



GRID DATA SHARING: BRIEF SUMMARY OF CURRENT STATE PRACTICES

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Grid Data Sharing: Brief Summary of Current State Practices

The National Association of Regulatory Utility Commissioners (NARUC) Center for Partnerships & Innovation is leading a new “Grid Data Sharing Collaborative” initiative focused on supporting states, utilities, and distributed energy resource (DER) providers in understanding options and tradeoffs related to sharing various types of grid data and information. The initiative is funded by the U.S. Department of Energy’s Office of Electricity, Grid Deployment Office, and Office of Cybersecurity Energy Security and Emergency Response.

The NARUC Grid Data Sharing Collaborative began in 2022 to support states, utilities, and stakeholders in identifying areas of agreement and disagreement about grid data sharing and to devise a framework for grid data sharing that each state can later tailor to their goals and priorities. The Collaborative published a framework and Playbook in 2023.

Public utility commissions (PUCs) are increasingly being asked to settle questions related to third-party access to power system¹ information or “grid data” that utilities use to plan and operate the electricity system. Fundamental to optimizing the design and operations of the electricity distribution system and its components is a shared understanding of the system itself. The data needed to fully understand distribution system limitations and potential are commonly held within the utility. DER developers, particularly, seek access to grid data to influence their siting and programming decisions.

Utility regulators are opening dockets and creating stakeholder conversations about appropriate ways to advance the sharing of grid data. Regulators leading grid data sharing initiatives are focused on understanding the benefits and risks of increased data access and transparency within their jurisdictions. In at least a dozen states, utilities have released host capacity maps (of varying granularity) that typically illustrate areas of the grid where siting new DERs or investing in demand-side management is viable from the grid perspective. Utilities, security experts, and DER developers have had a wide range of reactions to these emerging approaches.

In light of state and utility decarbonization targets, projected DER growth, customer preferences, resilience and security concerns, and more, questions about what data to share and how to share it will continue to arise across states in the coming years.

This brief summary discusses general trends in regulatory approaches to grid data sharing and outlines key areas of alignment and divergence; a summary table at the end of the document outlines the approaches of different states and utilities.

¹ Note: This initiative is not focused on customer data (e.g., electricity consumption, demographic information, program participation) behind-the-meter but rather data related to the power system, up to and including the electricity meter. Personally identifiable information is out of scope.

Grid Data Sharing Policy Context and Practices

Dozens of states have considered grid data sharing in a variety of contexts, including advanced metering infrastructure deployment, electric vehicle charger siting, and DER interconnection requests. NARUC's research shows that approximately 14 states have considered whether and how utilities should be making hosting capacity data available to the public and/or DER developers. At least 35 utilities currently publish some type of hosting capacity information, although they differ in the ways in which relevant data are shared. Far fewer state PUCs, utilities, and stakeholders have engaged in a comprehensive consideration of a broad grid data sharing policies or rulemakings.

Below are summaries of trends within these types of proceedings, which are drivers for grid data sharing. The table within this document includes a detailed summary of grid data sharing practices across states and utilities.

INTERCONNECTION

Interconnection standards specify important requirements for distributed resources connecting to the grid, including costs, timelines, and processes for DERs and utilities alike. Visibility into the electricity system and information sharing help utilities and interconnecting resources understand process issues and challenges. Data sharing practices are often embedded within interconnection and operations agreements. Tariffs for interconnecting resources also may impose certain data sharing requirements.

Many jurisdictions are leveraging industry standards to help manage system dynamics as more DERs are added. For example, more than 15 jurisdictions are adopting interconnection agreements consistent with IEEE 1547-2018 – Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces.² This standard lays out technical rules of interconnection for DERs and specifies some degree of grid data sharing and related communications certification requirements.³ Certification ensures that products are tested and are compliant with the required grid functionality. In winter 2020, the NARUC Board of Directors passed a resolution recommending that state commissions convene proceedings, engage stakeholders, and make evidence-based decisions to adopt IEEE 1547 and align implementation of the standard with the availability of certified equipment.⁴

For jurisdictions adopting IEEE 1547-2018, various levels of implementation imply different types of data sharing practices. IEEE 1547 is a standard that establishes the criteria for the interconnection of DERs with electric power systems and associated interfaces but does not prescribe cyber-physical security, planning, designing, or operating procedures. Some

