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PUC DOCKET NO. 46368
SOAH DOCKET NO. 473-17-0684

APPLICATION OF AEP TEXAS NORTH COMPANY FOR REGULATORY APPROVALS RELATED TO THE INSTALLATION OF UTILITY-SCALE BATTERY FACILITIES	§ § § § §	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

APPLICANT AEP TEXAS' INITIAL BRIEF

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APPLICANT AEP TEXAS' INITIAL BRIEF

Applicant AEP Texas Inc.[1] (AEP Texas or Company) respectfully files its initial brief.

EXECUTIVE SUMMARY

The evidence establishes that AEP Texas' proposed batteries will improve reliability at Woodson and Paint Rock with projected savings of nearly $8 million compared to traditional distribution solutions. The cost of the energy used in the batteries and uplifted to ERCOT load as unaccounted-for energy (UFE) will be $18 per year, as estimated by Staff witness Mark T. Bryant.

Parties have raised a host of legal and policy arguments against AEP Texas' proposal. The legal arguments have already been considered both by the Administrative Law Judge (ALJ) in denying Intervenors' Motion for Summary Decision and by the Commission in declining Intervenors' appeal of the ALJ's ruling. The policy arguments, led by Luminant, center around concern that widespread battery deployment could decrease generators' revenues. Those arguments are notably devoid of factual support, and make no effort to balance the benefits of AEP Texas' proposal for customers against the asserted harm to generators. Based on the clear customer benefits of AEP Texas' proposal compared to the speculative generator harm claimed by other parties, AEP Texas' proposal should be approved.

[1] As noted in the Company's Feb. 1, 2017 letter in this docket, AEP Texas North Company and AEP Texas Central Company have merged into their parent company to become AEP Texas Inc. and are now doing business as AEP Texas. AEP Texas should now be considered the applicant in this proceeding.

BRIEF ON PRELIMINARY ORDER ISSUES

I. Competitive Energy Services (Preliminary Order Issues 1 and 2)

Preliminary Order Issue No. 1: Would the ownership and operation of the storage facilities, in the application proposed by TNC, constitute a competitive energy service under 25 Texas Administrative Code § 25.341(3) (TAC)?

Preliminary Order Issue No. 2: Does the ownership and operation of the storage facilities, used in the manner proposed by TNC, violate the prohibition against electric utilities providing competitive energy services? If not, why?

Short answer: The proposed batteries will not provide competitive energy services.

These issues have already been briefed in connection with the Motion for Summary Decision filed by certain intervenors, and the ALJ correctly rejected the Intervenors' argument that AEP Texas' proposed battery facilities would provide a competitive energy service. The discussion below reiterates AEP Texas' response to the Motion for Summary Decision on this issue.

There are several reasons why AEP Texas' proposed batteries will not provide competitive energy services. Competitive energy services are defined as "customer energy services business activities that are capable of being provided on a competitive basis in the retail market."[2] However, AEP Texas' proposed batteries will not provide customer energy services, nor are they capable of being provided on a competitive basis in the retail market. Instead, the batteries will provide utility *system service*, which includes the regulation and control of electricity on the system, voltage and power continuity, and response to electric delivery problems such as outages and interruptions, all core utility system functions.[3] In their Motion for Summary Decision, the movants stated that AEP Texas' proposed batteries do not appear to be cost-effective in the competitive market, indicating that the batteries are not capable of being

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2 16 TAC § 25.341(3).

3 *Id.* at § 25.341(13).

provided on a competitive basis.[4] However, as a utility, AEP Texas has the obligation to provide reliable service to its customers in the most cost effective manner, which, in this case, involves installing batteries to serve customers in Woodson and Paint Rock.

When integrated electric utilities were unbundled to create the current market structure in ERCOT, they were required to separate their transmission and distribution utility functions from other functions, such as generation and competitive energy services, that would be transferred to affiliates operating in the newly-competitive retail market and could no longer be offered by the utility. This unbundling process is set out in 16 Tex. Admin. Code (TAC) §§ 25.341-25.344. Permissible transmission and distribution utility service was broken into four categories: system service, discretionary service, petitioned service, and other service. Competitive energy services were required to be discontinued by the utility with limited exceptions. *See* 16 TAC § 25.342(f).

