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**SOAH DOCKET NO. 473-24-12812
PUC DOCKET NO. 56165**

APPLICATION OF AEP TEXAS INC.	§	BEFORE THE STATE OFFICE
FOR AUTHORITY TO CHANGE	§	
RATES	§	OF
	§	
	§	ADMINISTRATIVE HEARINGS

DIRECT TESTIMONY AND EXHIBITS
OF DAVID SPOTTS ON BEHALF OF
SMT TX MANAGEMENT LLC

May 15, 2024

**SOAH DOCKET NO. 473-24-12812
DOCKET NO. 56165**

**DIRECT TESTIMONY AND EXHIBITS OF
SMT TX MANAGEMENT LLC**

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
I. INTRODUCTION	1
II. PURPOSE OF TESTIMONY	2
III. SMT EXPERIENCE	3
IV. WDS TARIFF ANALYSIS	4
V. APPROPRIATENESS OF INCLUDING WDS TARIFF IN THIS PROCEEDING	9
VI. SUMMARY AND CONCLUSIONS	12

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David Spotts. My business address is 3437 Iris Ct., Boulder, CO 80304

Q. PLEASE STATE YOUR OCCUPATION AND BY WHOM YOU ARE EMPLOYED.

A. I am a principal of SMT Energy (SMT), an ERCOT developer and operator of distributed energy resources. SMT currently owns and operates 100 megawatts (MW) of battery energy storage systems (BESS) in operation, in AEP Texas, Inc ("AEP TX") territory, in the form of (10) 10MW distribution voltage BESS with an additional 1.6 gigawatts ("GW") of both distribution and transmission voltage BESS assets to be deployed over the following 36 months.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE

A. I have 20 years of executive management experience in dispatchable generation, primarily solar, wind and battery storage. SMT Energy is my third entrepreneurial endeavor in the solar and energy storage industry. In 2006 I founded and led Solar Engineering Group, the first engineering firm in the United States to offer strictly photovoltaic engineering services. In 2010 I founded Scout Solar, an Arizona based solar construction company which owned and operated 6MW of C&I solar projects, this company is still in operation today. In between my entrepreneurial endeavors I have held positions such as SVP of Engineering and Director of Project Management for Sunpin Solar and AES, where I oversaw the interconnection, financing, development, construction and operation of 1.2GW's of utility scale solar projects.

A. Of relevance to this case, SMT Energy is the 7th largest asset owner of distributed energy storage projects in the nation with (10) 10MW projects currently in operation in AEP TX territory. Of which, I have been deeply involved in the development and operation of these distributed energy resources (“DESR”)’s as well as our future pipeline.

Q. **ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING**

A. SMT TX Management LLC.

II. PURPOSE OF TESTIMONY

Q. **WHAT ISSUES ARE YOU ADDRESSING.**

A. AEP TX’s proposed rate schedule for Wholesale Distribution Service Battery Energy Storage (“WDS”).

Q. **PLEASE DESCRIBE YOUR UNDERSTANDING OF AEP TX’S PROPOSED WDS TARIFF.**

A. My understanding is that AEP has proposed a WDS tariff for Battery Energy Storage Systems (“BESS”) as a part of this proceeding. That tariff proposal can be found as Attachment JIJ-5 to Jennifer L. Jackson’s Direct Testimony. That tariff would include: (1) a customer charge of \$21.27; (2) a metering charge of \$183.15 per month; and (3) a distribution system charge of \$2.40 per Non-Coincident Peak (“NCP”) kW billing demand for all BESS resources receiving distribution service below 60 kV.

Q. **WHAT IS YOUR RECOMMENDATION REGARDING AEP’S PROPOSED WDS TARIFF FOR BESS RESOURCES.**

A. I recommend that AEP TX’s proposed WDS tariff for BESS resources be rejected, the proposed tariff will cause immediate and irreparable harm to distribution BESS asset owners and those with projects in development. If a tariff must be adopted, we ask that it

be considerate of the actual costs incurred by the transmission and distribution service providers (“TDSP”)’s in the maintenance of the distribution systems associated with DESR’s, that it be considerate of the substantial amount of money paid up front by distribution BESS owner operators for network upgrades, that it be considerate of the testing requirements from ERCOT to qualify for ancillary services and that in no instance, the monthly tariff charging costs should exceed \$2,500 per month per asset.

III. SMT EXPERIENCE

Q. PLEASE DESCRIBE YOUR EXPERIENCE WITH BESS RESOURCES AT DISTRIBUTION VOLTAGE INCLUDING AT SMT ENERGY.

A. SMT Energy is the 7th largest asset owner of BESS in the United States, with (10) 10MW projects currently in operation in AEP TX. We lead every aspect of the operation of these resources from day to day maintenance to commercialization.