² For IEEE 1547-2018 resources for utility regulators. See <https://www.nrel.gov/grid/ieee-standard-1547/guide-to-updating-interconnection-rules.html>

³ See Cordova, J., & Boemer, J. (2021). Presentation: IEEE 1547-2018 and IEEE 1547a-2020: Opportunities, Adoption Methods & Stakeholder Coordination. Virtual Training on Bulk Power System Issues for State Energy Officials. Electric Power Research Institute. June 22, 2021. <https://pubs.naruc.org/pub/42B4D292-1866-DAAC-99FB-BF1866A134F4>. Accessed August 3, 2022.

⁴ Resolution passed by NARUC Board of Directors, 2020 Winter Policy Summit. Revised February 12, 2020. 4C436369-155D-0A36-314F-8B6C4DE0F7C7 (naruc.org), p. 1.

jurisdictions are developing inverter settings that may affect the communications requirements and expectations of data sharing between DER operators and utilities. For example, in 2022 Massachusetts through a Technical Standards Review Group⁵ and in coordination with both the Department of Public Utilities and ISO-New England, published Default IEEE 1547-2018 Setting Requirements for all DER projects with applications submitted on or after January 1, 2023.⁶ For many regulators and utilities, the grid support functions and data exchanges are still an active area of investigation.

HOSTING CAPACITY

Hosting capacity analysis (HCA) is the most common application of grid data sharing. HCAs are used to establish a baseline for the maximum amount of DERs, including portfolios of DERs, which a distribution system can accommodate safely and reliably without requiring infrastructure upgrades.⁷ More than a dozen jurisdictions currently require their regulated utilities to file hosting capacity information within regulatory proceedings. These data are not automatically made publicly available, depending on the data types and filing requirements.

Three primary applications for an HCA are to (1) support market-driven DER deployment; (2) assist with streamlining DER interconnections; and (3) enable more robust, long-term distribution system planning, which provides visibility into how much DER the grid can host in future years by identifying potential system constraints and potential upgrades.⁸ The level of granularity, visibility, and update frequency of HCA information currently shared by utilities varies widely across the country and even within states.

COMPREHENSIVE CONSIDERATION

Very few state PUCs, utilities, and stakeholders have engaged in a comprehensive consideration of grid data sharing for a variety of use cases at once.


The New York Public Service Commission has been facilitating a comprehensive proceeding regarding the “Strategic Use of Energy Related Data” since 2020 (20-00406/20-M-0082), which is informing the development of an Integrated Energy Data Resource Program and online platform to support a variety of data sharing use cases. See the [New York State Energy Research and Development Authority’s site](#) for a schedule, participants, resources, and more.

⁵ Note: The Common Technical Guideline highlights commonalities and differences in the interconnection practices and requirements of the four investor-owned utilities in Massachusetts. See [Massachusetts Technical Standards Review Group | Mass.gov](#)

⁶ Massachusetts Default IEEE 1547-2018 Setting Requirements. Published May 9, 2022. <https://www.mass.gov/doc/inverter-source-requirements-document/download>. Accessed September 27, 2022.

⁷ ICF. (2016). Integrated Distribution Planning. Prepared for the Minnesota Public Utilities Commission. <https://www.energy.gov/sites/prod/files/2016/09/f33/DOE%20MPUC%20Integrated%20Distribution%20Planning%208312016.pdf>. Accessed August 3, 2022.

⁸ Synapse Energy Economics. (2021). Hosting Capacity Analysis and Distribution Grid Data Security. Prepared for Minnesota Department of Commerce. https://www.synapseenergy.com/sites/default/files/Hosting_Capacity_Analysis_and_Distribution_Grid_Data_Security_21-016.pdf. Accessed August 2, 2022.



The Minnesota Public Utilities Commission articulated in their 2021 open proceeding (Docket No. E999/CI-20-800) that the Commission will consider:

“... what, if any, action by the Commission is needed to address electric distribution grid and customer security issues related to public display or access to grid data; including, but not limited to, distribution grid mapping, aggregated load data, and critical infrastructure ...”