As discussed further below in response to Preliminary Order Issue No. 3, AEP Texas' proposed batteries will provide system service, a core utility function, not competitive energy services. System service includes the regulation and control of electricity in the transmission and distribution system, transmission and distribution system voltage and power continuity, and response to electric delivery problems, including outages, interruptions, and voltage variations, and restoration of service in a timely manner.[5]

By contrast, competitive energy services are defined as "customer energy services ... capable of being provided on a competitive basis in the retail market."[6] The examples provided in the definition of competitive energy services confirm that these are *services provided directly on individual retail customer premises*. For example, competitive energy services include

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4 Motion for Summary Decision at 7 (footnote 25) (Mar. 31, 2017).

5 16 TAC § 25.341(13)(A), (C), (D).

6 16 TAC § 25.341(3).

energy-consuming customer premises equipment, the provision of technical assistance relating to any customer-premises equipment or device, customer or facility-specific energy efficiency equipment, transformation or power generation equipment located on the customer's side of the point of delivery, information related to customer usage, home and property security services, premises energy management systems, customer-premises energy or fuel storage facilities, and customer-premise metering equipment.[7] AEP Texas' proposed batteries will not provide energy services directly on end-use retail customer premises, and bear no resemblance to the types of individual customer premises equipment or services identified in the definition of competitive energy services. Instead, the batteries will provide system services, not to specific individual customers but to protect the reliability and function of the electric grid in delivering energy from source to load.

Moreover, competitive energy services must be capable of being provided on a competitive basis in the retail market,[8] and in the Motion for Summary Decision the Movants conceded that *"using storage in the manner proposed by AEP would not be cost-effective in the competitive market."*[9] The simple fact is that services are *not* being provided competitively, by battery or otherwise, to serve the need in Woodson and Paint Rock that will be addressed by AEP Texas' proposed batteries. As a result, it seems clear that the Company's proposed batteries are *not* capable of being provided on a competitive basis and therefore *cannot* be competitive energy services. However, as a regulated utility, AEP Texas has a different paradigm than market competitors, which requires it to provide reliable service to all customers

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7 *Id.* at § 25.341(3)(A), (C), (F), (G), (I), (K), (P), (N), (V).

8 *Id.* at § 25.341(3).

9 Motion for Summary Decision at 7 (footnote 25) (emphasis added).

in its service area.[10] While market competitors can choose whether or not to serve customers, AEP Texas has an obligation to provide reliable service to all customers. The Company's testimony shows that its proposed batteries are the least-cost method of providing that service.[11] No reason has been shown to deny that solution and to require AEP Texas to pursue a more expensive one.

II. Distribution Facilities (Preliminary Order Issue 3)

Preliminary Order Issue No. 3: Are TNC's proposed storage facilities considered a utility distribution asset or utility distribution facility under PURA[12]? If not, under what circumstances would the storage facilities be considered a utility distribution asset or utility distribution facility under PURA?

a. Will TNC's proposed storage facilities be operated below 60kV?

b. Do the storage facilities, used in the manner proposed by TNC, qualify as distribution-invested capital as defined in 16 TAC § 25.243(b)(3)?

i. Are the storage facilities, used in the manner proposed by TNC, appropriately categorized as distribution plant in the Federal Energy Regulatory Commission's (FERC) Uniform System of Accounts?

ii. Should these storage facilities be categorized as battery storage equipment categorized in FERC Account 363?

c. Do the storage facilities, used in the manner proposed by TNC, qualify as distribution assets as defined in 16 TAC § 25.341?

Short Answer: The proposed batteries will be distribution facilities under PURA and the Commission's rules because they will be installed on the Company's distribution system to provide system services and will operate below 60kV.

AEP Texas' proposed batteries are properly considered distribution assets and distribution facilities under PURA. The undisputed evidence shows that the batteries will be operated below 60 kV. Used in the manner proposed by AEP Texas, those batteries are appropriately categorized as "Electric Storage Equipment – Distribution" booked to FERC

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[10] PURA § 37.151 (CCN holder must serve every customer in its service area and provide continuous and adequate service in that area).

[11] AEP Texas Exhibit 4, Direct Testimony of Charles R. Brower III, at 11-16 and Exhibit CRB-6.

[12] Public Utility Regulatory Act, Tex. Util. Code §§ 11.001-66.016 (West 2016) (PURA).

Account 363. Because the facilities will operate below 60 kV and provide system services, they fall within the definition of distribution in 16 TAC § 25.341(5). The ALJ has already considered this issue in connection with the Motion for Summary Decision, and correctly rejected the Movants' argument that AEP Texas' proposed batteries are not distribution facilities.

