

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Grid-Enhancing Technologies

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Docket No. AD19-19-000

**Post-Technical Conference Comments of the WATT Coalition
February 14, 2020**

I. Introduction

Pursuant to the notice issued by the Commission on January 17, 2020 in the above-captioned docket, the WATT Coalition offers these post-technical conference comments. The WATT Coalition applauds the Commission for its attention to this important proceeding and the thorough process that has been followed. We believe the Commission now has all it needs to act and fulfill its statutory responsibility under the Federal Power Act, Section 219(b)(3).

The WATT Coalition includes Ampacimon, Lindsey Manufacturing, LineVision, NewGrid, Smart Wires, and WindSim, as described at www.watt-transmission.org.

II. Answers to Commission questions

We have filed extensive comments in this docket and understand that the Commission has encouraged commenters to avoid repetition.

- 1. Workshop participants identified several types of technologies that are currently capable of being deployed, such as power flow control and transmission switching technologies, dynamic line ratings, and storage as transmission. What other technologies that increase the capacity, efficiency, or reliability of transmission facilities are ready for deployment?*

WATT response:

We are not aware of other technologies that would currently qualify but we do not wish to foreclose other technologies. We reiterate our suggestion from our June 26, 2019 comments in the NOI (PL19-3) that the Commission use a flexible technology-neutral definition and we specifically offered this: “hardware, software and associated protocols applied to existing transmission facilities that increase the network’s operational transfer capacity.” We believe that fits neatly with FPA Section 219(b)(3) which calls for incentives for “transmission technologies and other measures to increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities.” The Commission should

establish now that the technologies listed in the question above are deemed to qualify because there is sufficient record evidence in this proceeding to make that determination and avoid unnecessary regulatory steps.

2. *Some workshop participants argued that further deployment of technologies that increase the capacity, efficiency, or reliability of transmission facilities can be encouraged with various types of incentives. What types of incentives would encourage the deployment of technologies referred to in Question 1?*

WATT response:

We presented the WATT shared savings approach in our written and oral comments in this docket and PL19-3 so will not repeat it here. This proposal has received far more vetting and comment than any other specific proposal and we remind the Commission of what we stated in our Reply Comments in PL19-3 (Appendix A) that 23 entities supported some form of incentive for operating the existing grid more efficiently.

We reiterate that simply using Return on Equity (ROE) adders would accomplish nothing and we would not support Commission action that uses that approach.

3. *In discussion at the workshop of the “shared savings” approach for the deployment of GETs to existing transmission assets, workshop participants expressed general ratemaking concerns, and identified implementation issues, such as the measurement of benefits and distribution of payments. Please provide comment on the proposed ratemaking structure and any implementation challenges.*

WATT response:

We presented extensive testimony on the shared savings approach that we offered. While some expressed general ratemaking concerns, those concerns were generally about the idea of having incentives at all. The Commission should treat that position as a comment on the Federal Power Act’s incentive policy rather than on our specific proposal. Very few proposals were offered, and two of them, the WATT Coalition and Wellinghoff approaches, are very similar.

The shared savings incentive approach relies on the same type of modeling used in today’s regional planning processes to determine the economic benefits of transmission projects, either to approve such projects, or to study their cost allocation. It is not clear to us why there would be more concerns about measuring economic benefits of GETs compared to those of traditional transmission projects. Just like other investments, GETs would be evaluated ex ante and their costs would also be determined ex ante. Unlike other investments, however, there are very limited risks of cost over-runs, considering that these are smaller, simpler projects. Under the shared savings approach, the total costs to consumers (including incentive

payments) would be significantly lower than the cost of traditional transmission projects.

Cost allocation could be specified in the incentive application filing. We see three options for cost allocation that the incentive applicant could select, but do not preclude other options. Cost allocation could be determined on a regional or utility-specific basis and could follow the same allocation as transmission cost allocation for transmission owner and RTO-wide programs, i.e., pro-rata of other transmission costs. An RTO or transmission owner could also file to assign costs more locally when the benefits accrue to market participants in one area significantly more than another. In addition, there could be an option where market participants sponsoring a particular project or program voluntarily cover the costs of such project or program. This last option is similar to costs allocation of transmission projects associated to generation interconnection requests, where costs are allocated to the party requesting the interconnection. Generation owners are often most impacted by transmission constraints and would welcome the opportunity to fund relatively low-cost projects using GETs to alleviate congestion.