UTILITY DATA SHARING WITH THIRD PARTIES

Third-party vendors may contract with utilities to deliver numerous services; data access between utilities and contracted vendors varies across utility programs. Jurisdictions are not consistent regarding whether and to what extent utilities are required to communicate with regulators and stakeholders about any grid data sharing associated with utility programs.

Some limited grid-level data sharing is required for utility procurements of non-wires solutions to grid constraints (e.g., solicitations, requests for proposals). The grid data provided to potential vendors are often centered around a grid performance issue/solution for a given location and may or may not be available publicly.

Conclusion

State utility regulators recognize the need for sharing grid-level data among utilities, DER providers, customers, and the broader public. Regulatory processes for accessing and sharing grid data can raise issues of privacy, cybersecurity, commercial exposure, and other issues. Differing state approaches to ensuring that grid data are shared while addressing these issues are often based on jurisdiction-specific policy issues or use cases. In all instances, utility regulators will weigh the value of sharing the data and compared with the costs and risks of data sharing.

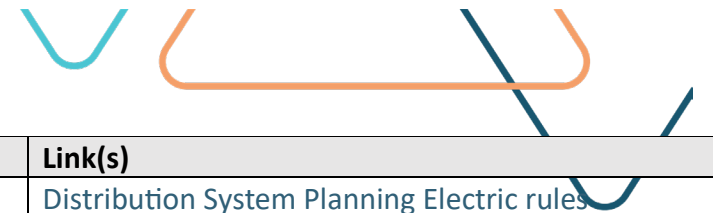
The NARUC Grid Data Sharing Collaborative framework and Playbook, released in 2023, should assist PUCs and their stakeholders in developing a state-specific process to balance these issues.

Please send additions and corrections to this brief to Danielle Sass Byrnett, dbyrnett@naruc.org.



Grid Data Sharing – Summary of Select State Proceedings and Utility Grid Data

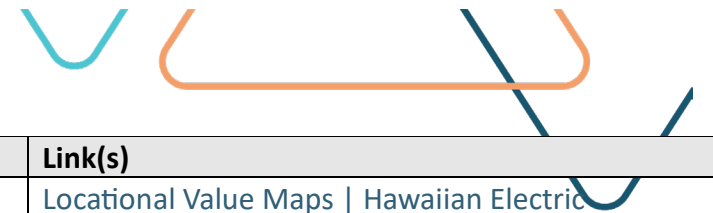
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
California	<p>The DRP Data Portals hosted by the three utilities provide Integration Capacity Analysis, Locational Net Benefit Analysis, Grid Needs Assessment/Distribution Deferral Opportunity Report, and other data to the public.</p> <p>Pacific Gas & Electric</p> <p>San Diego Gas & Electric</p> <p>Southern California Edison</p>	<p>R.14-08-013 Decisions D.17-09-026 and D.18-02-004, as confirmed by ALJ rulings</p> <p>R-14-10-003 Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Distributed Energy Resources</p> <p>OIR R.21-06-017, July 2, 2021</p>	<p>Integration Capacity Analysis maps include distribution lines, substations, transmission lines</p> <p>576 hour (24 hour peak load profile, 24 minute load profile for each month; requirements vary by size of utility customer base</p> <p>The California Energy Commission is currently gathering the following datasets (among others): Advanced Metering Infrastructure data in hourly (8760) or 15-minute intervals (kW, kWh) with Greenwich Mean Time timestamps; power flow modeling data; utility wildfire datasets; IOU hosting capacity information for each line segment, feeder, and substation; existing solar installation data from California Solar Initiative and Net Energy Metering interconnection datasets; existing Self-Generation Incentive Program projects data; existing demand response projects data; and DIDF filings data</p>	<p>California’s Integrated Distributed Energy Resources (IDER) [R. 14-10-003] – The California IDER and DRP Working Groups (drpwg.org)</p> <p>Energy Maps of California- California Energy Commission</p> <p>PG&E Distribution Resource Planning Data Access Portal (pge.com)</p> <p>Enhanced Integration Capacity Analysis (ICA) San Diego Gas & Electric (sdge.com)</p> <p>Southern California Edison (ArcGIS)</p> <p>Southern California Edison Distribution Resources Plan Extended Portal (DRPEP) (sce.com)</p> <p>Los Angeles Department of Water and Power</p>



