

via email (techforum@bpa.gov)

U.S. Department of Energy
Bonneville Power Administration
Transmission Services
May 23, 2023

Re: Comments of Amazon Energy LLC on the Proposed Generator Interconnection Queue Reforms Presented at the TC-25 Workshops

Amazon Energy LLC (“Amazon Energy”) respectfully submits these comments in support of the Bonneville Power Administration (“BPA”) efforts to expedite the current process for connecting new electric generation facilities to its transmission system.

Amazon.com, Inc. (“Amazon”) is the world’s leading corporate purchaser of renewable energy and is on a path to powering its operations with 100% renewable energy by 2025, five years ahead of its original goal. Amazon is also a co-founder of The Climate Pledge, a commitment to reach net-zero carbon emissions across its business by 2040. Amazon now has power purchase agreements with a total of 401 renewable energy projects across 22 countries, including 164 utility-scale wind and solar farms and 237 rooftop solar projects. 96 of those projects are utility-scale wind and solar farms located in the United States. Our entire portfolio represents over 20 gigawatts (GW) of renewable energy capacity.¹

Within BPA’s Oregon and Washington footprint, Amazon has invested over \$192 billion, including infrastructure and employee compensation since 2010, created over 101,000 full-time and part-time jobs, and supported over 340,000 indirect jobs². Improved interconnection and transmission planning and forward-looking reforms in the region will ensure BPA’s continued success as “an engine of the Northwest’s economic prosperity and environmental sustainability” and foster continued growth.³

Meeting Amazon’s renewable energy goals in the United States requires renewable energy resources to be available. Interconnection processes in the Pacific Northwest have posed a significant challenge to our pursuit of purchasing renewable energy at-scale in the region. Amazon is committed to working with utility partners, transmission operators and energy developers to support the deployment of new renewable energy on the same grids where we operate. However, with nearly 38 gigawatts of new renewable energy projects waiting to connect

¹ Amazon Sustainability, <https://sustainability.aboutamazon.com/environment/renewable-energy>

² Amazon Investing in the US, <https://www.aboutamazon.com/investing-in-the-u-s>

³ Bonneville Power Administration Mission, Vision, Values at <https://www.bpa.gov/about/who-we-are/mission-vision-values>

to the BPA grid in Oregon alone, opportunities for Amazon to invest in utility-scale renewable energy in states like Oregon – where we have significant business operations – have been limited. Urgent reforms are needed to help ensure that BPA’s grid is capable of supporting the sizable amount of renewables waiting to be built.

Support for First-Ready, First-Served Cluster Studies

Amazon encourages BPA to modernize its generator interconnection queue process and fully supports BPA’s consideration of a first-ready, first-served (“FRFS”) cluster study process as a critical and positive step in support of holistic reform. FRFS processes have been recognized by the Federal Energy Regulatory Commission (“FERC”) as a prudent and efficient practice to expedite existing queue backlogs,⁴ and will help ensure ample renewable energy supply to meet the laudable carbon reduction and renewable energy public policy goals of Washington and Oregon.

Serial processing of interconnection queues made sense at a time when a limited number of centralized generating units sought interconnection to the grid. Today, large numbers of independently developed renewable energy projects are seeking to interconnect at a time of limited excess grid capacity. This surge in new interconnections stresses current BPA resources and processes, adding schedule delays and increasing costs. Amazon appreciates that BPA’s leadership is considering alternative approaches.

Amazon believes that implementing the FRFS cluster process, already employed in some regional markets,⁵ is an important step in the region’s transition to renewable energy resources. Amazon is experiencing, first-hand, the delays presented by legacy serial interconnection processes through its work with project developers and electric service providers to meet Amazon’s renewable energy procurement goals.⁶ While Amazon continues to make progress toward meeting those goals, delays in the interconnection process are slowing integration of new renewable energy projects in BPA service territory. Increased efficiencies in queue processing and reasonable allocation of cluster study and network upgrade costs will enable corporate purchasers of renewable energy to support the bringing of new resources to the Pacific Northwest grid expeditiously, reduce costs for all customers, and lead to more rapid reductions in greenhouse gas emissions.

Support for Holistic Transmission Planning Reforms

⁴ Improvements to Generator Interconnection Procs. & Agreements, 179 FERC ¶ 61,194, at P 64 (2022). (“FERC Interconnection Reform NOPR”)

⁵ *Midcontinent Indep. Sys. Operator, Inc.*, 178 FERC ¶ 61,141 (2022); *Sw. Power Pool, Inc.*, 178 FERC ¶ 61,015 (2022).

⁶ Amazon Energy LLC, Initial Comments, Docket No. RM22-14-000, at 4, (filed Oct. 13, 2022)

Amazon also believes BPA should pair interconnection queue reform with reforms to the existing transmission planning process to ensure ample transmission capacity is available to deploy new renewable energy at scale and meet the region's electricity demand to support economic development. BPA's generator interconnection and large load transmission planning processes should complement each other so that the grid is developed and matures in a way that accounts for the significant increase in new renewable energy resources needed to meet growing load demand needs and the region's clean energy goals.