In her direct testimony, AEP Texas witness Judith Talavera testified that the Company's proposed batteries would be part of the Company's distribution system, would operate below 60 kV, and would be booked to FERC Account 363, "Energy Storage Equipment – Distribution."[13] Ms. Talavera further testified that Account 363 is classified as a distribution account in both the Commission's Transmission and Distribution Utility Rate Filing Package and 16 TAC § 25.243, the Distribution Cost Recovery Factor rule.[14] No party filed testimony disputing these facts.

AEP Texas' proposed batteries will provide system service, a core utility function. System service is "service that is essential to the transmission and distribution of electricity from the point of interconnection of a generation source or other third-party electric grid facility, to the point of interconnection with a retail customer or other third-party facility."[15] It includes "the regulation and control of electricity in the transmission and distribution system," "transmission and distribution system voltage and power continuity," and "response to electric delivery problems, including outages, interruptions, and voltage variations, and restoration of service in a timely manner."[16] AEP Texas' undisputed testimony demonstrates that its proposed batteries are intended to prevent and respond to outages, to provide continuous delivery of power, and to

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13 AEP Texas Exh. 2, Direct Testimony of Judith E. Talavera, at 7-8.

14 *Id.*

15 16 TAC § 25.341(13).

16 *Id.* at § 25.341(13)(A), (C), (D).

accommodate load growth without outages or interruptions.[17] The undisputed testimony also establishes that the batteries will be located on AEP Texas' distribution system between the power supply and the retail customer points of interconnection,[18] consistent with the definition of system service.

Commission Rule 16 TAC § 25.341(5) defines "distribution" as "*system* and discretionary *services* associated with *facilities below 60 kilovolts* necessary to transform and move electricity from the point of interconnection of a generation source or third-party electric grid facilities, to the point of interconnection with a retail customer or other third-party facilities, and related processes necessary to perform such transformation and movement." As noted above, it is undisputed that the batteries will operate below 60 kV, and the batteries will be a necessary part of the distribution system, located on the grid between generator and retail customer points of interconnection, providing core utility system services to customers in Woodson and Paint Rock. As a result, they are classified as distribution facilities.

In their Motion for Summary Decision that the ALJ denied, certain Intervenors asserted that the proposed batteries are not "necessary to transform and move electricity" over the grid under 16 TAC § 25.341(5),[19] but Texas courts have rejected the concept that "necessary" means strict necessity where no other options are available. In *Public Utility Comm'n v. Texland Electric Co.*,[20] the Austin Court of Appeals addressed the statutory requirement that the Commission consider the need for additional service in determining whether to grant a CCN.

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17 AEP Texas Exhibit 4, Direct Testimony of Charles R. Brower III, at 8-16 (explaining that the proposed batteries will provide least-cost solutions to address reliability concerns related to distribution system outages and interruptions and will enable load growth on the system).

18 *Id.* at 11 ("A utility-scale battery facility could be installed on the radial distribution feeder near Woodson"), 15 ("installation of a battery on the distribution system in Paint Rock").

19 Motion for Summary Decision at 10.

20 701 S.W.2d 261 (Tex.App.—Austin 1985, no writ).

The Court concluded that "a 'need' for additional service implies a relative requirement, ranging from an imperative need to one that is minimal."[21] More recently, the Austin Court confirmed the *Texland* holding that need can range from imperative to minimal.[22] As a result, "need" does not equate to strict necessity, but can instead mean that a facility is necessary because it is the least-cost solution to provide reliable electric delivery service. Intervenors' assertion that the batteries are not necessary distribution facilities because AEP Texas can use much more expensive alternatives is not a reasonable interpretation of the definition of "distribution" in 16 TAC § 25.341(5).

In light of the Commission's definition of core utility system service and the Courts' broad interpretation of need, Intervenors' argument that AEP Texas' proposed batteries are not distribution facilities lacks merit. AEP Texas has an obligation to provide reliable service to its end-use consumers at the lowest reasonable cost.[23] Since its proposed batteries are the least-cost option for providing such service in Woodson and Paint Rock, they are necessary for the provision of distribution service under the Commission's rules, the Courts' rulings, and any reasonable interpretation of the issue.