Q. PLEASE DESCRIBE WHAT SMT TX MANAGEMENT LLC AND SMT ENERGY LLC DO IN THE ENERGY MARKET.

A. SMT Energy is a battery energy storage developer and owner who develops, finances, engineers, procures, constructs, operates, maintains and commercializes distribution voltage battery energy storage projects.

Q. PLEASE DESCRIBE THE IMPORTANCE OF SMT OWNED RESOURCES FOR ENERGY MARKETS AND SPECIFICALLY ERCOT.

A. SMT BESS assets are strategically located across the AEP TX market near major load pockets and high renewable areas to help provide grid stability to the ERCOT transmission system. DESR’s provide both energy and ancillary service value to the wholesale market and assist in relieving transmission overloads as applicable during

periods of congestion The assets also correlate well to ERCOTs robust demand outlook and act as a stability resource to manage renewable generation intermittency and peak demand energy needs.

IV. WDS TARIFF ANALYSIS

Q. PLEASE EXPLAIN WHAT A BESS RESOURCE AT DISTRIBUTION VOLTAGE IS.

A. Distribution BESS resources are under 10MW, interconnected by express feeder to an existing AEP TX owned substation at the existing distribution voltage. Distribution battery energy storage systems benefit not just the local area in which they are located but rather the entire transmission system through the provision of ancillary services to ERCOT.

Q. PLEASE EXPLAIN HOW A BESS RESORUCE OPERATES ON THE DISTRIBUTION SYSTEM.

A. A distribution voltage battery energy storage system charges during periods of high excess capacity on the system and discharges during peak demand conditions with limited reserve capacity for utilization, historically in the form of energy of ancillary services capacity.

Q. PLEASE DESCRIBE THE COST ASSOCIATED WITH CONSTRUCTION AND MAINTENANCE OF A BESS RESOURCE AT DISTRIBUTION VOLTAGE.

A. Costs for a 10MW/10MWH BESS project range from \$6-8M in capital expenditures with annual operating budgets of \$200-\$250k per project. Distribution BESS resources are equity financed, fully merchant assets which are highly sensitive to increasing operational expenditures (such as charging tariffs).

Q. DOES AEP TX'S PROPOSED WDS TARIFF FOR BESS RESOURCES AFFECT THE VIABILITY OF EXISTING AND FUTURE BESS PROJECTS AT DISTRIBUTION VOLTAGE?

A. Yes, AEP TX's proposed tariff is harmful to existing project economics and future BESS projects will be at risk given the negative outlook to increasing charging transmission costs at the distribution voltage level. The proposed tariff will cause existing and future BESS projects to become uneconomical, thereby causing less BESS projects to be in operation and ultimately reducing grid stability, increasing volatility, and increasing costs to consumers.

Q. CAN YOU PLEASE DESCRIBE IN MORE DETAIL THE FINANCIAL HARM THIS PROPOSED TARIFF WOULD DO TO CURRENT AND FUTURE PROJECTS IN AEP'S SERVICE TERRITORY.

A. Yes, the proposed tariff would cause financial harm to current and future DESR's in the following ways;

(1) On average, SMTs battery energy storage resources have the potential to earn between \$500,000-\$1.0M in revenue per year. AEP TX's tariff as currently proposed would cost a distribution voltage BESS operator \$3.4M per year (2.5–3.5X, current pricing). The tariff as currently proposed would instantly making any project impossible to continue to operate as originally intended.

(2) Since the rate is based on NCP, the proposed tariff charges would force distribution BESS operators to charge the batteries much more slowly, this is harmful for three reasons;

- a. Since it takes longer to charge the battery, it exposes the operator to longer term price volatility in the market, it prevents the operator from being able to re-charge quickly after meeting ancillary service obligations and maintain a high state-of-charge (“SOC”) in order to take advantage of real time opportunity, leading to lower revenue and the inability to hit return thresholds necessary to finance fully merchant energy storage assets.
- b. Taking 6-10 hours to re-charge the battery prohibits the operator from ensuring a high SOC. The result will be distribution BESS with lower SOC’s which means less reliability for ERCOT and consumers.
- c. The proposed tariff is a dis-incentive in that it forces operators to retract all ancillary services in the charge direction including PFR. PFR as service battery operators are not compensated for by ERCOT but are required to participate. Under the proposed tariff, one PFR event requiring to ramp quickly at 10MW would penalize the operator for a full year. Thus, participation in PFR would be limited, as would participation in voltage regulation down (reg down) ancillary services. The proposed tariff has large consequences on the full offering of the distribution energy storage resource.