BPA's 2022 Transmission Service Request Study and Expansion Process ("TSEP") Cluster Study was BPA's largest to-date, with 144 transmission service requests studied, comprised of 11,118 MW of solar, storage and wind projects, separate from the generator interconnection study process.⁷ According to BPA, "Renewable mandates such as Oregon House Bill 2021 and Washington's Clean Energy Transformation Act drove the influx of requests from new generation developers" in 2022.⁸ Aligning generator interconnection and TSEP processes would promote efficient grid development and help ensure transmission is planned to serve the evolving resource mix and new loads on the system.

As legacy resources are retired and new resources and loads continue to be added to the transmission system, more dynamic and inclusive processes that work with BPA customers and align the transmission planning studies between transmission service and generator interconnection are needed. For example, BPA could provide increased transparency into both transmission planning and generation interconnection technical methodologies, including making power flow models and contingency files available to BPA customers through a process that protects confidentiality.

Making such information available to large energy consumers that rely on BPA transmission would be beneficial to both BPA and the energy consumers by enabling the consumers to develop long-term energy strategies, for both power supply and renewable energy deployment, to align with BPA's reliability goals and its mission to provide an adequate, efficient, economical and reliable power supply.⁹

A consolidated interconnection and transmission process would also offer an opportunity for BPA to reevaluate grid investment planning for both energy supply and demand. Proactive planning to build transmission to renewable energy resource rich geographic areas and support large loads connecting to the system will be required to support state's carbon free and renewable energy goals.

⁷ <https://www.bpa.gov/about/newsroom/news-articles/2022/20220804-over-11-gw-studied-in-2022-cluster-study-almost-doubling-the-2021-reques>

⁸ Id.

⁹ BPA *supra* note 3.

Support for Non-Wires Alternatives

Amazon also encourages BPA to further incorporate non-wires alternatives into its interconnection and transmission planning. Grid-enhancing technologies (“GETs”), such as advanced power flow control, grid optimization, dynamic line ratings, static synchronous compensators, and static VAR compensators are valuable tools in cluster interconnection study processes and warrant serious consideration. But GETs should not be viewed or treated as an alternative to traditional network upgrades necessitated by interconnection processes. Rather, they are a complement to traditional transmission technologies that should be planned together to foster maximum efficiencies of existing grid infrastructure, and meet reliability and decarbonization goals.

Recent studies have shown that GETs are a viable solution to integrate renewables more quickly in the United States, with one study showing that GETs could enable more than twice the amount of new renewables to be integrated in the Southwest Power Pool.¹⁰ The same study showed that GETs could facilitate estimated annual production cost savings of \$175 million to ratepayers.¹¹ With broader adoption, GETs could help unlock new generation resources, speed their development, and lower costs for consumers without the additional expense of new transmission infrastructure in certain areas.

GETs are emerging as another important consideration in transmission planning and generator interconnection queue reform, and FERC has proposed to allow generators to *request* consideration of such technologies in the interconnection study process.¹² Amazon has encouraged FERC to take a further step of *requiring* consideration of GETs in the interconnection cluster study process.¹³ Amazon has also urged FERC to keep the range of such technologies open-ended so that consideration of additional technologies can be requested where the generator believes they might be beneficial and reduce the need for upgrades. Amazon believes BPA can also realize the benefits of incorporating GETs on its system by taking a similar approach to incorporate GETs in this tariff proceeding and align that approach with future reforms to the TSEP procedures.

Requiring GETs in the BPA interconnection queue processing and transmission planning analysis will drive additional savings for customers across the system. Deployment of GETs on the BPA

¹⁰ Unlocking the Queue with Grid-Enhancing Technologies, Brattle, https://watt-transmission.org/wp-content/uploads/2021/02/Brattle_Unlocking-the-Queue-with-Grid-Enhancing-Technologies_Final-Report_Public-Version.pdf90.pdf at 8.

¹¹ *Id.* at 10.

¹² FERC Interconnection Reform NOPR at PP 297-299 (2022). In some instances, transmission providers are already deploying Dynamic Line Ratings with success, highlighting the viability of the technology. See <https://www.linevisioninc.com/news/duquesne-light-company-further-enhances-transmission-capacity-reliability-with-grid-enhancing-technology>

¹³ Amazon Energy LLC, Initial Comments, Docket No. RM22-14-000, at 7, (filed Oct. 13, 2022)

system can increase efficiencies on the existing grid and thereby reduce the need for some network upgrades in the interconnection process.

Conclusion

As a company with major operations in the Pacific Northwest, Amazon is eager to see more renewable energy projects in the BPA grid, and believes that new processes, policies and approaches to the operation of BPA's grid will be necessary to fully realize the renewable energy goals of states like Oregon and Washington and lower costs for all customers in the region. Amazon recognizes the widespread benefits that can be achieved by a more expeditious transition to a sustainable, decarbonized electric system, and looks forward to continuing to partner with BPA and its stakeholders to achieve the region's carbon-free and renewable energy goals.

Respectfully Submitted,

Amazon Energy LLC