III. Generation Facilities (Preliminary Order Issue 4)

Preliminary Order Issue No. 4: Are TNC's proposed storage facilities considered a generation asset or generation facility under PURA? If not, under what circumstances would the proposed storage facilities be considered a generation asset or generation facility under PURA?

a. Will TNC's storage facilities be installed with the intention to sell energy or ancillary services at wholesale? If so, are the storage facilities, used in the manner proposed by TNC, generation assets under PURA § 35.152?

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21 *Id.* at 266.

22 *Hammack v. Public Util. Comm'n*, 131 S.W.3d 713, 723 (Tex.App.—Austin 2004, pet. denied).

23 PURA § 37.151.

b. *Are storage facilities that export power to the ERCOT wholesale market excluded from the definition of generation under PURA § 35.152(a) and 16 TAC § 25.341(10) solely because the owner proposes to not be paid for the exports?*

c. *Do TNC's proposed storage facilities constitute assets, activities, or processes necessary and related to the production of electricity for sale under 16 TAC § 25.341(10)?*

d. *Does TNC's proposed operation of the storage facilities constitute wholesale storage under 16 TAC § 25.501(m)? If not, why?*

e. *Would TNC's proposed storage facilities be governed by the wholesale market design in 16 TAC § 25.501(m)? If not, why?*

f. *Who does TNC intend to purchase energy from to charge the proposed storage facilities?*

g. *Under PURA, can TNC own the energy stored in the proposed storage facilities? If TNC cannot, then who can own the stored energy?*

Short Answer: The proposed batteries will not be generation facilities under PURA or the Commission's rules because they are located on the distribution system and AEP Texas will not buy, sell, or take title to the energy used in the batteries, but will instead treat it as unaccounted for energy (UFE).

a. AEP Texas' proposed batteries will not be installed with the intention of selling energy or ancillary services at wholesale, so they will not be generation assets under PURA § 35.152. (Preliminary Order Issues 4(a) and 4(b))

This issue has also already been briefed in connection with the Motion for Summary Decision, and the ALJ rejected the Movants' argument that AEP Texas' proposed batteries will be generation assets. AEP Texas reiterates below its arguments in response to the summary decision motion.

AEP Texas' proposed batteries will not be generation assets under § 35.152 because they are not intended to be used to sell energy or ancillary services. Section 35.152(a) states that "[e]lectric energy storage equipment or facilities *that are intended to be used to sell energy or ancillary services at wholesale* are generation assets."[24] In other words, under § 35.152(a), batteries are generation assets *if they are intended to be used to sell energy or ancillary services*

[24] PURA § 35.152(a) (emphasis added).

at wholesale, but not otherwise. The Legislature could readily have provided that *all* energy storage devices are generation assets, but did not.

A plain reading of § 35.152 indicates that energy storage devices are generation assets *when they are intended to be used for commercial purposes in the market.* The focus of § 35.152(a) is on the *intent* of the party *using* the storage device. In this case, Ms. Talavera's uncontroverted testimony shows that AEP Texas does not intend to and will not use its proposed batteries to sell energy or ancillary services,[25] but instead proposes to treat the energy used in the batteries as UFE.[26] In reviewing the UFE treatment of energy for a utility-scale battery installed at Presidio by Electric Transmission Texas, LLC (ETT), the Commission found that "ETT will not buy, sell, or take title to the unmetered, unaccounted-for energy stored in the NAS [sodium sulfur] battery."[27] AEP Texas has proposed the same UFE treatment as ETT did. As a result, AEP Texas will not sell energy or ancillary services and its proposed batteries will not be generation assets under § 35.152.

Intervenors have acknowledged that AEP Texas "would neither purchase nor sell the energy [used in the battery] directly,"[28] but instead proposes to treat it as UFE, just as the energy used for ETT's Presidio battery has been treated since the Commission approved installation of that battery in 2009. Although the Company is open to discussing alternatives for accounting for the energy used in the batteries, AEP Texas' direct testimony confirms that the Company will not buy, sell, or take title to UFE used in its proposed batteries.[29] Because AEP Texas proposes to

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25 AEP Texas Exhibit 4, Rebuttal Testimony of Judith E. Talavera, at 2.

26 AEP Texas Exhibit 3, Direct Testimony of Judith E. Talavera, at 8-9.

27 Docket No. 35994, *Application of Electric Transmission Texas, LLC for Regulatory Approvals Related to Installation of a Sodium Sulfur Battery at Presidio, Texas*, Order at 10 (April 6, 2009).

