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April 1, 2026

Ms. Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1325 G Street, N.W., Suite 800
Washington DC, 20005

Re: FC1182 –Integrated Distribution Planning Working Group

Dear Ms. Westbrook-Sedgwick:

Enclosed please find Potomac Electric Power Company's Presentation for the Integrated Distribution System Planning working group meeting.

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

/s/ *Taylor W. Beckham*

Taylor W. Beckham

Enclosure:

cc: All Parties of Record

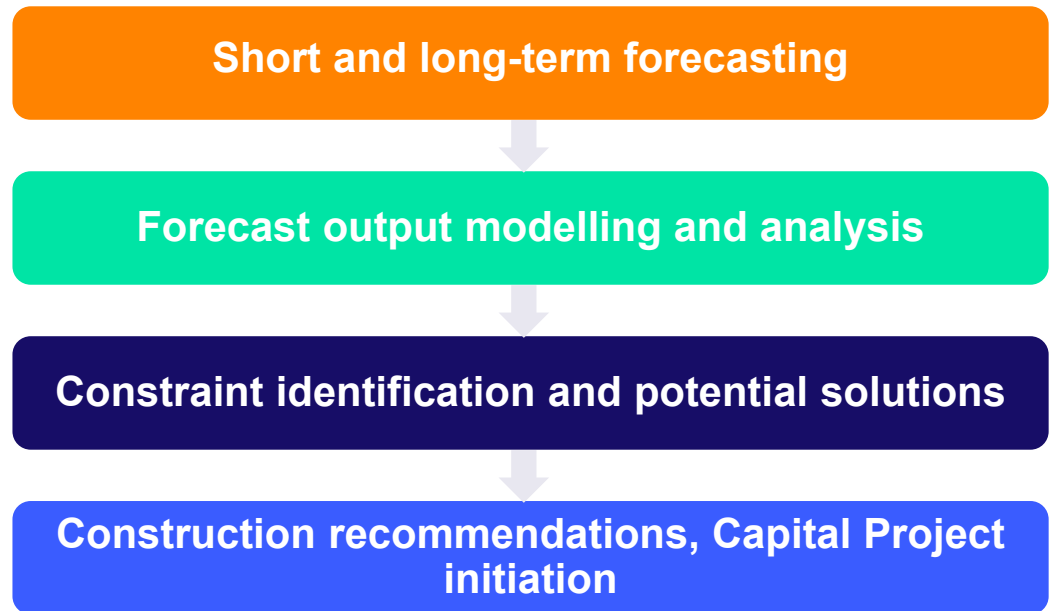
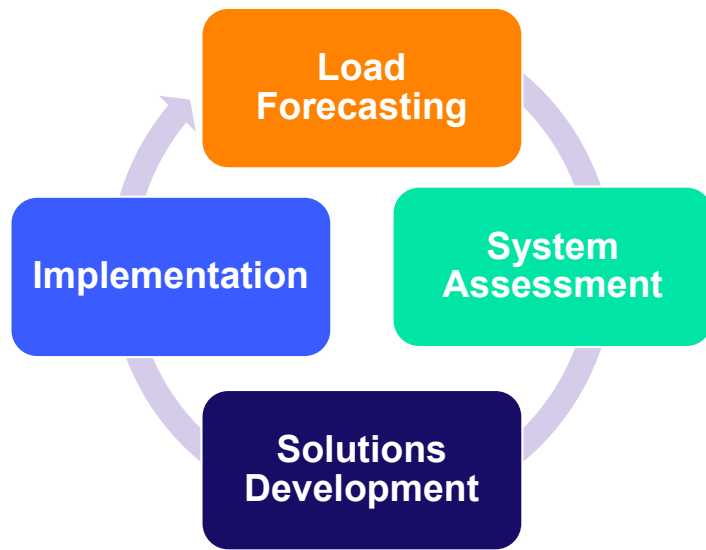


PHI Distribution Planning Overview

April 8, 2026

Capacity Planning Mission

To provide for economic and orderly modification, expansion & accommodation to meet existing and future customer demands. This includes increased enablement of Climate Solutions, while maintaining a workforce able to drive an industry leading level of system reliability and safety, all while leveraging the enhancement of new technology.



