and one underground. Andrea noted that an underground route would require a transition station. It would also need to head north and cross the Norfolk Southern Railway, which does not look viable. There is also a small structure on Manassas-owned parcel.

Each table reviewed the Hornbaker map and reported their thoughts:

- Table 1 (Realtor Association of Prince William County, Manassas Interfaith Council, Manassas National Battlefield Park, Haymarket Gainesville Business Association):
  - The red line overhead route seems to be the most logical due to its shorter distance and fewer turns
  - The group agrees that it does not seem viable to go underground

- Table 2 (Piedmont Environmental Council, Prince William County Planning Office, Prince William Chamber of Commerce, NAIOP Northern Virginia):
  - Same feedback as table 1
  - There is going to be future development on either side of Broad Run
  - The group suggests avoiding county owned land
  - The Hourglass substation should be fully considered for overhead and underground

- Table 3 (Historic Prince William, Prince William Economic Development, Northern Virginia Building Industry Association, The Coalition to Protect Prince William County):
  - Data centers should be paying for this
  - Underground is preferred but appears to have the most constraints
  - Long-range land use should be considered when making a decision
  - The red option seems to be the most plausible

- Observers/Alternates table (Historic Prince William and League of Women Voters of Prince William – Fauquier, The Coalition to Protect Prince William County, Manassas National Battlefield Park):
  - NOVEC should be invited to this conversation
  - Need to consider the big picture of future data centers

Question	Answer
Are you trying to avoid county-owned land?	We attempted to find a route that avoided county-owned land, however; due to the structure height limitations with the Manassas Regional Airport it was not possible for this project.
Is there a reason you can't go underground like previously done for the Haymarket project?	Yes. Each project has different right-of-way width and workspace requirements for underground routes due to the ampacity of the lines. For the Hornbaker Project we reviewed potential underground routes; however due to a number of reasons (e.g. physical space limitations, impacts on a Department of Historic Resources easement, impacts on City of Manassas land, building in the right-of-way) it was determined that underground was not feasible. Additionally, underground routes would require portions of in-road construction, which based on feedback received from VDOT, is not preferred.
Can you explain the different methods of underground construction?	Standard underground construction involves the digging of an open trench and placing the circuits in the trench and then backfilling the trench. Trenchless crossings (which include both horizontal directional drills and jack and bore crossings) are used to cross features (e.g., major roads, railroads) where the feature cannot be open cut. This involves larger workspaces on either side of the crossing with the cables strung below the feature. Additionally, each conduit of the circuit needs to be strung individually with adequate spacing between each conduit (depending on the ampacity of the line) which leads to the right-of-way for trenchless crossings needing to be significantly larger than the standard underground construction. Existing underground utilities and the geology of the area both factor in to the depth of a crossing. Buildings cannot be located within the path of a trenchless crossing.
What are the height restrictions in relation to the airport?	Airports have imaginary surfaces that are established with relation to each airport and each runway. The imaginary surfaces were developed to prevent existing or proposed objects from extending from the ground into navigable airspace. Existing topography plays a role in the structure height limitations. For example, if you are at ground level and the airport surface is 150 feet above you, structures could be up to 150 feet tall. If you are on a hill with an elevation of 80 feet, structures could only be 70 feet tall.
Why is there only one underground option presented? Is this the preferred?	As part of the routing process, the amount of physical space available is one of limitations evaluated along with other environmental, social, and engineering constraints. Due to physical space limitations and workspace requirements (see question above) only one potentially viable underground route was identified. However, as described above due to a number of reasons it has been determined that this underground route is not viable. At this time, we do not have a preferred route.

