Virtual Power Plant (VPP)

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Decarbonize

Electrify

Perform

Virtual Power Plant

PGE will enable customers to shift their power usage from peak times while providing reliable and affordable energy

Virtual Power Plant

The orchestration of
Distributed Energy Resources and Flexible Load,
through technology platforms,
to provide grid and power operations services.

Customer Programs	Distributed Solar	Distributed Thermal	Distributed Storage	Utility Storage

Technology Platforms

Policy and Regulation

To achieve a 25% peak usage offset while serving 100% of customer energy needs
PGE is targeting 2,000 VPP-enabled megawatts by 2030

Enhancement Opportunities for Scheduling Demand Response into CAISO Markets

- Within the EIM CAISO Portland the BAA Bal Viewer has limited opportunities to report utilization of demand response. PGE currently uses Load Forecast Adjustment (LFA)
  - LFA is too manual and is dependent on e-mail exchanges creating risk for PGE that the hourly DR resource utilization is inaccurate
- DR could be represented as a non-participating load. Because there is no discrete column for DR it must fit into the generating assets column. At T – 75 we might get verification that the DR is recognized, this creates risk for PGE especially when all resources are being used.
- The ability to automate the representation of DR program is preferred by PGE. Additionally, PGE would like to have feedback (pseudo-telemetry) into the market applications, including the active load forecasting modeling.
  - PGE would like a way to represent DR events via base schedules – an automated process similar to existing resources
  - Telemetry requirements would need to be discussed
    - Grant entities authority to submit telemetry, that doesn't meet standard telemetry requirements, as best-case data
    - Entities attest that they are using the best available data or calculations, and are monitoring the process/data to ensure the highest quality data possible.

Opportunities for DER Modeling and Scheduling Market Enhancements

- FERC notes existing generation models and demand response models limit the operation of DERs and the services they may be eligible to provide to the market (Order 2222)
- EIM/EDAM Opportunity– engage stakeholders to develop a policy and investment roadmap to -
    - Evaluate opportunities to incorporate DER as a load modifying resource.
    - Resource and system modeling operated by the CAISO should be updated to better plan for, include and treat DERs as resources capable of providing energy service uniquely from traditional resource.
    - Update bid and settlement requirements, challenge whether and what kind of meter data is needed by the ISO as opposed to what risk the utility or bidder carries for underperformance.
    - Seek development of DER structured requirements that harness the greatest system value possible from the aggregation of DERs

Opportunity – Allow EIM entities to base schedule demand response in a common application

Opportunities for State Regulators to Harness the Full System Value of DERs

- Modernize interconnection and operational standards for DER development particularly behind the meter resources.
- Ensure market access rules include customer protections
- Support distribution system upgrade investments meant to operationalize and optimize DER utilization for energy and capacity grid services
- Engage with markets to assure DERs are uniquely treated and barriers to DER participation are addressed.

Let's meet the future together.

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