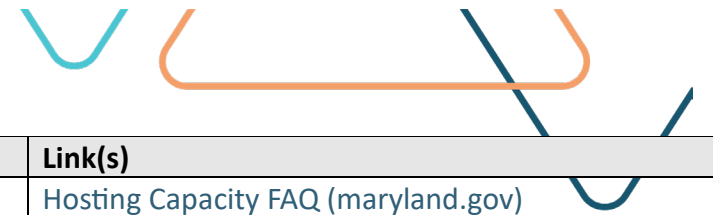
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
Colorado	Xcel Energy	<p>Proceeding No. 20R-0516E, Decision No. C21-0549</p> <p>Utilities required to file Distribution System Plans every two years, beginning either Jan 2022 or 2023. Plans require a wide range of grid data, including hosting capacity map informed by a hosting capacity analysis that determines hosting capacity on a particular feeder, feeder section or substation at a given time under existing and forecasted grid conditions and operations without adversely impacting safety, power quality, reliability, or other operational criteria.</p> <p>The hosting capacity analysis shall be performed using a load flow analysis and forecasted distribution facilities and their capacity, configuration, loading, and voltage data gathered at the substation, feeder, and primary node levels where available.</p> <p>Hosting Capacity Analysis and related data posted to a publicly available web portal</p>	<p>daytime minimum load</p> <p>Web portal also to include a wide variety of data in tabular form, including data for each substation and substation transformer, with the following data and more:</p> <ul style="list-style-type: none">maximum rated capacity of each substation transformerpeak hourly demand on each substation transformer for the past three yearscapacity margin for each substation transformeradvanced functionality capabilities of each substation transformernumber of feeders served by each substation and substation transformermaximum rated capacity of each feederpeak hourly demand on each feeder for the past three yearscapacity margin for each feeder <p>Utility to also provide a grid needs assessment that includes info on NWA</p>	<p>Distribution System Planning Electric rules</p> <p>PSCo Hosting Capacity Map Overview (arcgis.com)</p>
Connecticut	Eversource	17-12-03 PURA Investigation into Distribution System Planning of The Electric Distribution Companies	2017 PURA decisions approved grid modernization plans for utilities and initiated hosting capacity maps.	<p>Eversource DG Hosting Capacity Viewer CT (arcgis.com)</p> <p>United Illuminating</p>
Delaware	Delmarva Power			<p>Delmarva Power – Hosting Capacity Map (Pepco Holdings, Exelon)</p>



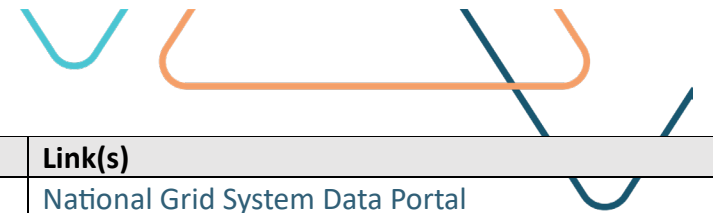
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
District of Columbia	Pepco	DCPSC Case No. 1130, Order 20286, Jan 24, 2020 DCPSC Case No. 1130, Order 20364, Jun 5, 2020 FC1130 In the Matter of The Investigation into Modernizing the Energy Delivery System For Increased Sustainability	Hosting Capacity Maps available from Pepco (the only utility in the district), one for radial distribution feeders and one for (underground?) network distribution feeders. In response to requirement to provide “A secure web portal to facilitate sharing of non-public, locationally-specific system-level data between the utility and third parties responding to RFPs and with government agencies developing DER programs. (Order 20286)” Load forecast, reliability statistics, planned resiliency/reliability projects Load data (requires NDA) Existing DER capacity Circuit design criteria and capacity; voltage profile, and other static Critical Energy Infrastructure Information (requires secure access)	https://edocket.dcpSC.org/apis/api/Filing/download?attachId=100684&guidFileName=f9794777-ad3d-4f71-bda1-ba04f95db4ad.pdf https://edocket.dcpSC.org/apis/api/Filing/download?attachId=104691&guidFileName=9adc85df-6c7e-4aac-ba88-33461a51c75a.pdf Potomac Electric Power Co. – Hostinc Capacity Map (Pepco Holdings, Exelon)
Georgia	Georgia Power			Customer site selection tool - Find Sites in Georgia Select Georgia