28 Appeal of Order No. 5 at 8 (Jun. 2, 29017).

29 *See* AEP Texas Exhibit 3, Supplemental Testimony of Judith Talavera at 6-7.

treat the energy used in its proposed batteries as UFE, it will be calculated and allocated to load by ERCOT along with all the other UFE on the system.[30] AEP Texas will play no role in calculating and allocating UFE, and will not buy, sell, or own the energy used in the batteries.

b. AEP Texas' proposed batteries are not generation under 16 TAC § 25.341(10). (Preliminary Order Issue 4(c))

Commission rule 16 TAC § 25.341(10) is the definition of "generation," which includes "assets, activities, and processes necessary and related to the production of electricity for sale." The definition goes on to provide:

> Generation begins with the acquisition of fuels and their conversion to electricity and *ends where the generation company's facilities tie into the facilities of the transmission and distribution system.* (emphasis added)

AEP Texas' proposed batteries are not generation under this definition for two reasons: 1) they do not produce electricity for sale; and 2) they will be located on the distribution grid, not on a generation company's side of a grid interconnection.

The definition of "generation" in 16 TAC § 25.341(10) highlights two distinctions between a storage device used by a transmission and distribution utility for reliability purposes and a storage device used by a generation company to sell energy or ancillary services in the wholesale market. One distinction is whether the storage device is intended to be used to sell energy or ancillary services, as discussed above with respect to PURA § 35.152. That factor is reflected in the reference to "production of electricity for sale" in 16 TAC § 25.341(10). The second distinction relates to the *location* of the storage device – either on the transmission and distribution grid or on the generation company's side of a grid interconnection. AEP Texas' proposed batteries are not generation based on either their intended use or their location on the grid.

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[30] *See* ERCOT Protocol § 11.4.6.

c. AEP Texas' proposed batteries are not wholesale storage subject to 16 TAC § 25.501(m). (Preliminary Order Issues 4(d) and (e))

Commission rule 16 TAC § 25.501(m) applies when a storage facility is separately metered from all other facilities and energy stored in the facility is subsequently sold at wholesale as energy or ancillary services. AEP Texas' proposed batteries will not be separately metered because the energy they use will be treated as unmeasured UFE, nor will the Company sell the energy at wholesale as energy or ancillary services. As a result, rule 16 TAC § 25.501(m) is not applicable.

Rule 16 TAC § 25.501(m) was promulgated in response to SB 943,[31] the legislation that enacted PURA § 35.152, discussed above. The purpose of rule 16 TAC § 25.501(m) was to create rules for storage facilities that are generation assets under § 35.152, *i.e.*, facilities that are intended to be used to sell energy or ancillary services at wholesale. AEP Texas' proposed batteries are not subject to PURA § 35.152 for the reasons previously discussed, nor are they subject to rule 16 TAC §25.501(m), which was promulgated in response to that statute.

Rule 16 TAC § 25.501(m) should be viewed in the context of rule 16 TAC § 25.501 as a whole. That rule, titled "Wholesale Market Design for the Electric Reliability Council of Texas," governs the ERCOT wholesale market and addresses factors such as bilateral markets, day-ahead markets, congestion pricing and rights, and nodal and zonal pricing. These provisions all relate to operation of and pricing in the ERCOT market, and rule 16 TAC § 25.501(m) similarly relates to storage facilities that participate in that market. AEP Texas' proposed batteries will not participate in the market because the energy they use will be treated as UFE. As a result, the market rules in rule 16 TAC § 25.501 have no applicability to those batteries.

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[31] See Project No. 39917, *Rulemaking on Energy Storage Issues*, Order Adopting Amendments to § 25.192 and § 25.501 as Approved at the March 7, 2012 Open Meeting, at 41 (March 30, 2012).

The wholesale market design set out in rule 16 TAC § 25.501(m), referred to in Preliminary Order Issue 4(e), confirms that rule 16 TAC § 25.501(m) does not apply to AEP Texas' proposed batteries. The rule 16 TAC § 25.501(m) market design provides that wholesale storage shall be settled as load except that it shall be based on nodal prices and shall not be subject to various retail and ERCOT charges. These are all pricing provisions for storage devices that buy and sell energy in the wholesale market. None of these provisions apply to energy that is treated as UFE, as the energy used in AEP Texas' batteries will be, which is outside the market and is calculated and allocated to load by ERCOT in an entirely different way under ERCOT Protocol § 11.4.6.