Are there different right-of-way requirements for overhead vs. underground?	Yes, easements are larger for trenchless underground crossings of roads or railways (see response above). Overhead routes and standard underground construction require less right-of-way.
Are there existing easements impacting the overhead routes?	There are no historic conservation easements associated with the overhead routes. There are Prince William County protected open spaces that are crossed by both overhead routes. Additionally, proffer conditions, and landscape requirements for existing and planned developments within the study area are considered.
Is there a difference between the two overhead route costs?	Estimates have not been completed at this time, but they would be comparable. This information will be provided in the SCC Appendix.
How is the cost of a data center project distributed?	Like all electric transmission projects over 138 kV, the costs for this project will be distributed among all Dominion Energy customers throughout the Commonwealth.
What is the difference in cost between the red overhead route and the underground route?	Underground installation is roughly 7-10 times more expensive than overhead. A general rule of thumb for overhead construction cost is $2 million per mile. For a 1-mile project, the cost difference could be $2 million vs. $20 million.
Are there any historic landscapes or structures in the area?	A Stage 1 Report will be filed with the SCC Appendix for the project which will include potential impacts on aboveground historic resources and archaeological resources. There is a Department of Historic Resources conservation easement associated with the Cannon Branch Fort Site located south of Nokesville Road and north of the Manassas Regional Airport.
Do you know the proposed overhead structure height compared to the existing buildings?	It depends on the location, in some instances existing buildings are taller than the structures and in other locations the structures would be taller than the buildings. Dominion has reviewed the airport surfaces for the Manassas Regional Airport to ensure that none of the structures exceed those height restrictions.
When will a final decision be made?	Dominion Energy plans to file the project with the SCC in late summer, including our preferred route and a robust routing study that examines the various alternatives evaluated. Obtaining the Certificate of Public Convenience and Necessity (CPCN) typically takes up to one year, then Dominion Energy would need to acquire the necessary permits before beginning construction.
Is this project needed regardless of how many data centers are built? Will the election affect anything?	This project is needed to fulfill a specific customer request for service. Additional data centers built in the future will likely require additional infrastructure. Dominion Energy does not speculate regarding election outcomes.
Are there larger, strategic conversations happening to avoid the need to piecemeal new infrastructure?	Dominion Energy works closely with Prince William County officials, planning staff, and economic development to understand growth trends, new development, and large energy users potentially coming into the area. Ultimately, it is up to each

	developer to request service through Dominion or NOVEC.
If we are two years out from this project's approval, but the data center site is actively under construction, what happens in the lag time?	Dominion Energy provides bridging or a temporary source while the SCC process is completed, however this temporary source is not sufficient for the developer's ultimate load projections.
Can government land be condemned like private land?	Government land can not be condemned.
How high are transmission lines?	Transmission structure heights vary and are proposed to be between approximately 90 feet and 125 feet for this project.
Why can't Dominion route power from the Hourglass substation (black triangle on map)?	The Hourglass substation is dedicated for other future growth and as a result, another substation is required to meet the load in the area.
Is the 300 ft right-of-way firm or can it be adjusted? (Note: this question was in reference to a potential underground route)	The 300 ft estimate was provided by Dominion's underground engineering team, based on what is known today. If the line were approved for underground construction, that team would create a final design based on topography and many other factors that could increase or decrease the ultimate space needed.
What is the minimum right-of-way needed for a 230 kV line? (Note: this question was in reference to the overhead routes)	The right-of-way needed for this project (a double-circuit 230 kV line) is 100 feet.
Is it a single or double circuit line for this project?	A double circuit line.
How many lines are going into the data center?	One double-circuit 230 kV line is required. The facility will have backup generators on site.
Will there be extra power after the data center is constructed? If so, how much excess energy will be available after data center is constructed?	We don't have that answer today but we will work to provide one at the next meeting.
What happens to the routes that are determined not to be viable?	As part of their filing with the SCC, Dominion Energy provides a Routing Study which documents the entire routing process. At the beginning of the Routing Study Dominion will outline routes that were reviewed and determined to not be viable. All remaining routes will be carried through the document, with a preferred route being selected at the end of the document. Dominion will then present the preferred route (and any viable route alternatives) to the SCC in their application.
Could Dominion build more distribution lines instead of transmission lines?	Every customer is served with distribution lines which are connected to a substation. The nuance is the distance those distribution lines travel. Generally speaking, Dominion Energy's preference is to site substations as close to the load center as possible – thereby siting distribution circuitry close to the load center. There are instances where substations, and

	the distribution circuits pulled from them, could be located off-site from large load users (e.g. data centers), however it simply depends on the load. The greater the load, the less reliable longer distribution lines operate.
Once a load request is submitted, how long can a company set/hold the letter? Is the load validated by the SCC?	We don't have that answer today but we will work to provide one at the next meeting.