Capacity Planning Forecasting

Current Process:

- Pepco personnel reviews summer and winter historical load vs previous histories, including load, weather, proposed and emergent system rearrangements, and new load additions.
- Using existing forecasting tool, Pepco forecasts a 90/10 short-term (2 year) forecast using known predicted loads and known DER applications in the queue. Review of previous historical peaks help estimate energy efficiency reductions.
- Using existing forecasting tool, Pepco forecasts a 90/10 long-term (10 year) forecast using anticipated predicted loads, and energy efficiency reductions built on the short-term projections.
- Feeder and Substation constraints identified in the Pepco forecasts are evaluated for cost-effective alternative solutions, including non-wires solutions.
- Condition based solutions are developed by multiple departments, including Planning, to identify the alternative solutions that best alleviate the anticipated condition. These solutions are included in the Pepco forecasts, which may alleviate the need for load driven work.
- Selected alternative solutions are presented for approval, including discussion of alternatives that were not selected. During review, the management team evaluates the selection process to ensure the proper considerations were evaluated to fully vet the solution selected.

Ten-year Forecasting Process | Data Inputs

Forecasting

Assessment

Solutions

Implementation

Load Forecasting incorporates numerous data sources to project growth on the distribution system over multiple timescales

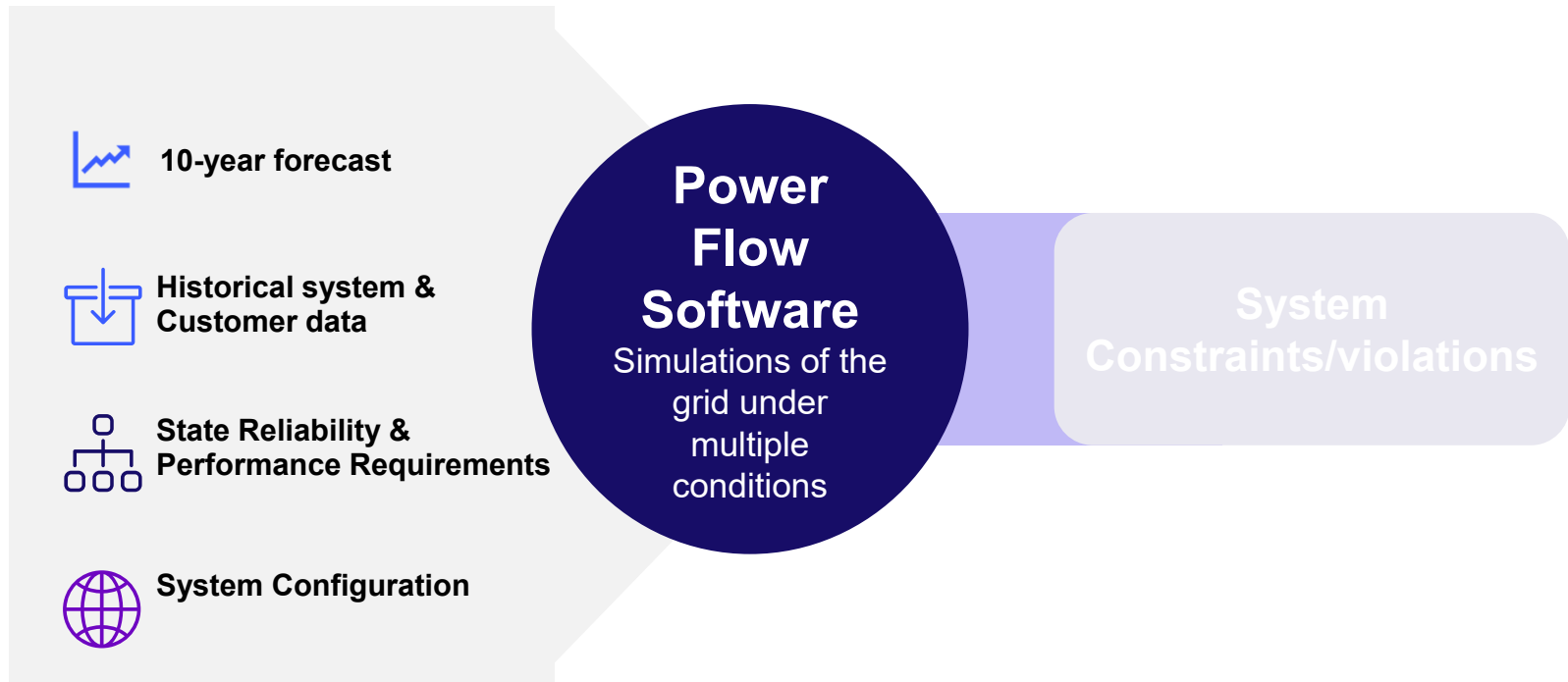
Data Inputs

- Peak historical loads
- Meter Data (AMI)
- Substation Data (SCADA)
- New Business Applications
- Existing Distributed Energy Resources (DER)
- Contingencies
- Thermal limits
- Energy Efficiency
- Load Transfers

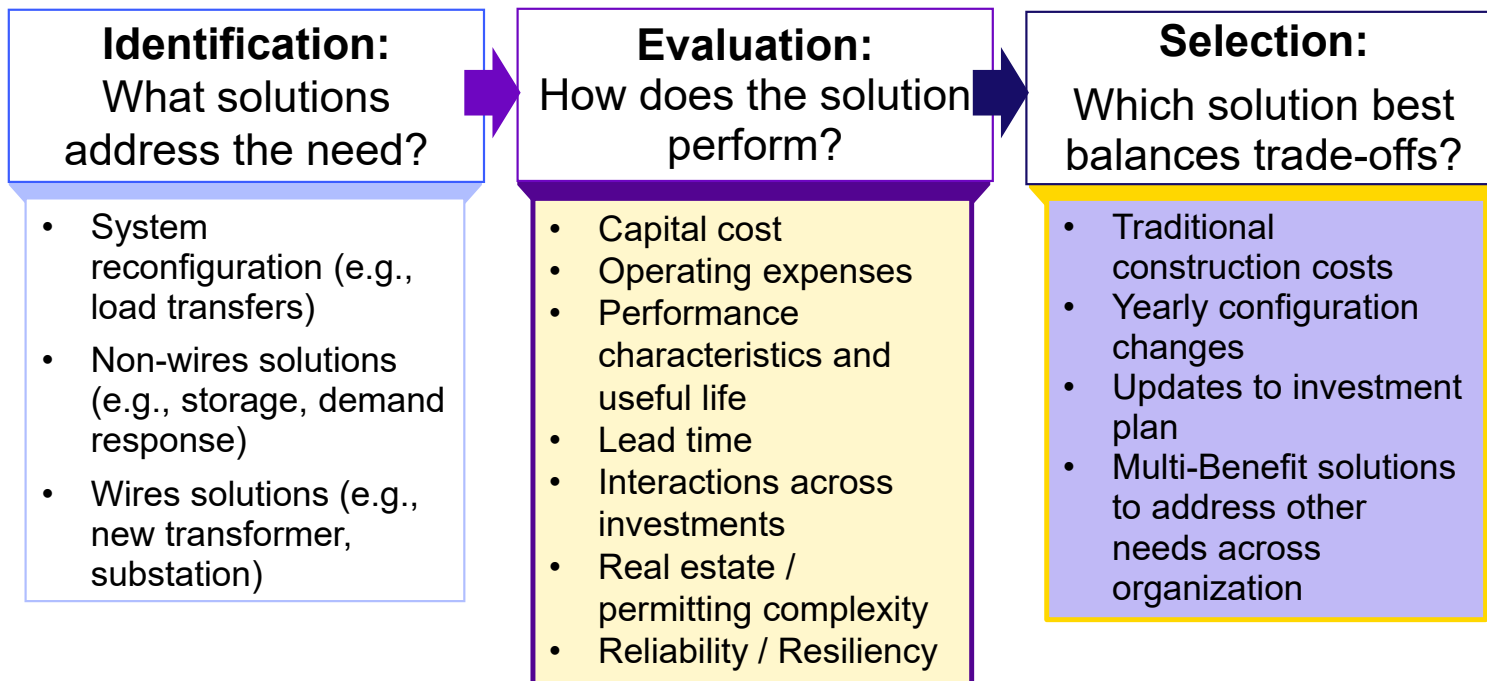
Future Data inputs

- Yearly Loads and DER
- Load & Generation Disaggregation
- Weather Adjustment
- Integrated model with DER
- Common methodology of forecasting new business applications
- Fleet Vehicle Electrification