d. The Company will not purchase or own the energy used in its proposed batteries. (Preliminary Order Issues 4(f) and (g))

AEP Texas will not purchase or own the unaccounted-for energy used in its proposed batteries. UFE by nature is unmetered energy that is "unaccounted for" and is outside the ERCOT market. ERCOT defines UFE as "[t]he difference between total Load for each Settlement Interval, adjusted for applicable Distribution Losses and Transmission Losses, and total ERCOT generation."[32] In other words, UFE is the "gap" between metered generation and energy usage plus estimated losses.[33] It arises from a variety of factors, primarily errors in the calculation of losses and other unmetered energy.[34] ERCOT calculates all UFE on the system and allocates it to load under Protocol § 11.4.6. Intervenors recognize these basic facts about

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[32] ERCOT Protocol § 2.1 (definition of Unaccounted for Energy). ERCOT's Protocols can be accessed at http://www.ercot.com/mktrules/nprotocols/current.

[33] *See* the Supplemental Direct Testimony of AEP Texas witness Judith E. Talavera at 5 and EXHIBIT JET-1S, pp. 2-3 (ERCOT's 2015 UFE Analysis).

[34] *Id.*

UFE.[35] Under Protocol § 11.4.6, AEP Texas plays no part in ERCOT's calculation and allocation of UFE.

The Commission specifically addressed UFE in Docket No. 35994, a case in which several of the Intervenors challenged ETT's proposal to install a utility-scale battery in Presidio. In a section of its Order titled "Propriety of ETT's Battery Ownership," the Commission made the following finding concerning treatment of the energy used in ETT's battery as UFE:[36]

> 49. In conformity with ETT's application, under ETT's Presidio Reliability Improvement Project, *ETT will not buy, sell, or take title to the unmetered, unaccounted-for energy* stored in the NaS [sodium sulfur] battery. (emphasis added)

AEP Texas recognizes that the Docket No. 35994 order states it is not precedential with respect to treatment of a battery as a transmission asset and is based on reliability facts unique to the Presidio area.[37] However, AEP Texas is proposing the same UFE treatment in this case that the Commission approved in Docket No. 35994. The Commission's finding in Docket No. 35994 confirms that AEP Texas will not purchase or own the energy used in its proposed batteries. Whether or not the Commission's finding is precedential, it acknowledges the simple fact that a utility does not purchase or own UFE stored in its battery.

Staff witness Mark T. Bryant has proposed that AEP Texas either purchase the energy used in its proposed batteries or issue a Request for Proposal for third party reliability solutions using batteries or other technologies.[38] However, these proposals do not offer practical solutions to the reliability issues at Woodson and Paint Rock for several reasons. First, AEP Texas is not

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35 Joint Motion for Summary Decision at 2 (footnote 5) and 7.

36 Docket No. 35994, Order at 10.

37 Docket No. 35994, Order at 5, 12.

38 Staff Exhibit 1, Direct Testimony of Mark T. Bryant, Ph.D., at 7, 12-13.

aware of any third party providing the battery services suggested by Mr. Bryant.[39] Second, under PURA § 39.105(a), AEP Texas can only purchase energy for its own use. It is not clear under this provision whether AEP Texas could purchase energy for its batteries and later discharge the energy back to the grid to prevent outages in Woodson or Paint Rock. Third, a third party providing battery services to AEP Texas might become a utility itself under PURA,[40] and in any event the status of such a provider would be uncertain. Mr. Bryant himself acknowledges that his proposal may not be compatible with ERCOT market design[41] and Luminant witness Ms. Frazier also questioned the legality of arrangements like those proposed by Mr. Bryant.[42] Finally, AEP Texas is responsible for the reliability of its grid and would be reluctant to contract that responsibility to a third party.[43] In contrast to Mr. Bryant's uncertain approach, treating energy used in a utility battery as UFE has previously been addressed by the Commission, and therefore provides AEP Texas a workable alternative to more expensive traditional distribution solutions for the issues at Woodson and Paint Rock.[44]

IV. Certificate of Convenience and Necessity (Preliminary Order Issue 5)

Preliminary Order Issue No. 5: Does TNC need to obtain a certificate of convenience and necessity (CCN) for the proposed facilities under PURA § 37.051 and 16 TAC § 25.101?

Short Answer: AEP Texas does not need to obtain a CCN for the proposed batteries because they will be installed on the Company's distribution system.