3. Daves Store Table Map Exercise:

Roya Smith, ERM presented an overview of the Daves Store project, study area, and conceptual overhead and underground routes. Roya explained that constraints within the study area include the crossings of Route 29 (Lee Highway), a Norfolk Southern railroad, and a gas pipeline. She then explained that while underground routes are being considered, due to engineering requirements, any line route will need to connect to the proposed Stinger and Trident substations as an overhead transmission line. Therefore, transition stations A or B will be needed to transition the line from underground to overhead for the hybrid routes.

Each table reviewed the Daves Store overhead and hybrid route maps and reported on their discussions:

- Table 1 (Realtor Association of Prince William County, Manassas Interfaith Council, Manassas National Battlefield Park, Haymarket Gainesville Business Association):
    - The big question revolves around impacts; visual impacts seem less given the presence of I-66
    - Quality of life for residents and the existing transmission line north of I-66 should be considered

- Table 2 (Piedmont Environmental Council, Prince William County Planning Office, Prince William Chamber of Commerce, NAIOP Northern Virginia):
    - Same feedback as table 1
    - The group would like to see the bigger picture and how all the routes fit together
    - If the SCC is going to put the cost on the ratepayer to go underground, an underground option does not make sense for this project.

- Table 3 (Historic Prince William, Prince William Economic Development, Northern Virginia Building Industry Association, The Coalition to Protect Prince William County):
    - The underground option is preferred due to viewshed impacts and businesses in the area
    - There should be careful consideration that this redevelopment does not return this community back to industrial
    - The transmission line routes selected based on current needs and impacts may impact future development. Impacts to long-range planning and land use should be considered during the routing process.

- Observers/Alternates table (Historic Prince William and League of Women Voters of Prince William – Fauquier, The Coalition to Protect Prince William County, Manassas National Battlefield Park):
    - There is richness of historical resources in the area
    - It would be helpful to show the County overlay districts.

Question/Comment	Answer

There's only one substation at Daves Store, but we know there's going to be two, right?	Additional substations are not part of this project. Added substations will be on the developer's property, but in terms of timeline, Daves Store comes first.
Is the nearby train crossing impacted?	All routes cross the railroad to reach the project endpoints, the Daves Store and Atlantic Substations. Feasible crossing locations are still being evaluated for both overhead and underground options.
Participants would like to see lines in larger context and color-coded (i.e. 230 kV and 500 kV so participants know which lines are which).	
When will these maps be publicly available?	Dominion Energy will take the feedback heard today to see if adjustments can be made and then have the maps ready to present to this group at the next meeting as a preview of what will be shared at the public Open House.
Is there proposed residential development near Trident and Stinger?	No, adjacent properties have been identified for future data center development.
Are there existing overhead transmission lines through the Manassas Battlefield Park?	Yes, approximately 1.5 miles, however, they are separate from the Daves Store Project.
Why is it ok to cross a road and railroad on this project when it was a constraint on the Hornbaker Project?	While there are similar constraints associated with crossing a railroad and a highway with an underground route, such as a widened right-of-way, there are no conservation easements at this specific location that would prevent the crossing, unlike the Hornbaker Project.
How long are the overhead routes?	Approximately 2.2 miles.
Is there a difference in the length between the overhead routes?	The length of the overhead routes is similar.
What is the difference in construction time between overhead and underground routes?	Underground construction is much slower, especially if using horizontal directional drilling (HDD) methods. For overhead construction, typically one mile of transmission line is constructed per month.
If an underground route is chosen, is it possible to tie into the existing lines on the Manassas Battlefield Park property and make them underground as well?	Dominion's Planning Group would need to review, but that would be a separate project and would require transition stations, which may not be feasible on National Park Service (NPS) property or it would trigger NEPA requirements.
Why show the variations between the three overhead routes if they are so similar**?**	During the SCC process, Dominion Energy must show all viable alternatives that were examined to determine a preferred route. Several corridors along Wellington Branch Drive and the adjacent commercial/industrial park are being evaluated based on additional public comment and review.
What are the distances of all of the overhead routes?	The red line is 2.2 miles, the orange and yellow lines are approximately 2.3 miles.