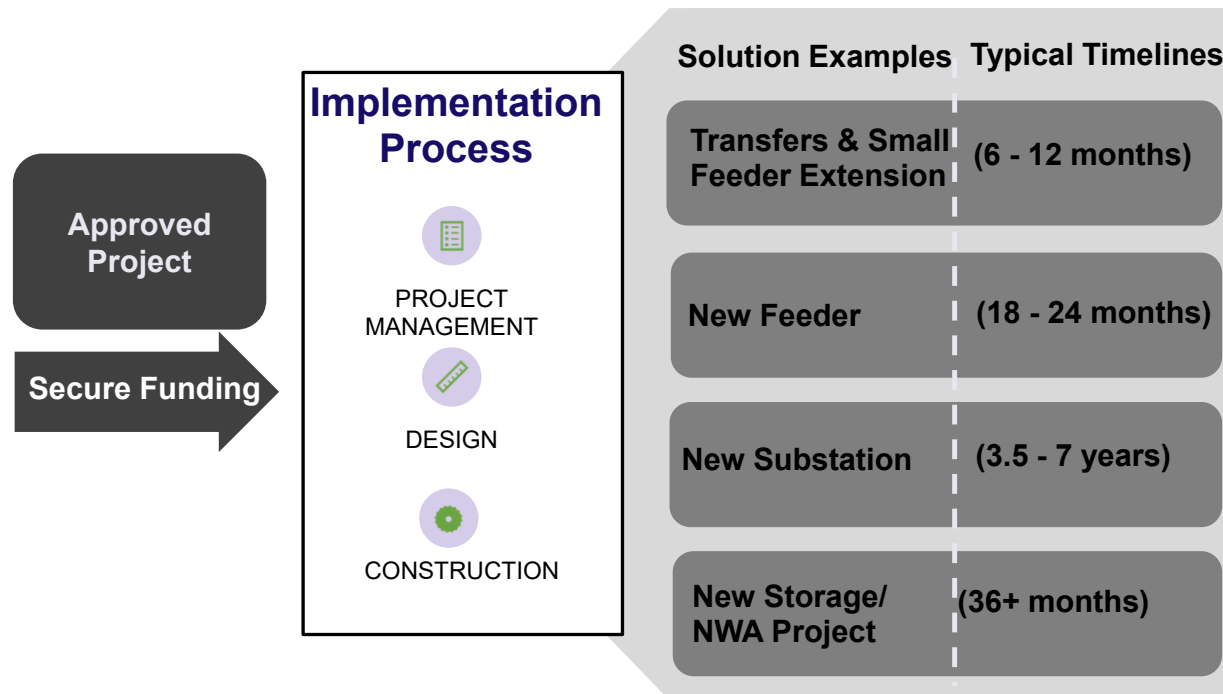
Planning Process | System Assessment



Planning Process | Solutions Development

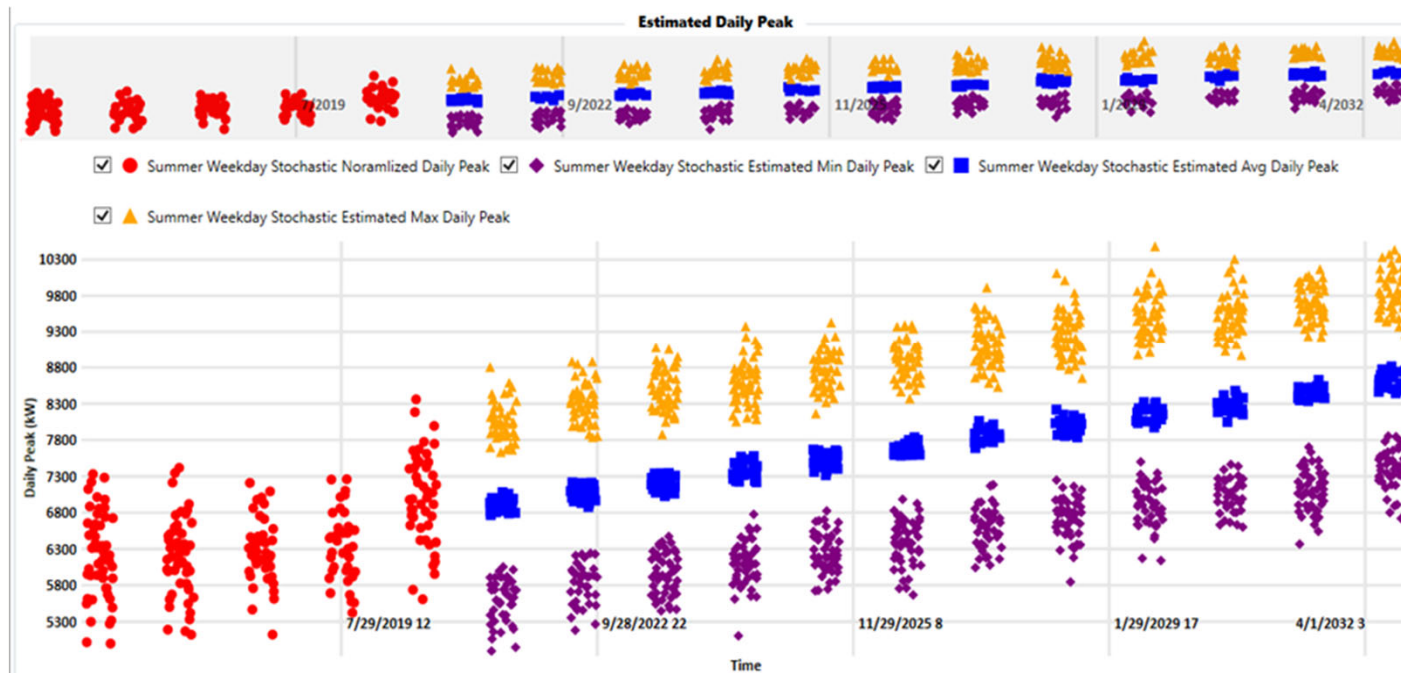


Planning Process | Solutions Development



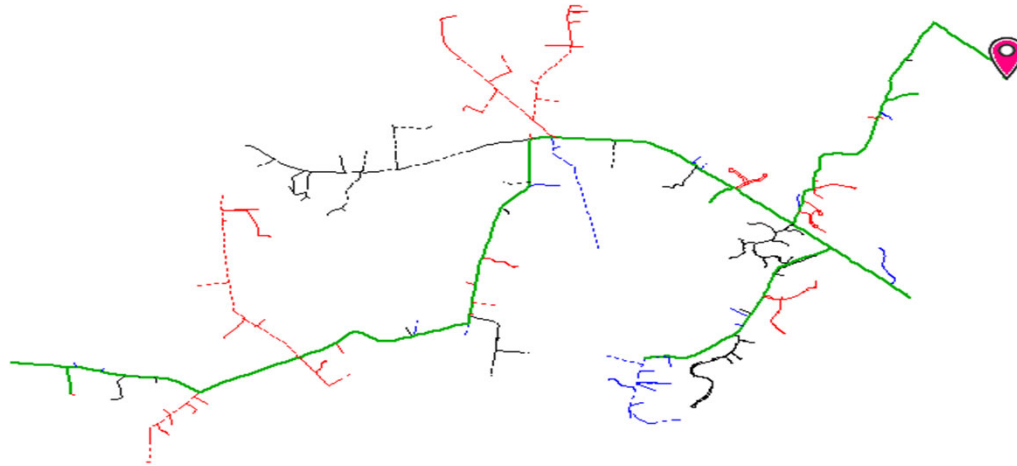
Long-Term Distribution Load Forecasting

- Data from meters, feeders, transformers, substations are applied to create a long-term (10yr) forecast annually
- Forecasting software simulates existing, pending and forecasted DER, 90/10th percentile weather normalization, energy efficiency, regional growth projections and known load additions
- Output of Ten-Year Forecast (TYF) informs multiple internal and external stakeholder groups (PJM)
- Forecast values are used to address any system constraints identified and initiate required capital projects



Short-Term Distribution Planning

- All PHI feeders are assessed through the short-term Planning process
- Recent and historical weather values are used to project known and forecasted feeder load conditions
- All known Prospective New Business and DER locations are incorporated into feeder models
- Real and reactive power values are allocated to feeder models in power flow software (CYME) to simulate peak conditions
- Simulations indicate any potential system constraints (overload, OV/UV) to be addressed prior to the next Planning cycle
- Constraints addressed through Construction Recommendations provided to Distribution Engineering, which could include load transfers, reconductoring, reactive/voltage support or PF correction through regulators and capacitors