(3) Lastly, distribution BESS are required by ERCOT to qualify for ancillary services prior to achieving commercial operation. In doing so, part of the testing requires the project to ramp quickly which artificially inflates the projects peak demand, which is then used to set the tariff price for the next 12 months. If the tariff is adopted, to be fair, there must be another tariff used for “On-Test” procedures during which time the peak demand

will not be used to set the charging price for the next 12 months. Failure to do so will result in an immediate halt of new projects entering the AEP TX market.

Q. WOULD AEP TX'S PROPOSED WDS TARIFF EVEN ACTUALLY RECOVER THE COST ASSOCIATED WITH SERVICE TO BESS RESOURCES AT DISTRIBUTION VOLTAGE.

A. The amount of equipment necessary to interconnect a distribution voltage BESS is minimal. If you examine the actual costs associated with maintaining service to the BESS resources the costs to be recovered are minor compared to the up-front payments made by SMT and other distribution BESS developers to AEP TX for interconnection upgrades. In 2023, SMT Energy paid a one-time fee of \$4,982,112 to AEP TX for network upgrades needed to facilitate the interconnection of our (10) 10MW DESR's (~\$498k per project). The WDS tariff as proposed would impose an annual cost of \$3,412,952 (~\$341k per project). The projected life cycle of a distribution BESS project is 20 years, in which time AEP TX would accumulate \$68,259,040 as currently proposed (13.7X the initial costs paid by SMT).

Q. WHAT ARE THE ACTUAL COSTS ASSOCIATED WITH INTERCONNECTING AND MAINTAINING SERVICE TO BESS RESOURCES AT DISTRIBUTION VOLTAGE.

A. SMT paid millions of dollars up front for all network upgrades inside the substation fence as well as the distribution pole/conductor/equipment necessary to interconnect the distribution voltage BESS projects in AEP TX territory. We should look at this as an engineering / operations question since the amount of physical equipment necessary to interconnect a DG is extremely limited. Generally, this included (6) poles, miscellaneous

equipment and conductor ranging from 100-1,200' in overall length. SMT paid for this equipment up front, as well as the labor for AEP TX to install it, but all of it will continue to be owned by AEP TX, and, with exception of acts of god, will never need to be replaced / upgraded / updated and/or modified in the future. We reached out to AEP TX approved contractors who have direct experience maintaining this exact equipment to determine what they would charge to maintain such a limited amount of distribution service equipment and the response was \$3,000 - \$5,000 per year.

Q. WHAT HARM DO YOU SEE THE REDUCTION OR ELIMINATION OF BESS RESOURCES AT DISTRIBUTION VOLTAGE CAUSING.

A. Reducing or eliminating BESS recourse at distribution voltage is harmful to;

AEP TX – a BESS is a reliable load customer for AEP TX. AEP is being compensated for delivering auxiliary power to the BESS per currently approved tariffs. SMT is spending around \$180,000 per year on auxiliary power. \$3.6M over the 20-year projected project lifecycle.

TX State Comptroller - SMT has paid approximately \$2.5M in Sales and Use Tax.

ERCOT – distribution BESS provide system wide benefits in the form of ancillary services and assist in relieving transmission overloads during period of congestion. The assets act as stability resources to manage renewable generation intermittency and peak demand needs.

TX Citizens and Ratebase – Winter Storm Uri was a direct contributor to the cause of death of hundreds of Texans. With the ever-increasing amount of intermittent power generation from renewable resources, it is imperative BESS remain on the grid to maintain the stability, health, and safety of the community.

Q. DO YOU FIND AEP'S PROPOSED WDS TARIFF TO BE DISCRIMINATORY AGAINST BESS RESOURCES AT DISTRIBUTION VOLTAGE AND IF SO WHY.

A. Yes, DESR's are being singled out and treated differently than other resources at transmission voltage including BESS resources at transmission voltage. Transmission generation projects, including BESS, do not have to pay a cost in aid of construction ("CIAC") or a charging tariff. Thus, if the subject is imposed, DG BESS projects will be paying two fees other resources are not required to in the form of both the CIAC and a charging tariff.

Q. WHAT IS YOUR RECOMMENDATION REGARDING AEP'S PROPOSED WDS TARIFF.

A. I recommend that the Commission reject AEP's proposed WDS tariff for BESS at distribution voltage in this proceeding. If a tariff must be imposed, it should be equal to the actual cost to maintain service for distribution BESS projects not to exceed \$2,500 per month.

