UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Distributed Energy Resources – Technical Considerations for the Bulk Power System	Docket No. AD18-10-000

POST-TECHNICAL CONFERENCE COMMENTS OF THE TRANSMISSION ACCESS POLICY STUDY GROUP

The Transmission Access Policy Study Group ("TAPS") appreciates the opportunity to respond to the April 27, 2018 Notice Inviting Post-Technical Conference Comments regarding distributed energy resources ("DERs") modeling and data collection and availability.[1] As TAPS has previously stated, we see the potential value that DER participation in Regional Transmission Organization and Independent System Operator ("RTO") markets can provide to customers and support the Commission's desire to eliminate unnecessary barriers to such participation. But TAPS also recognizes that distribution system and DER modeling are still in their early stages of development. As the technical conference made clear, distribution utilities, RTOs, and other stakeholders are still only beginning to explore issues regarding what data are needed and how that information should be shared. Moreover, the collection of distribution utility information would raise a host of new concerns related to customer privacy, commercially sensitive information, and cybersecurity. TAPS encourages the Commission to continue to gather

[1] *Distributed Energy Resources – Technical Considerations for the Bulk Power System*, Notice Inviting Post-Technical Conference Comments (Apr. 27, 2018), eLibrary No. 20180427-3017.

information to explore these issues. But it would be premature for the Commission to attempt to establish uniform data collection requirements.

INTEREST OF TAPS

TAPS is an association of transmission-dependent utilities in more than 35 states, promoting open and non-discriminatory transmission access.[2] Representing load-serving entities entirely or predominantly dependent on transmission facilities owned and controlled by others, TAPS has supported the Commission's initiative to form truly independent RTOs to provide non-discriminatory transmission access and foster robust competition, to enable them to meet their load reliably and affordably. Thus, TAPS supports the development and implementation of new and advanced technologies, including DERs, that will increase reliability and access to more economic power supplies, provided that those technologies reduce cost to the ultimate ratepayer. Because TAPS members (or the distribution utilities that are members of TAPS members) operate distribution systems, they are directly affected by the development of DERs and the Commission's examination of the participation of DER aggregations in markets operated by RTOs.

[2] David Geschwind, Southern Minnesota Municipal Power Agency, chairs the TAPS Board. Jane Cirrincione, Northern California Power Agency, is TAPS Vice Chair. John Twitty is TAPS Executive Director.

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I. POST-TECHNICAL CONFERENCE QUESTIONS REGARDING COLLECTION AND AVAILABILITY OF DATA ON DER INSTALLATIONS (PANEL 4)

The technical conference discussion[3] made clear that the development of detailed models of distribution systems and the transmission/distribution interface is still a work-in-progress.[4] DER modeling is also in its early stages of development; there is no single set of best practices regarding DER modeling.[5]

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[3] Transcript of Technical Conference, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Docket Nos. RM18-9-000, AD18-10-000 (Apr. 10, 2018), eLibrary No. 20180502-4007 ("Tr. Vol. 1"); Transcript of Technical Conference, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Docket Nos. RM 18-9-000, AD18-10-000 (Apr. 11, 2018), eLibrary No. 20180502-4008 ("Tr. Vol. 2").

[4] Tr. Vol. 2, 298:22-299:4 (Boemer) ("We would just like to caution at this point that this [DER aggregation] model has not been applied widely to date and therefore industry has very little experience with the accuracy of this model for analyzing the impact of DER on bulk system reliability studies. Further research is therefore needed to explore whether these latest models are sufficient and whether they may need further improvement."); *id.* at 281:25-282:5 (Shrestha) ("[I]n terms of the options available for modeling interaction between transmission and distribution based on current practice it's pretty much limited . . . the transmission model does not include detailed model for the distribution. It just stops at the [transmission/distribution] interface."); *id.* at 238:14-24 (Hawkins) ("To your follow-up question about the processes and procedures in place to share the information . . . as far as procedures to share data with [Midcontinent Independent System Operator ("MISO")], there's a pretty easy answer[:] that process is not in place. There haven't been agreements or any sort of structures set up to share that data as of[] yet. We're just starting to think about what that might look like today."); *id.* at 293:5-17 (Prica) ("There is no at

In addition, even setting aside the potentially significant issues associated with attempting to order data collection on facilities and operations not subject to the Commission's jurisdiction, it would be premature for the Commission to establish uniform data collection and reporting standards for distribution utilities now. There is wide variation in distribution systems and DER penetration levels. As TAPS explains in greater detail in the comments it is submitting concurrently in Docket No. RM18-9-000, regions, states, and distribution utilities are at very different stages with respect to DER penetration.[6] Even in the regions most committed to fostering third-party aggregators for non-demand response DERs, distribution utilities are only beginning to experience some of the challenges associated with DER participation in wholesale markets.

Likewise, different distribution utilities currently have different data collection capabilities.[7] Many distribution utilities currently have, and have only needed, limited

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the moment standard approach" to modeling the interaction between transmission and distribution, and "[t]he biggest problem in connecting the [transmission and distribution] is that the models that we are using" are difficult to connect.).