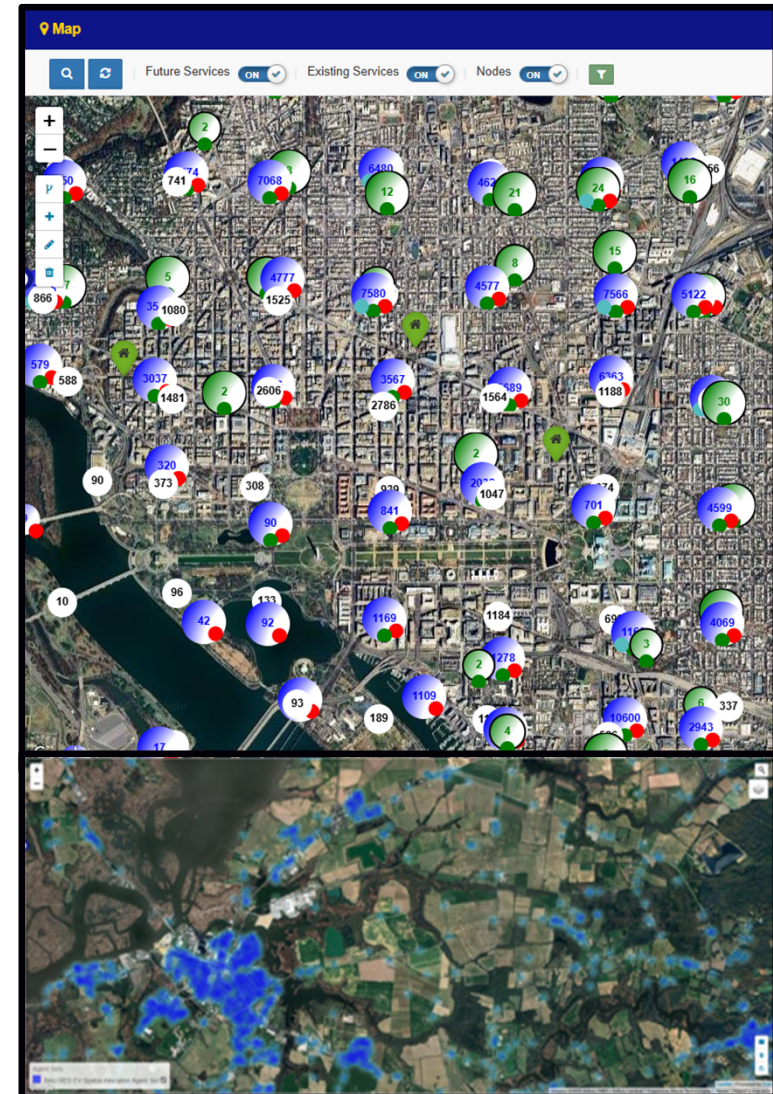


Integral Analytics: LoadSEER

New Software Overview

- **Data Integration:** Connects various sets of data such as AMI, SCADA, SAP, & weather services.
- **Load Shape Processing:** Uses a special module to process data and adjust for weather
- **Scenario-Based Forecasting:** Helps reconcile different forecast outputs and policy considerations
- **Spatial Allocation & Forecasting:** Predicts technology adoption trends and growth
- **DER & NB Forecast Optimization:** Finds the best mix of Distributed Energy Resources (DER) and forecasts new business growth.
- **Advanced Bottom-Up Forecasting:** Uses advanced technologies to provide detailed service-level forecasts utilizing customer premise level data

