Electric Reliability Council of Texas, Inc. (ERCOT) submits the following responses to certain Public Utility Commission of Texas (Commission) staff questions set forth in Public Notice of Request for Comments—Rulemaking to Address the Use of Non-Traditional Technologies in Electric Delivery Service, filed in this Project on October 2, 2018.

I. ERCOT'S RESPONSES TO COMMISSION STAFF QUESTIONS

1. Apart from energy storage, what non-traditional technologies could provide a potential cost-effective solution to reliability issues on a utility’s transmission or distribution system?

   ERCOT Response: A comprehensive list of every non-traditional technology that may be able to resolve reliability issues on a utility’s transmission or distribution system would be extensive. Any technology that alters the amount of current flowing on a transmission or distribution line (including a technology/procedure that alters customer usage or circuit impedences/voltages, or provides injection of energy) could provide a potential reliability solution. It is possible that many non-traditional technologies would be less costly than new transmission or distribution circuits or new substation equipment.

3. How should any energy necessary for TDU implementation of a non-traditional technology device be measured and accounted for within the ERCOT market, without using Unaccounted for Energy (UFE)?
ERCOT Response: ERCOT takes no position in this proceeding as to how such energy should be accounted for within the ERCOT market. To the extent it may be helpful in consideration of this issue, however, ERCOT notes that UFE is the difference between total metered ERCOT Load (as adjusted for applicable Distribution Losses (DL) and Transmission Losses (TL)) and total metered ERCOT generation. One component of UFE is inadvertent energy due to ERCOT Settlement treatment of Direct Current Tie (DC Tie) Schedules. UFE can also be attributed to inaccuracies in meter data, meter data estimations, DLs, TLs, profile data, DL code assignment, and energy theft. The use of UFE should be minimized, especially when energy can be metered and assigned to a specific ERCOT Market Participant.\(^1\) In the case of non-traditional technologies, an alternative to the UFE approach may be to meter the injections (and withdrawals, in the case of energy storage) of these technologies similar to the way other assets are treated in the ERCOT System. The metered quantities of such non-traditional technologies would be processed and settled in the same manner as other resources registered with ERCOT. Each non-traditional technology could be represented by a Qualified Scheduling Entity (QSE) and the pricing and Settlement concepts in the ERCOT Protocols could be used to calculate the payments and charges for QSEs representing non-traditional technologies.

4. In which situations and scenarios would it be appropriate for a TDU to deploy a non-traditional technology device for the purpose of supporting reliability on its transmission or distribution system?

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\(^1\) ERCOT's annual report on UFE is available on the ERCOT website at: [http://www.ercot.com/mktinfo/data_agg/ufe](http://www.ercot.com/mktinfo/data_agg/ufe). The most recent version of this report (published in 2017) reflects that the amount of UFE in ERCOT has declined significantly over the past ten years.
ERCOT Response: ERCOT takes no position regarding when a TDU should be permitted to deploy such technology. To the extent it may be helpful in consideration of this issue, however, ERCOT notes that ERCOT would not necessarily incorporate every potential reliability solution utilized by Transmission and Distribution Service Providers (TDSPs) into ERCOT’s planning and operational reliability assessments. Generally speaking, in order for a Resource to be reflected in ERCOT’s reliability assessments, there must be an expectation that the Resource will be available under peak demand conditions—because (a) ERCOT has the ability to dispatch the Resource, (b) the device is tied to a regular usage pattern, or (c) because there is a strong financial incentive for the Resource to be available.

For example, at this time, only a limited subset of distributed energy resources (DER) are included in the transmission databases that are used by ERCOT and the transmission service providers (TSPs) to assess ERCOT System needs. Other activities, such as demand response programs operated by utilities or competitive retailers, also may not be reflected in ERCOT’s transmission planning studies because these programs are not necessarily deployed during periods of peak local transmission or distribution usage.

6. Should the commission’s rules permit or require a TDU to contract with a non-utility service provider for the provision of a non-traditional technology device to support reliability on the TDU’s transmission or distribution system? If so, what parameters should the commission stipulate for this arrangement?

ERCOT Response: ERCOT takes no position on whether such contracting should be permitted or required. ERCOT notes, however, that a third party that contracts with an ERCOT-registered TDSP would not necessarily be registered with ERCOT as a Market Participant or bound by the ERCOT Protocols.
11. Could the commission specify conditions under which a TDU could employ non-traditional technologies to support reliability? If so, what conditions would be appropriate?

ERCOT Response: ERCOT takes no position on whether the Commission could specify conditions under which a TDU could employ non-traditional technologies to support reliability. However, the Commission may wish to consider the requisite implementation time needed for non-traditional technologies, as compared to traditional transmission and distribution projects. For example, demand response programs and technologies such as battery storage devices could potentially be planned and installed more quickly than a traditional transmission or distribution project, such as construction of a new transmission line. As a result, the Commission may wish to consider what would be the most appropriate timing for review of a non-traditional project proposed to resolve a reliability issue, should it determine that such projects are subject to Commission approval. For instance, if a TDU seeks Commission approval of an non-traditional technology to resolve a reliability need and brings that proposal to the Commission for review with only enough time to complete that specific project, there may not be sufficient time for a traditional transmission or distribution project to be planned, permitted, and constructed before the reliability issue develops if the non-traditional technology project is rejected by the Commission. To the extent there is a formal review process established by the Commission for non-traditional technologies, the Commission may want to require that such proposals be brought to the Commission for review with enough time to allow for review of an alternative, traditional transmission or distribution project.
13. Are there any other issues that the commission should consider addressing in this project?

ERCOT Response: In recent years, ERCOT has received numerous questions regarding ERCOT’s interpretation and treatment of Wholesale Storage Load (WSL) under the ERCOT Protocols and as set forth in 16 TAC § 25.501(m). For example, where a storage facility registered with ERCOT does not qualify for WSL treatment, should that facility be settled at the zonal price under 16 TAC § 25.501(h) or at the nodal energy price under 16 TAC § 25.501(m)? This proceeding may present an opportunity to consider modifications to the ERCOT Protocols and/or Commission rules with respect to WSL treatment.

II. CONCLUSION

ERCOT respectfully requests the Commission’s consideration of these comments. ERCOT is prepared to provide any additional information the Commission may request in evaluating non-traditional technologies in electric delivery service rules.
Respectfully submitted,

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