AEP Texas does not need to obtain a CCN for the proposed batteries because the Commission's CCN rule, 16 TAC § 25.101(c)(4), provides that a CCN or CCN amendment is

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39 Tr. at 38 (Jun. 21, 2017).

40 Tr. at 38; *see* PURA § 31.002(6) (definition of electric utility).

41 Staff Exhibit 1, Direct Testimony of Mark T. Bryant, Ph.D., at 13.

42 Tr. at 163.

43 Tr. at 38 (expressing concern about operational issues).

44 *See* Tr. at 82-83.

not required for the construction or upgrading of distribution facilities in a utility's service area. The undisputed evidence establishes that AEP Texas is proposing to install the batteries as distribution facilities within its service territory,[45] so no CCN or CCN amendment is required.

V. Unaccounted-for Energy (UFE) (Preliminary Order Issues 6 and 7)

Preliminary Order Issue No. 6: Is it appropriate to treat energy flows associated with TNC's proposed storage facilities as unaccounted-for energy? If not, how should the energy flows associated with the storage facilities be treated?

Preliminary Order Issue No. 7: In order to comply with PURA and the applicable Commission rules, what are the energy-flow metering requirements, if any?

Short Answer: It is appropriate to treat the energy flows associated with AEP Texas' proposed batteries as UFE, which does not need to be metered.

It is appropriate to treat the energy flows associated with AEP Texas' proposed batteries as UFE. The proposed batteries will provide substantial cost savings to customers compared to traditional distribution solutions, and treating the related energy flows as UFE provides an effective method for addressing those flows. The Commission has previously addressed treating energy used in the Presidio battery as unmetered UFE, so that treatment provides a known solution compared to other untested approaches. AEP Texas' proposed batteries' energy usage is very small, and no basis has been shown for speculative concerns about market impacts resulting from reductions in power prices.

As discussed above, in Docket No. 35994 the Commission addressed the energy used in ETT's Presidio battery, recognizing that it would be unmetered and treated as UFE.[46] The Commission also found that "AEPSC submitted a protocol revision request that will clarify that energy flows associated with charging and discharging the battery will be treated like substation

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45 AEP Texas Exhibit 3, Supplemental Testimony of Judith E. Talavera, at 2.

46 Docket No. 35994, Order at FOF 49.

equipment and as a result, will not be measured for settlement purposes."[47] After the Commission's ruling, ERCOT Protocol § 10.3.3.1 was revised to provide that energy associated with the Presidio battery, like the energy consumed by substation facilities already addressed by that Protocol, did not need to be metered.[48] As is the case with energy used by substation facilities (generally known as station power), accounting for energy used by a utility battery through unmetered UFE provides an effective and efficient method of addressing energy used by utility facilities to support the electric grid.[49] In contrast, alternatives to treating the energy as UFE are uncertain at best.

Luminant and Staff witnesses raised concerns about the market impacts of utility batteries, but provide little factual support for such impacts and do not consider the customer benefits of such batteries. They have not rebutted AEP Texas' evidence showing nearly $8 million in savings from its two proposed batteries compared to traditional distribution solutions,[50] nor do they acknowledge the potential for utility batteries to provide substantial customer savings.

Staff witness Mr. Bryant recognizes that AEP Texas' proposed batteries by themselves are not likely to have significant market impact, but expresses concern about the prospect of widespread future deployment of such batteries.[51] Of course, if additional utility batteries were deployed, presumably those additional batteries would multiply the nearly $8 million in customer savings from AEP Texas' proposed batteries. However, the energy usage of AEP

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47 *Id.* at FOF 48.

48 AEP Texas Exhibit 3, Supplemental Testimony of Judith E. Talavera, at 6 and Exh. JET-2S.

49 AEP Texas Exhibit 6, Rebuttal Testimony of Charles R. Brower III, at 6-8.

50 AEP Texas Exhibit 4, Rebuttal Testimony of Judith E. Talavera, at 3; AEP Texas Exhibit 5, Direct Testimony of Charles R. Brower III, at 12-13, 15, Exh. CRB-6.

51 Staff Exhibit 1, Direct Testimony of Mark T. Bryant, Ph.D., at 10-11.

Texas' two batteries will be *less than 1/8th of a single typical residential customer*,[52] so there is substantial reason to doubt that broader deployment of such batteries would impact the market.

