

INSIGHTS

FERC Staff Issues White Paper on Hybrid Resources; Seeks Industry Input

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On May 26, 2021, Federal Energy Regulatory Commission (“FERC”) staff issued a [white paper](#) regarding the current status and use of hybrid resources – e.g., co-located generation and storage facilities – in wholesale markets, including markets operated by Regional Transmission Organizations and Independent System Operators (“RTOs”).^[1] Following a technical conference that FERC held last year on the same topic,^[2] the White Paper provides FERC staff’s preliminary views and observations in a handful of areas related to hybrid resources, including interconnection issues and the participation of such resources in wholesale markets.

Simultaneously with the issuance of the White Paper, FERC also issued a [notice](#) inviting interested parties to submit comments on the White Paper by August 18, 2021. This comment date is intended to coincide with the deadline for comments on [informational reports](#) regarding hybrid resources that each RTO is expected to submit to FERC by July 19, 2021.

As a general matter, the White Paper takes the position that hybrid resources have the potential to deliver benefits to wholesale markets, but that unlocking the potential of such resources may require changes to the rules currently employed by RTOs and other FERC-jurisdictional transmission providers.

Interconnection Requests

Participants at FERC’s 2020 technical conference agreed that the lack of clarity and consistency in interconnection procedures across wholesale markets creates challenges to hybrid resource projects. By their nature, these projects require that two or more resources be permitted to share a single point of interconnection. While RTOs allow, or are working towards allowing, multiple resources to share a single point of interconnection and to be studied under the same interconnection request, FERC staff notes that approaches vary by market and that “[i]mplementation remains uneven.”^[3]

Additionally, the White Paper notes that there is no common standard for submitting interconnection requests for hybrid resources. This results in unclear or inconsistent submissions by hybrid resources, which can create difficulties when modeling such resources in

interconnection studies. FERC observes that hybrid resource interconnection “could be more efficient if interconnection customers were able to submit a single interconnection request,” treating the hybrid resource as one project in the interconnection queue.^[4] At least one participant at the technical conference suggested that FERC should clarify the rules regarding expanded use of surplus interconnection service by requiring “all transmission providers to allow interconnection customers to request surplus service...with the caveat that the customer acquiring the surplus capacity could not reach commercial operation prior to the host facility.”^[5]

Material Modification

The White Paper also identifies two issues regarding “material modifications,” which is the standard used by RTOs to determine whether an alteration to an interconnection request will have an impact significant enough that the customer should be required to submit a new interconnection request – effectively restarting the study process – to move forward with the modification. The White Paper notes that the material modification standard may currently act as a barrier to allowing interconnection customers to add energy storage to an interconnection request already proceeding through the interconnection process.^[6] Additionally, current “material modification” requirements may impede a project’s ability to change its election to rely on grid charging or self-charging during the interconnection process.^[7]

In order to address these issues, the White Paper raises the prospect of requiring transmission providers to modify their interconnection rules to treat such changes as “technological advancements” that can be made during the interconnection process without losing a customer’s queue position. FERC staff identifies several benefits of treating such additions as “technological advancements,” including reliability benefits, project cost and time savings, and a lack of adverse effect to other customers.^[8] Technical conference participants suggested that FERC develop best practice guidelines for RTOs, which would include criteria for distinguishing between “material modifications” and “technological advancements.”^[9]

FERC staff also notes that projects in the interconnection queue may not currently elect to change their election between self-charging and grid-charging without also submitting a new service request for grid charging, thereby causing projects to lose their queue positions. The White Paper notes that Load Serving Entities (“LSEs”) can add grid charging capability to an LSE owned co-located hybrid or integrated hybrid facility by designating the storage component of the facility as system load and using Network Integrated Transmission Service to charge the resource. The White Paper observes that, in some cases, this may provide LSEs with an advantage over independent generators in terms of the ability to add grid charging to a co-located hybrid or integrated hybrid facility without losing its queue position.

Modeling Hybrid Resources

The White Paper also identifies concerns that the approach currently used by transmission providers for studying energy storage resources using worst case assumptions and scenarios may result in energy storage facilities facing exorbitant upgrade costs that do not accurately

reflect the costs of the resource and the manner in which such resources operate. Specifically, FERC staff notes the concerns of one participant that explained RTOs “assume that electric storage will charge during peak periods and discharge during light load periods,” which can result in a misunderstanding of the actual operating characteristics of hybrid resources. While conceding that additional time may be necessary to understand how hybrid resources actually operate in wholesale markets better, FERC staff notes the concern that the lack of integrated hybrid resource modeling currently serves as a “barrier for interconnection of hybrid resources.” [\[10\]](#)

Valuation of Hybrid Resources in Capacity Markets

Limits on the participation of hybrid resources in RTO capacity markets may result in an undervaluation of the full breadth of services that such resources can provide, according to the White Paper. [\[11\]](#) FERC staff highlights the key benefits that hybrid resources can provide to wholesale markets: the “ability to facilitate the integration of variable energy resources, shift generation from lower priced periods to higher priced periods when the energy is more valuable to customers, and enhance technical performance and capability by increasing operational flexibility.” [\[12\]](#) However, current participation requirements do not necessarily allow for hybrid resources to provide these resources to the grid, potentially requiring some changes in rules such as allowing hybrid resources to choose their own participation model or altering market power mitigation rules to more accurately reflect hybrid resources’ opportunity costs.

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With comments due by August 18, 2021, the Bracewell team is ready to discuss how possible FERC action on hybrid resources could impact your business. If you have any questions, please feel free to reach out to the authors of this post who would be happy to respond.

[\[1\]](#) *Notice of Technical Conference, Hybrid Resources White Paper*, Docket No. AD20-9-000 (May 26, 2021) (“White Paper”).

[\[2\]](#) *Notice of Technical Conference, Transcript of July 23, 2020 Technical Conference: Hybrid Resources*, Docket No. AD20-9-000 (Aug. 10, 2020).

[\[3\]](#) White Paper at 25.

[\[4\]](#) *Id.*

[\[5\]](#) *Id.* at 26.

[\[6\]](#) *Id.*

[\[7\]](#) *Id.* at 27.

[\[8\]](#) *Id.*

[\[9\]](#) In creating such a guideline, it was noted, a better understanding of the electrical impacts of different technologies is needed. Forums such as the Institute of Electrical and Electronics Engineers, the Energy Systems Integration Group, or FERC technical conferences could help provide that information.

[\[10\]](#) White Paper at 29.

[\[11\]](#) *Id.* at 30.

[\[12\]](#) *Id.*