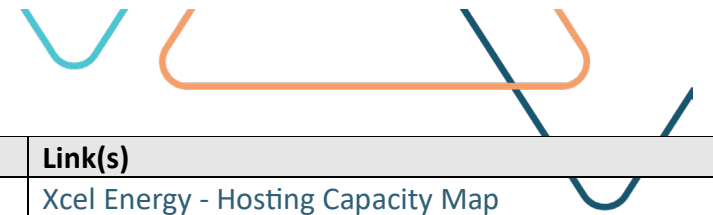
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
Hawaii	HECO	from 2017 Order: "HECO Companies' hosting capacity analysis should, to the extent practicable, reflect actual conditions. Given the pending and near-term development of DER and DER-related programs that are intended to provide grid-supportive services, the commission agrees with these Parties' proposals for the HECO Companies to update their hosting capacity methodology to better reflect reasonable assumptions about DERs, focusing not just on the effect of their energy exports, but also on the grid-supportive services they can provide." Docket 2014-0192 Decision and Order No. 34924	from 2017 Order: "HECO Companies' hosting capacity analysis should, to the extent practicable, reflect actual conditions. Given the pending and near-term development of DER and DER-related programs that are intended to provide grid-supportive services, the commission agrees with these Parties' proposals for the HECO Companies to update their hosting capacity methodology to better reflect reasonable assumptions about DERs, focusing not just on the effect of their energy exports, but also on the grid-supportive services they can provide."	Locational Value Maps Hawaiian Electric
Illinois	Commonwealth Edison Ameren	22-0486 Illinois Commerce Commission on Its Own Motion -Vs- Commonwealth Edison Company 22-0487 Illinois Commerce Commission on Its Own Motion -Vs- Ameren Illinois	Section 16-105.17(f) of the Illinois Public Utilities Act, 22o ILCS 5/16-105.17(f) Required Information to be Included in Multi-Year Integrated Grid Plan "(E) Hosting Capacity and Interconnection Requirements. (i) The utility shall make available on its website the hosting capacity analysis results that shall include mapping and GIS capability, as well as any other requirements requested by the Commission or determined through Commission rules. The plan shall identify where the hosting capacity analysis results shall be made publicly available. This shall also include an assessment of the impact of utility investments over the next 5 years on hosting capacity and a narrative discussion of how the hosting capacity analysis advances customer-sited distributed energy resources, including electric vehicles, energy storage systems, and photovoltaic resources, and how the identification of interconnection points on the distribution system will support the continued development of distributed energy resources. (ii) Discussion of the utility's interconnection requirements and how they comply with the Commission's applicable regulations"	Hosting Capacity Map - Ameren Illinois PV Hosting Capacity Map - ComEd



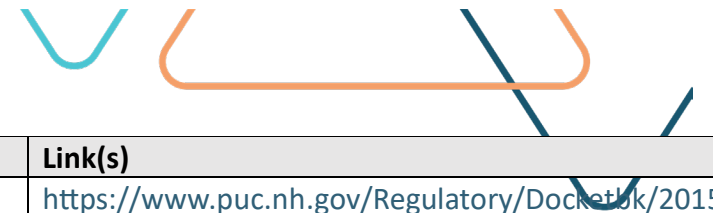
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
Maryland	Under COMAR 20.50.09, the state’s five largest utilities are required to file an annual report with the Maryland Public Service Commission (PSC) that provides the number of interconnection requests received, approved, and denied. Baltimore Gas and Electric Company (BGE), Delmarva Power & Light Company (DPL), Potomac Electric Power Company (Pepco), The Potomac Edison Company, and Southern Maryland Electric Cooperative (SMECO)—collectively represent over 97% of the state’s customer load.	PC 44 COMAR 20.50.09 governs the interconnection of small generators. In addition to providing general interconnection requirements, this section contains information about interconnection request processing fees, certified equipment, and the various levels of review. The state’s largest utilities are required to provide an interconnection queue, updated monthly, with information about interconnection requests from all facilities with a nameplate capacity greater than 500 kW.	<p>Hosting capacity is defined in the Code of Maryland Regulations (COMAR) 20.50.09.02B(17) as the amount of aggregate generation that can be accommodated on the electric distribution system without requiring infrastructure upgrades.</p> <p>Hosting capacity maps are currently not available on a state-wide level, although two utilities in Maryland, Pepco and DPL, provide hosting capacity maps. Both are subsidiaries of Pepco Holdings, Inc. (PHI) which models hosting capacity across all its service territories. PHI states that hosting capacity modeling is not an exact science and that space on a feeder is subject to change with new interconnections. Therefore, the map may over- or understate the actual hosting capacity of a distribution line.</p> <p>Several of Maryland’s distribution utilities maintain restricted circuits maps, which show circuits that have limited (or no further) capacity for additional interconnections. These include BGE, Choptank Electric Cooperative,⁹ and Pepco and DPL. Each utility states that circuit restrictions are complex and constantly evolving, so the maps should only be used for discussion purposes. https://dnr.maryland.gov/pprp/Pages/hosting-capacity-faq.aspx#a</p>	<p>Hosting Capacity FAQ (maryland.gov)</p> <p>Transforming Maryland's Electric Grid (PC44) - Maryland Public Service Commission (state.md.us)</p> <p>Pepco Holdings, Exelon</p>