Moreover, Mr. Bryant's concern about widespread battery deployment is based on forecasts that include both integrated utilities and substantial amounts of non-utility, customer-owned storage.[53] Integrated utilities providing both power supply and delivery service do not exist in ERCOT, except for certain cooperatives and municipally-owned utilities. Nor will ERCOT utilities install non-utility, customer-owned storage. As a result, AEP Texas' proposal for distribution-only batteries is far narrower than the scope of battery deployment discussed by Mr. Bryant,[54] and the opportunities for such distribution battery deployment in ERCOT are also more limited than Mr. Bryant suggests.

Finally, Luminant and Staff suggest that treating the energy used in AEP Texas' proposed batteries as UFE could disrupt accounting for the ERCOT market. Luminant witness Ms. Frazier argues that UFE is a hindrance to ERCOT's fulfillment of the directive in PURA § 39.151(a)(4) to ensure that electricity production and delivery are accurately accounted for among the generators and wholesale buyers and sellers.[55] However, ETT's Presidio battery, which is more than three times the size of AEP Texas' two proposed batteries combined, has been in operation for years without significant impact on system-wide UFE or on accounting for the ERCOT market.[56] As noted above, AEP Texas' two proposed batteries combined will use an amount of

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52 AEP Texas Exhibit 6, Rebuttal Testimony of Charles R. Brower III, at 5.

53 Staff Exhibit 1, Direct Testimony of Mark T. Bryant, Ph.D., at 8-9; AEP Texas Exhibit 6, Rebuttal Testimony of Charles R. Brower III, at 3-4.

54 *Id.*

55 Luminant Exhibit 1, Direct Testimony of Amanda J. Frazier, at 10.

56 See Docket No. 35994, Order at 2 (Presidio battery is 4.8 MW); AEP Texas Exhibit 5, Direct Testimony of Charles R. Brower III, at 11, 15 (Woodson battery is 1 MW; Paint Rock battery is 500 Kw (.5 MW)). Note that ERCOT's 2015 UFE analysis attached to AEP Texas Exhibit 3, Supplemental Testimony of Judith E. Talavera, as Exh. JET-1S, makes no mention of the Presidio battery.

energy equivalent to 1/8th of a typical residential customer.[57] As a result, there is little basis for concluding that even multiple battery deployments would significantly impact market accounting. In any event, the small likelihood and scope of any such impact should be evaluated in light of the substantial customer benefits that utility batteries could provide.

VI. Conditions (Preliminary Order Issue 8)

Preliminary Order No. 8: If ultimately determined to be legal and appropriate, what conditions, if any, should the Commission place on TNC's ownership and operation of the proposed storage facilities?

Short Answer: No conditions are justified for AEP Texas' ownership and operation of the proposed batteries.

AEP Texas does not believe any conditions are necessary or appropriate for its ownership and operation of the proposed batteries. The evidence establishes that the batteries offer cost savings of nearly $8 million compared to traditional distributions solutions,[58] while the cost of energy used in the batteries and included in UFE is truly miniscule -- $18 per year according to Staff witness Mr. Bryant.[59] ETT's battery at Presidio has been in operation since 2009 with its energy usage treated as UFE. No reason has been shown to place conditions on AEP Texas' proposed batteries.

Staff witness Mr. Bryant has suggested that the Commission pursue a rulemaking or place limitations on utility batteries.[60] Given the large potential cost savings and small energy usage associated with AEP Texas' proposed batteries, Mr. Bryant has not justified limitations on such batteries. A rulemaking could be helpful to consider broader battery issues, but should not

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57 AEP Texas Exhibit 6, Rebuttal Testimony of Charles R. Brower III, at 5.

58 AEP Texas Exhibit 4, Rebuttal Testimony of Judith E. Talavera, at 3.

59 Staff Exhibit 1, Direct Testimony of Mark T. Bryant, Ph.D., at 5.

60 Staff Exhibit 1, Direct Testimony of Mark T. Bryant, Ph.D., at 12-13.

affect the Commission's resolution of this case to address the needs of customers in Woodson and Paint Rock.

CONCLUSION

AEP Texas' proposed batteries will improve reliability at Woodson and Paint Rock and provide substantial cost savings compared to traditional distribution solutions. No basis has been shown to prevent the deployment of such beneficial devices.

Respectfully submitted,

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DATED: July 7, 2017.

Certificate of Service

I certify that a true and correct copy of the foregoing document was served on all parties this 7th day of July, 2017.

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Kerry McGrath