V. APPROPRIATENESS OF INCLUDING WDS TARIFF IN THIS PROCEEDING

Q. WAS IT APPROPRIATE FOR AEP TX TO INCLUDE A PROPOSED WDS TARIFF IN THIS PROCEEDING.

A. No, it was not for two reasons.

Q. WHAT IS THE FIRST REASON.

A. AEP TX along with SMT McAllen LLC, an affiliated entity of SMT TX Management LLC, and other interested parties agreed to abatement in PUCT Docket No. 53267 on October 27, 2022, pending the resolution of cost recovery for DESRs in PUCT Docket

No. 54224.¹ The proceeding in PUCT Docket No. 53267 was related to the exact WDS tariff AEP is seeking approval for as a part of this proceeding. Further, when AEP later requested to lift abatement in PUCT Docket No. 53267 the State Office of Administrative Hearings (“SOAH”) Administrative Law Judge (“ALJ”) in that proceeding denied AEP TX’s request citing the pending resolution of PUCT Docket No. 54224 related to cost recover for DESRs.

Q. WHY IS THIS SIGNIFICANT.

A. AEP TX is attempting to bypass SOAH’s original denial of lifting abatement to resolve the WDS tariff rate in PUCT Docket No. 53267 by trying to get approval of its WDS tariff in this proceeding. That proceeding is the appropriate venue to resolve the WDS tariff issue and not AEP TX’s current rate case.

Q. WHAT IS THE SECOND REASON?

A. Currently the Commission has a docket, PUCT Docket No. 54224, in which the Commission is seeking to adopt a rule for cost recovery for service to DESRs. That docket will create a new rule for how utilities like AEP TX can recover costs related to DESRs. Thus, prior to that rule’s adoption this proceeding should not involve resolution of the WDS tariff.

Q. WHY SHOULD THIS PROCEEDING NOT INVOLVE RESOLUTION OF THE WDS TARIFF?

A. This proceeding should not involve approval of the WDS tariff given the pending outcome of PUCT Docket No. 54224. There is a distinct possibility that the rule adopted by the Commission could require alterations to or make AEP TX’s WDS tariff proposed

¹*Application of AEP Texas Inc. for Approval of a Wholesale Distribution Service Distributed Generation Energy Storage Tariff*, Docket No. 53267, Agreed Motion to Abate Proceeding (Oct. 27, 2022).

in this proceeding illegal under Commission rules. Further, AEP TX is unfairly discriminating against BESS resources by forcing them to litigate in multiple proceedings for a proposed rate that could be made illegal by a Commission rulemaking. This includes ignoring a SOAH ALJ order denying the lifting of abatement in Docket No. 53267 and instead trying to re-litigate the WDS tariff in this docket instead. SMT TX Management LLC and other SMT Energy subsidiaries have had to incur significant costs to prevent AEP TX's abuse of separate rate proceedings and urges the Commission to prevent AEP TX's from ignoring valid SOAH orders to push through its WDS tariff.

Q. WHAT IS YOUR RECOMMENDATION ON THE APPROPRIATE COURSE OF ACTION TO RESOLVE THIS ISSUE?

A. The appropriate course of action for AEP TX would be to allow the rulemaking in PUCT Docket No. 54224 to be resolved so that there is a uniform standard for cost recovery related to DESRs. Then AEP TX and the other parties in PUCT Docket No. 53267 can request abatement of that proceeding be lifted to resolve the WDS tariff rates under the new framework adopted by that rulemaking.

Q. WOULD THE COURSE OF ACTION DESCRIBED ABOVE HARM AEP IN ANY WAY.

A. No, as AEP TX has the opportunity to request rates be applied on a looking back basis to the day AEP TX filed their initial application in PUCT Docket No. 53627 on February 24, 2022. Further, PUCT Commissioner Jimmy Glotfelty at the May 2, 2024 PUCT Open Meeting instructed Commission Staff to prioritize PUCT Docket No. 54224 related to cost recovery and finalize the rulemaking in an efficient and timely manner.² Thus, AEP

² See, Commission Open Meeting, Agenda Item No. 28 at 42:27 – 46: 12 (May 2, 2024).

TX both can fully recover rates relating back to February 24, 2022 and will not have to wait long for finalization of a new rule for cost recovery for service to DESRs.

VI. SUMMARY AND CONCLUSIONS

Q. PLEASE PROVIDE A SUMMARY OF YOUR RECOMMENDATION REGARDING AEP'S PROPOSED WDS TARIFF.

- A. AEP TX's proposed WDS tariff should be rejected because otherwise it will;
- a. Immediately and irreparably harm all existing distribution BESS projects.
 - b. Immediately halt all development and investment into distribution BESS projects.
 - c. Cost a single distribution BESS project 2.5-3.5X more than it would generate in revenue on an annual basis.
 - d. Unfairly and excessively compensate AEP TX for maintenance of the distribution equipment necessary to interconnect distribution BESS.
 - e. Cause existing operators of DESR's to charge very slowly and rarely maintain a high SOC.
 - f. Reduced grid stability.
 - g. Increased grid volatility which will increase costs to consumers.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

- A. Yes.