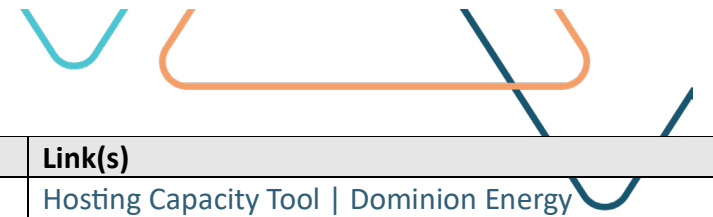
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
Massachusetts	Eversource, National Grid, Unitil	<p>The D.P.U. also asked the distribution companies to evaluate the potential for expanded mapping to include information about the need for upgrades at each circuit or substation, if necessary, to support DG applicants.</p> <p>D.P.U. 19-55-D Inquiry by The Department of Public Utilities on Its Own Motion Into Distributed Generation Interconnection., Order 16 Sep 2020</p>	<p>The Department of Public Utilities (D.P.U.) directed each distribution company to produce a Hosting Capacity Map that includes, at a minimum, the following information by location, circuit, and/or substation:</p> <ul style="list-style-type: none"> (1) operating voltage (kilovolt) (2) hosting capacity available (MW) (3) total nameplate interconnected DG (MW) (4) total nameplate pending DG (MW) (5) potential or on-going ASO studies (6) the current jurisdiction of circuits, i.e., federal or state; and (7) date last updated <p>peak load (historical and forecast)</p>	National Grid System Data Portal Hosting Capacity Map Eversource Interconnection Hosting Capacity Map Unitil
Michigan	All IOUs - DTE Energy, Consumers Energy, Indiana & Michigan Power	<p>U-21251 In the matter, on the Commission’s own motion, to establish a workgroup to conduct an electric grid integration study and to make recommendations to improve the readiness of the distribution system for both distributed energy resources and electric vehicle infrastructure in response to Senate Resolution 143.</p> <p>U-20147 – Requires IOUs to file 5-year distribution plans</p> <p>U-20969 - In the matter, on the Commission’s own motion to commence a collaborative to consider issues related to the further engagement, education, and participation of utility customers</p>	<p>All IOUs are asked to file hosting capacity maps in distribution plans. August 2020 Order requested DTE and Consumers submit first iterations of hosting capacity analysis in 2021 distribution plan filings, Indiana & Michigan asked to observe in preparation for HCA.</p> <p>Senate Resolution 143 encourages the Commission to “undertake a study on reliability, interconnection, and grid integration issues for distributed energy, including potential growth of distributed energy systems, changes to system design and operations, and system benefits, costs, and other impacts.” Further, SR 143 encourages the Commission to coordinate with electric providers and other persons on “distribution circuit-level data collection, modeling, and analysis” to evaluate the available capacity and constraints on the interconnection of additional DG systems, and to submit its findings from the study to the Senate by December 31, 2022. Data Access, Privacy, and Information Technology, and the Energy Security Sections, reviewed the comments and feedback filed in U-20959 in response to an April 2023 order. The staff offered further recommendations to the Commission related to personal data, data aggregation and anonymization, aggregated data availability for local government benchmarking, building owners and multi-unit dwellings, regulatory policy considerations, research, green button standards, and other topics.</p>	Case: U-21251 (force.com) Staff of Michigan Public Service Commission Recommendations for Data Access and Privacy – July 2023 Michigan Public Service Commission Generator Interconnection information and Hosting Capacity Maps