[5] *Id.* at 283:10-13 (Bahramirad) ("As far as I know there is not an industry recognized best practices for [modeling DERs] so far and currently there is no DER model for interaction between distribution and transmission."); *id.* at 283:5-9 (Bahramirad) ("For the current practice DER are not modeled also in dynamic studies however we are thinking about different ways of modeling DER[s]."); *id.* at 309:11-17 (Boemer) ("All that said, even with the availability of these models the very next question is what shall be the parameters to fill these models with? . . . [M]ore research, more collaboration will be required going forward in order to understand what are the critical parameters of these new models.").

[6] *See also* Tr. Vol. 1, 104:7-8 (Haque) ("the state of Ohio has very low DER penetration."); *id.* at 133:3-9 (Norton) (noting that "small local communities . . .you're not seeing any [DERs] and then you have other communities, especially around some of the colleges where you see lots of [DER] penetration."); Tr. Vol. 2, 220:7-11 (Tetlow) (Arizona Public Service Company has about 80,000 residential customers with rooftop solar panels, representing about a 7% residential penetration rate); *id.* at 233:1-4 (Hawkins) (the lower level of DER penetration in MISO compared to California); *id.* at 236:24-25 (Bielak) ("California [Independent System Operator] has a much larger penetration of DER than PJM."); *id.* at 318:21-319:2 (Bahramirad) (the "low penetration of the distributed energy resources" on the Commonwealth Edison Company system); *id.* at 367:1-3 (Crews) ("California has a much higher [DER] penetration than say, Kentucky.").

[7] *Id.* at 291:20-24 (Prica) ("To talk about . . . DER modeling today it really depends on the software that the utilities are using. Because the utilities are using mostly commercial software, some of them are maybe a little more advanced, some of them are not."); i*d.* at 248:23-249:2 (Hawkins) ("In the MISO footprint,

visibility of their systems; and the cost of installing new real-time metering and communication systems could be substantial. Moreover, the appropriate level of data granularity and proper data processes may well depend on the relationship between the RTO and distribution utilities in question,[8] but RTOs and stakeholders are still exploring the contours of that relationship and the data each side needs to run its system.[9]

Further, TAPS urges the Commission to tread lightly with respect to data collection and availability. The collection of distribution utility information would be a new arena for the Commission, as well as for many small distribution utilities, and would raise a host of new challenges. In addition to issues of cybersecurity, competitively sensitive information, and Critical Energy/Electric Infrastructure Information, customer privacy issues must be taken very seriously. Collecting, transmitting, and concentrating sensitive data carries a risk of improper disclosure. For instance, an Unidentified Registered Entity recently agreed to a $2,700,000 penalty after one of its contractors improperly made sensitive data accessible over the internet.[10] Requiring data collection

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there's a varying ability to even get that insight into real time operations and a lot of it is determined by different state regulator decisions on investments into various grid modernization, initiatives and things like that.").

[8] *Id.* at 243:1-19 (Wagner) (levels of data granularity that is necessary depends on "the relationship between the system operator and the local distribution utility"); *id.* at 277:16-278:6 (Wagner) ("I think that relationship [between transmission system operator and distribution utility] will define the nature of the data that's required." And because large utilities have "capabilities . . . much more advanced than some of our—some of our smaller utilities . . . we're working to find what that ideal solution is from a data requirement perspective, recognizing that there are specific needs in order to maintain reliability that currently we impose on those more traditional generators and we need to determine what that equivalent data requirement is for the distributed energy resources.").

[9] *See id.* at 322:14-24 (Boemer) ("[T]o date we see very—a great variety of utility practices to actually verify [data] . . . *it remains to be seen whether the associated costs to these [verification] procedures would balance the potential system benefits and reliability benefits* but that's certainly another avenue for exploration for collaborative research and industry collaboration.") (emphasis added).

[10] *N. Am. Elec. Reliability Corp.*, 163 FERC ¶ 61,153 (2018) (affirming by operation of law the penalty noticed in N. Am. Elec. Reliability Corp., NERC Full Notice of Penalty Regarding Unidentified Registered Entity, *N. Am. Elec, Reliability Corp.*, Docket No. NP18-7-000 (Feb. 28, 2018), eLibrary No.

for DERs would increase the risks of similar improper disclosures and the costs of safeguarding against such risks.

Ultimately, this is not the appropriate time to establish uniform data collection requirements. The Commission noted it its Notice of Proposed Rulemaking that DER technologies are "constantly evolving,"[11] and distribution utilities, RTOs, and others are still in the early stages of addressing questions such as what data should be collected, how data should be shared, how can sensitive distribution utility information be protected, and what models provide the most benefit when weighed against their costs. And given the widely disparate levels of DER penetration in different areas, it is an open question as to whether the benefits of potential data collection requirements will outweigh the costs. Thus, while TAPS encourages the Commission to continue to facilitate the examination of these important questions, it should not attempt to lock-in data collection and sharing processes while these issues are just beginning to be explored. If DVD or Blu-Ray technology may soon be available, it does not make sense to establish VHS as the standard everyone must now adopt.

20180228-5108).

[11] *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 81 Fed. Reg. 86,522 at 86,525 (proposed Nov. 30, 2016), FERC Stats. & Regs. ¶ 32,718, P 13 (2016).

CONCLUSION

The Commission should consider these comments as it continues to explore the proposed reforms regarding the participation of DER aggregations in RTO markets.

Respectfully submitted,

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