Why aren't there routes further along Wellington Road?	A route option was considered but dismissed due to space constraints for the transmission line right-of-way. Reasonings include future road widening plans for Wellington Road, a dedicated utility easement, and vegetative buffer requirements associated with the development of the Trident/Stinger parcel.
Is there any data on the economic impact of businesses located near an overhead transmission line?	We have not seen negative impacts for businesses located near transmission lines. However, there are numerous studies detailing the many benefits of electric transmission for consumers and the economy, including advancing renewables and electrification, to greater efficiency and reduced emissions.
Did Dominion look at an option along the existing transmission line to the north of I-66?	Yes, a route was considered but dismissed due to space constraints of existing development in the area.
How many amps are needed for this project?	230 kV, or approximately 4000 amps.
Why can't the yellow triangle (Young's branch substation) serve data centers?	That substation is currently under construction for other load needs, and it will be at capacity once it's operational.
How realistic are underground routes for this project?	Underground routes present a challenge at the Lee Highway crossing due to the highway, pipeline, and railroad crossings. Dominion Energy is currently reviewing the feasibility of underground routes for this Project.
Is there a risk of pushing for more underground routes? Does that put us at a disadvantage, or should we pick certain ones?	When going to the SCC, Dominion Energy evaluates all routes and selects the route that reasonably minimizes impacts, including overhead and underground routes. Cost is a factor, but not the only one. The SCC is in place to protect consumers from the burden of unreasonable or unnecessary costs.
Is there another line coming to facilitate energy to places west of Daves Store?	If additional data centers are planned for areas west of Daves Store (and outside of the Overlay District), additional infrastructure would be required to serve those new loads.
Could we do a double circuit line at the top near Young's Branch?	No, that line is already double-circuited and at capacity.

4. Key Takeaways:

- Understanding the cost difference between underground/overhead routes and the need for accurate cost estimates.
- The need for transparency in regard to who pays for the projects and how the cost is distributed among customers.
- These projects are the building blocks for a more comprehensive electrical grid, and therefore long-range planning is needed across Dominion Energy, the county, NOVEC and the developers.
- Next meeting:
    - Date – July 26, 2023
    - Time – 10 am – noon
    - Location – Beacon Hall (other venues are still being explored)

- The Hornbaker Community Meeting will likely be held the first week of August and will allow the public to provide input.

Closing Comments

- Data centers should be responsible for undergrounding.
- Label the maps for future data center development.
- Long-range planning should be considered for both of these projects. For example, there are parking lots that could convert to housing in 20-30 years.
- Unless and until elected officials work openly with Dominion Energy, we will continue to operate this way. Daves Store is the result of bad planning due to decisions made by elected officials. Although this is frustrating, this engagement process is appreciated.
- There is a huge need for region-wide planning to build out analysis of the load requests received, including what has been approved, existing transmission lines, and what is needed.

Question/Comment	Answer
Can you hint at what's next?	Infrastructure projects occur at the customer's request and are also driven by growth in a region. Next, we will be looking at a reliability project to enhance reliability for the broader region – not just one customer.
So, this group is not going to dissolve?	No, the group will continue as projects evolve.
What's the lifecycle of these lines?	50 years is the high-end.
When do load requests become public?	Dominion Energy does not typically publicize load requests. However, interested parties may request specific information from the SCC once a project is filed.