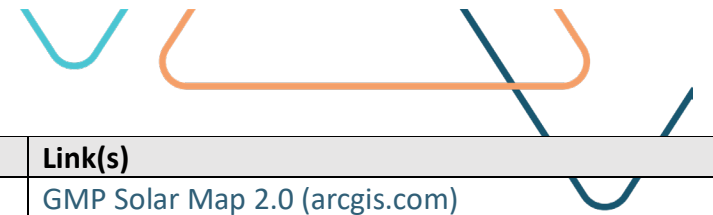
Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
Minnesota	Xcel Energy	<p>Recent expansions and changes to grid data sharing requirements</p> <p>Commission directs further exploration of privacy and security issues, requires utility to evaluate and justify each privacy and security concern and the basis for withholding information</p> <p>Utility must, to the extent practicable, include a unique name or number for each line segment in the maps' pop-up boxes and show the actual locations of distribution system lines instead of broad blocks of color on the HCA map</p> <p>Docket No. E-002/M-19-685, Order July 31, 2020</p> <p>Docket Nos. E002/M-19-685 and E002/M-20-800</p>	<p>daytime minimum load and absolute minimum load; requirements vary by size of utility customer base</p> <p>Initial requirement to provide data</p> <p>Each [public utility that files Biennial Transmission Projects Reports and] that is operating under a multiyear rate plan approved under section 216B.16, subdivision 19, shall conduct a distribution study to identify interconnection points on its distribution system for small-scale distributed generation resources and shall identify necessary distribution upgrades to support the continued development of distributed generation resources, and shall include the study in its [Biennial Transmission Projects Report].</p>	Xcel Energy - Hosting Capacity Map
Nevada	NV Energy	<p>Distribution Resource Plan Process</p> <p>Docket 21-06</p> <p>Docket No. 19-04___ - Joint application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of First Amendment to 2018 Joint IRP, a Distributed Resource Plan.</p>	<p>Nev. Admin. Code § 704.9102 "Hosting Capacity Analysis" defined: "Hosting capacity analysis" means the analysis to determine the amount of distributed resources that can be accommodated on a particular feeder section of the distribution system at a given time under existing and forecasted grid conditions and operations without adversely impacting safety, power quality, reliability or other operational criteria.</p> <p>Nevada Public Utilities Commission directed NVE to develop several new tools that make up the newly established DRP framework, including load/DER forecasting, hosting capacity analysis (HCA), grid needs assessment and locational net benefits analysis to identify nontraditional solutions to grid constraints.</p> <p>576 hour (24 hour peak load profile, 24 minute load profile for each month)</p>	NV Energy (must create account to access)



Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
New Hampshire	Unitil, NHEC, Eversource	15-296 Investigation into Grid Modernization DE 19-197 Development of a Statewide, Multi-Use Online Energy Data Platform Last Cost Integrated Resource Plans	Grid Mod Workgroup recommended HC maps	https://www.puc.nh.gov/Regulatory/Docket/2015/15-296/LETTERS-MEMOS-TARIFFS/15-296_2019-02-12_STAFF_REPORT_AND_RECOMMENDATION.PDF
New Jersey	Pepco, PSE&G, Atlantic City Electric	QO21010085 - In the Matter of Modernizing New Jersey's Interconnection Rules, Processes, And Metrics	PSE&G and FirstEnergy have maps searchable by address showing capacity available on each circuit with a low/medium/high rating. Atlantic City Electric is a Pepco utility, as described in the entry above; its map is more detailed than PSE&G and FirstEnergy	Atlantic City Electric, a PHI company Public Service Electric & Gas Company (PSE&G) Solar Power Suitability Map - PSE&G (pseg.com) Jersey Central Power & Light (JCP&L) (FirstEnergy) Rockland Electric Company
New York	Joint Utilities of New York	NY DPS Matter 16-M-0411, Order of March 9, 2017 NY DPS Matter 16-M-0411, Order of December 14, 2017 NY DPS Matter 16-M-0411, Order of April 20, 2018	O&R also provides a Load capacity map to support Level 3 EVSE siting PSC established access fees for aggregated community load data but found that aggregated data for the Utility Energy Registry (UER) doesn't (yet) meet privacy standards. Adopted a 4/50 whole-building data aggregation standard The Joint Utilities, with guidance from stakeholders in the 2016 engagement group discussions, have developed a four stage Hosting Capacity implementation roadmap. Hosting Capacity Maps available for all utilities (e.g., National Grid, Con Edison, Orange & Rockland, Central Hudson, & NYSEG/RG&E) Hosting Capacity Maps include (based on O&R and Central Hudson) Circuit name and local voltage; NYISO load zone Local minimum and maximum hosting capacity Anti-islanding hosting capacity Connected and queued DER Links to graphs of minimum load curve, historical and forecast 8760 load, and 5-year 24-hour peak load forecast Aggregated community load data are available for a fee. 8760 hour load data	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F67F8860-0BD8-4D0F-80E7-A8F10563BBA2} https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={9BA6AD25-C4EE-4BF1-A08D-05C253670D1B} https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={4C4CE28E-54CC-4514-967D-B513678E3F37} IEDR New York State's Integrated Energy Data Resource (ny.gov) Central Hudson Gas & Electric Con Edison National Grid NYSEG and RG&E (AvanGrid) Orange & Rockland



Jurisdiction	Utilities	Select Grid Data Proceedings	Description	Link(s)
North Carolina	Dominion			Hosting Capacity Tool Dominion Energy
Oregon	PacifiCorp Portland General Electric	UM 2197 - Portland Gas & Electric UM 2198 - PacifiCorp UM 2005 - Investigation into Distribution System Planning UM 2111 - Staff Investigation into Interconnection Processes and Policies	A recent legislatively required Distribution System Planning Report generated a Distributed Generation Evaluation Map that provides information on “DG that might be accommodated at a particular point.” It clearly states that a hosting capacity analysis would be an “additional, more detailed” step in siting DG. https://portlandgeneral.com/about/who-we-are/resource-planning/distribution-system-planning	PacifiCorp OR Data Portland General Data Distributed Generation Evaluation Map (arcgis.com)
Rhode Island	National Grid	Budget approval for the SDP included in Dockets 4755 & 4756, order of January 8, 2019. Additional budget approved in Dockets 4770 & 4780, order of May 5, 2020	National Grid maintains a System Data Portal, which contains distribution feeder and substation information in GIS, including: Feeder ID and characteristics, such as geographic locations Substation source Planning area Voltage information Loading and available hosting capacity NOTE: National Grid has similar data portals for its New York and Massachusetts distribution systems. Load forecasts, area studies, and reliability reports are presented in report format.	National Grid - Rhode Island System Data Portal (arcgis.com)



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Vermont		19-0856-RULE Proposed revisions to Vermont Public Utility Commission Rule 5.500 2022 Vermont Comprehensive Energy Plan	Green Mountain Power has an interactive hosting capacity map, with circuit-specific data on capacity, available capacity, and %age remaining. Burlington Electric Department has an interactive map with qualitative data at the feeder level, characterizing DG capacity availability as low, moderate, or good. BED also provides a table summarizing existing DG installations by circuit. Vermont Electric Co-op has a static map with large areas shaded to indicate whether or not there are constraints to DG installation in that area. No quantitative data are presented. https://vermontelectric.coop/client_media/files/VEC_SystemsMap_GenerationConstraint_10_19_21.pdf	GMP Solar Map 2.0 (arcgis.com) Burlington Electric Department Vermont Electric Co-op
Virginia	Dominion			Hosting Capacity Tool Dominion Energy
Washington	Avista Puget Sound Energy		[Puget Sound Energy] created a Hosting Capacity Heat map that is accessible via email request. The map is intended to provide visibility and transparency into the generation capabilities of a given area. The map is available to customers and developers looking to add a new DER in PSE's service territory.	Avista Geospatial Maps (arcgis.com) PSE Hosting Capacity Analysis (email to receive link to map)