pepco holdings

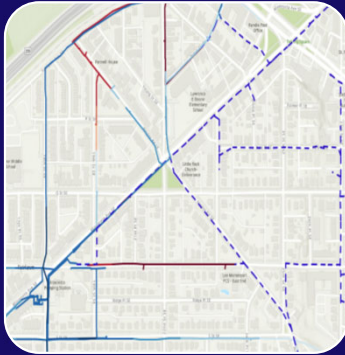


PHI Restrictions for DER

Restriction A	Feeder is closed if DER reverse flow exceeds Substation-Transformer set buffer. • <i>Transformer Level, no further applications*</i>
Restriction B	Feeder is closed if DER injection subjects feeder to overvoltage or poor power quality conditions. • <i>Feeder Level, no further applications*</i>
Restriction C	Feeder is restricted if ratio of DER to normal feeder load is exceeded – risk of excess DER flow. • <i>Feeder Level, 50kW and above restricted</i>
Restriction D	Feeder is closed if net DER reverse flow exceeds thermal feeder rating. • <i>Feeder Level, no further applications</i>
Restriction F	Feeder is closed if DER excessively contributes to faults and/or impacts feeder fault protection. • <i>Feeder Level, no further applications</i>
Restriction E	Feeder is restricted from large applications if additional large applications interfere with substation transformer voltage control and switching operations. • <i>Transformer Level, no additional Large application*</i>
Restriction G	Feeder is closed if Net DER reverse flow exceeds a percent buffer of the thermal transformer rating. • <i>Transformer Level, no further applications*</i>
Restriction N	Network feeder group networks or spot areas restricted if aggregate generation exceeds minimum load. • <i>Network Group Level, 50kW and above restricted</i>

** No further applications without significant grid upgrade work*

2026 DER Map Planned Updates



Sectional / Locational Hosting Capacity

- Hosting Capacity is calculated for individual segments of a feeder
- More granularity for users
- Increase application confidence

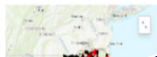
DER Hosting Capacity

The Hosting Capacity map gives an indication of how much generation (expressed in kW) can be added to a feeder before the feeder reaches capacity or other limitations that reduce the reliability of service to electric customers on the feeder. Although the values are meant to provide the user with a general idea of availability, space on the desired feeder is not guaranteed and/or may change at any time. All applications for interconnection will still require a full review and may also require additional interconnection costs.

Hosting capacity is not an exact science. Results shown may underestimate the hosting capacity and results will be revisited in the future.

DER Restrictions

In some regions, Pepco Holdings might not have an open circuit at your location – or the circuit might be restricted or constrained, making additional



Updated Landing Page

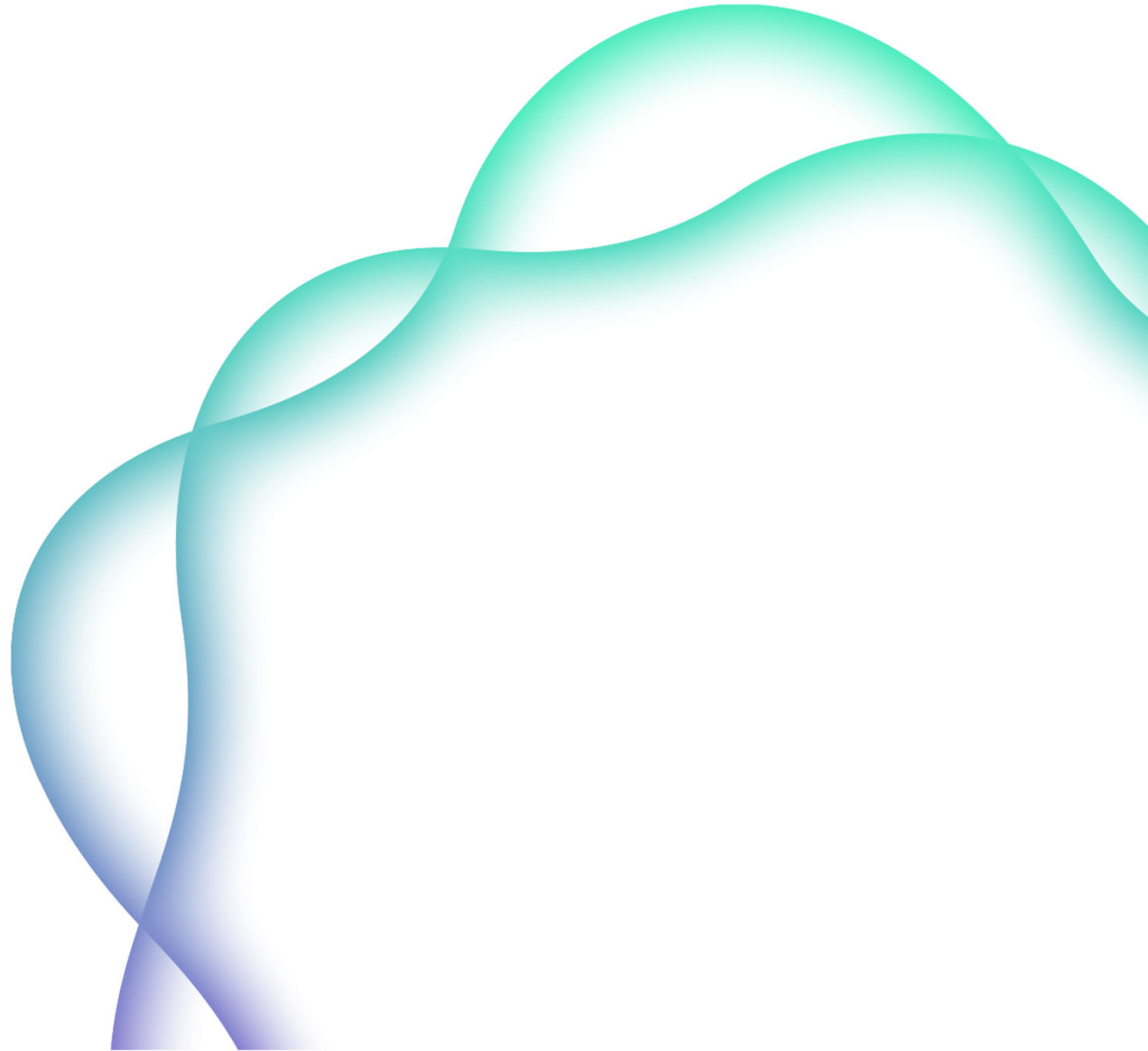
- Consolidated Web Link to all DER Maps
- Improved User Experience