4. *Referring to the technologies mentioned in Question 1, some workshop participants indicated that RTOs/ISOs consider qualitative benefits, including certain reliability and flexibility attributes, in the regional transmission planning process. How do RTOs/ISOs currently measure or consider these benefits? Please provide examples.*

WATT response:

There are qualitative benefits that should inform the Commission's interest in proceeding with incentives to increase the deployment of Grid-Enhancing Technologies. For example, one can easily imagine that better monitoring of the sag of the line that initiated the 2003 blackout by contacting vegetation, or some of the lines that have started wildfires in the West could help avert outages in the future. We are proposing a very modest incentive, only including the quantifiable economic benefits.

5. *What software or other changes would an RTO/ISO need to make to implement GETs? As more of these technologies come onto the system, what challenges exist for coordinating their control in terms of analytics, automation, and optimization?*

WATT response:

To achieve significant benefits in the near term, no major software upgrades are needed. Certainly over the long-term, the system could be optimized more fully with software improvements but the Commission, the industry, and consumers need not wait for those upgrades before adopting the technologies.

The changes required at the RTO and TO vary by the specific GET:

- Most RTOs already have the capability of receiving dynamic line ratings from TOs. For those RTOs, there is no change required to support the wide scale deployment of DLR.
- Currently, implementing a reconfiguration requires one or multiple phone calls between the RTO and TO. For broad application of transmission switching (topology optimization) in real-time operations, such communications between the RTO and the TOs should be automated.
- For an RTO that has already integrated PSTs/PARs into their processes and control system at some level, it will be relatively trivial to integrate modular power flow control (MPFC) into their system at the same level of integration. This is because MPFCs can be setup to operate very similarly to a PST/PAR. For RTOs that have not integrated PSTs/PARs, more effort will be required. Additional details are provided in Smart Wires comments.

6. *Workshop participants discussed the benefits of pilot programs. Should the Commission encourage the testing and deployment of technologies that increase the capacity, efficiency, or reliability of transmission facilities through pilot programs and demonstration projects? If so, is there regulatory support that the Commission could provide to support and encourage such efforts? Could the Commission use its transmission incentives policy to encourage such pilot programs and demonstration projects? If so, please describe how the Commission could do so.*

WATT response:

As indicated by several presenters at the Workshop, as well as by commenters in the Inquiry Regarding the Commission's Electric Transmission Incentives (Docket No. PL19-3-000) and the proceeding on Managing Transmission Line Ratings (Docket No. AD19-15-000), there have been a number of studies, pilots and permanent technology deployments for all GETs across various jurisdictions. The technologies sit in the classic "valley of death" between R&D and wide deployment. Technology incentives play a key role in crossing the valley of death into wide commercial adoption. Merely pursuing more pilot projects would not change the status quo. Instead of GET pilots, we believe that GET implementations should be the priority, even if implementations could be on a limited scale and focused on locations/regions with known problems. The main difference between a pilot and an implementation with limited scale is that the latter is used in operations by operations staff (after initial tests are successful), whereas many pilots are for observation purposes only. The Commission could issue a Policy Statement encouraging GET implementations with a restricted scope and/or location, in addition to permanent and broader deployments of GETs, and inviting TOs and RTOs to file for incentives for such GET implementations, or proceed with a formal rule-making process.

III. Conclusion

We remind the Commission that “the potential benefits of these technology options are quite significant, with estimated benefits ranging in the tens to hundreds of million dollars per year with large-scale deployments...these benefits are of the same magnitude as some of the operational benefits provided by RTO and ISO-operated regional markets.”¹ We urge the Commission to adopt the WATT Coalition proposal because it will lead to more just and reasonable rates and allow the Commission to comply with Congress’ explicit direction in FPA Section 219(b)3.

Respectfully submitted,

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¹ Bruce Tsuchida, Brattle, and Rob Gramlich, Grid Strategies, “Improving Transmission Operations with Advanced Technologies,” white paper attached to WATT Coalition filing, <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15283553>.