Planning Process Evolution

	PAST	PRESENT	FUTURE
Forecast Process	Excel Based (Top Down)	DSP-LF (Top Down)	LoadSEER (Top Down, Bottom-Up)
Forecast Methodology	90/10 – Summer Peak / Winter Peaks	8760 – Summer / Winter Peaks	8760 – Summer / Winter Peaks
DER Forecasting	N/A	Historical DER Trend Forecast	Historical & Future DER Forecasting
Forecast Inputs			
Prospective New Business (PNB)	Email	Email, SmartSheet, Internal tracking	IntellioConnect / CTG
Electric Vehicles (EV)	N/A	NB Tracking, Analytics in Opower forecasts for known fleet locations	LoadSEER DER Optimizer, Adjustments and Spatial Allocation
Demand Response (DR)	N/A	Mapping DRs to FDRs for utilization Potential DR Availability per feeder in TYF	Customer Ops Provides FDR DR MW Capabilities (Tracking vs. Inclusion)
Distributed Energy Resources (DER)	N/A	Existing DERs tracked, mapped in CYME	LoadSEER DER Optimizer, Adjustments and Spatial Allocation
Battery Energy Storage Systems (BESS)	N/A	Existing DERs tracked, mapped in CYME	LoadSEER DER Optimizer, Adjustments and Spatial Allocation
Combined Heat and Power (CHP)	N/A	Non-PV Gen (CHP) per feeder in TYF	Non-PV Gen (CHP) per feeder in TYF, Spatial allocation
Building Electrification (BE)	N/A	N/A	Adjustments, Spatial Allocation
Energy Efficiency	Used standard reductions from the jurisdictions in the Pepco Holdings Territory	Incorporated into DSP-LF Forecasting based on industry standard reductions	Identify Energy Efficiency (EE) adoption of BTM assets & Jurisdictional EE Programs
Weather Considerations	N/A	Historical Weighted Temperature Humidity Index (WTHI) Forecasting - 30 Years of Data at Local Stations	Weather normalization in SCADA Scrubber , increased number and accuracy of stations



Questions



CERTIFICATE OF SERVICE

I hereby certify that a true copy of Pepco's Presentation for the Integrated Distribution System Planning working group meeting was served on the parties of record in Formal Case No. FC1182 by electronic mail this 1st day of April 2026.

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/s/ *Taylor W. Beckham*

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