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**PROJECT NO. 54999**

**TEXAS ENERGY FUND**

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**PUBLIC UTILITY COMMISSION  
OF TEXAS**

**COMMENTS OF  
ALISON SILVERSTEIN CONSULTING**

**EXECUTIVE SUMMARY**

These comments address only the Texas Backup Power Packages (TBPP) portion of the Texas Energy Fund topics.

There are over 20,000 critical facilities in Texas (including medical, community resilience centers, senior living centers, rural gas stations, fire stations, law enforcement, food banks, water and wastewater treatment facilities, and more), so the rules for how to allocate grants versus loans will determine how many communities and facilities receive TBPPs.

- The criteria for loans versus grants should be designed to maximize the number of communities and facilities that receive backup power. The Commission should award grants for the full \$500/kW of TBPP capacity and complementary loans for procurement and operation.
- Since the average Texas critical facility load is under 1MW (subject to actual survey by the selected TBPP research facility), give grant funds to cover procurement of at least the first 500 kW or more of any applicant's load, and make low-cost loan funds available to cover additional TBPP procurement up to the 2.5 MW limit specified in PURA §34.0204(4).
- Provide qualification criteria that does not over-limit what community facilities can receive TBPP funds.
- Grants or loans should be limited to actual facility load (subject to the efficient combination of standard TBPP units), and not be allowed to fund significantly oversized or redundant backup capacity. Do not award TBPP funding for capacity over 2.5 MW.
- This program is intended to protect Texas communities, not make money. The maximum TBPP loan rate should be three percent. Smaller qualifying facilities should be offered automatic loans to cover the first three years of package maintenance and refueling.
- Build contract language into all grants and loans warning that violation of the "no energy or ancillary services sale" provision could cause loss of funding. Include the provision that sale of energy or ancillary services applies not only to actions of the facility owner but also participation in any commercial aggregation or virtual power plant.
- Extensive functionality and capabilities will be required to administer the TBPP program, and extensive pre-application and application guidance will be required.
- Limit TBPP behind-the-meter uses to assure that the facilities are always able to serve their purpose of providing two days of islanded backup power to the facility in the event of a local grid failure. But allow ERCOT to electronically call on TBPPs to island for up to four hours in the event of an ERCOT grid emergency, and pay the facilities for this grid support.

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**COMMENTS OF  
ALISON SILVERSTEIN CONSULTING**

COMES NOW Alison Silverstein Consulting, an independent energy advisor, to thank the Commission for this extended opportunity to address issues in this project. These comments address only the Texas Power Promise (TPP) and Texas Backup Power Packages (TBPP) portion of the Texas Energy Fund (TEF) topics and the questions and comments covered in the September 21, 2023 workshop.

The September 21 workshop agenda asks, “What are the essential components for rules establishing procedures for grants and loans under this program?” At the same time, Commission Staff acknowledge that some of the issues to be covered in the rulemaking, such as criteria to be used for making grants or loans, should be recommended by the TBPP Advisory Commission and can’t be resolved at this time. The recommendations below apply to both those issues subject to immediate rulemaking and those subject to later Advisory Commission input.

**Workshop agenda questions**

**1) How should the PUC discern between projects eligible for loans versus projects eligible for grants?**

There are over 20,000 critical facilities in Texas (including medical, community resilience centers, senior living centers, rural gas stations, fire stations, law enforcement, food banks, water and wastewater treatment facilities, and more), so the rules for how to allocate grants versus loans will determine how many communities and facilities receive TBPPs. Since the purpose of the TBPP program is to support the Texas Power Promise of community

resilience, the criteria for loans versus grants should be designed to maximize the number of communities and facilities that receive backup power.

PURA §34.0205(b) says a grant may not exceed \$500/kW of TBPP capacity; PURA §34.0205(c) says loans may be provided for procurement and operating costs. The Commission should award grants for the full \$500/kW of TBPP capacity, particularly for the first five years of program operation, since package costs are unlikely to fall due to vendor competition or economies of scale for several years.

As a general rule, it appears that smaller and more rural communities have less cash and greater resilience needs than larger communities, and non-profit- and government-owned facilities have less cash and ability to fund backup power than private entities. Some operational rules to implement these ideas include:

- Since the average Texas critical facility load is under 1 MW (subject to actual survey by the selected TBPP research facility), give grant funds to cover procurement of at least the first 500 kW of any applicant's load, and make low-cost loan funds available to cover additional TBPP procurement up to the 2.5 MW limit specified in PURA §34.0204(4).
- Grants or loans should be limited to actual facility load or critical load, and not be allowed to fund significantly oversized or redundant backup capacity. Funding TBPP capacity beyond a qualifying facility's actual load (respecting recent peak load increases driven by unusual sustained heat and cold levels) and the minimum oversizing associated with using multiple TBPP units\* would contravene the purpose of the statute because it would reduce the amount of funds and TBPP capacity available for other facilities and communities.
- The break between grants and loans for corporate for-profit applicants should be higher (perhaps 1 MW) than for non-profits and government-owned TPP-qualifying facilities, because the corporate entities have access to more alternate funding opportunities (e.g., corporate profits, municipal tax breaks and federal grants) and resources than smaller, local not-for-profit entities.
- TBPP qualifying facilities should receive grant money for TBPP procurement and low-cost loans to fund upgrades to the facility to improve its energy efficiency (since that

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\* The statute directs the TBPP research entity to design multiple sizes of interoperable TBPPs to enable the combined use of multiple packages into configurations that support the wide variety of critical facility sizes and needs across Texas. Therefore many facilities will end up receiving more total TBPP capacity than each facility's actual load. TBPP design implementation should aim to minimize this oversizing to lower ongoing operating and fuel costs for facility owners and preserve TPP-TEF capital funds to maximize the number of facilities and communities served.

could lower the size and cost of the TBPP required) or necessary facility upgrades to enable TBPP installation. The Commission could also modify utility energy efficiency programs to direct them to prioritize efficiency improvements to Texas Power Promise-qualifying facilities.

- Smaller TBPP qualifying facilities should be offered automatic loans to cover the first three years of package maintenance and refueling.
- The Commission should limit how much of the TBPP funds are awarded initially. Assuming the Commission has directed the research entity to survey (or at least estimate) the location, numbers, sizes and types of TPP-qualifying facilities across the state, these limits might include awards by geographic regions, awardee size, and critical facility type, to assure that the funds get allocated fairly across the state and community needs and that TBPP-TEF funds don't get used up too quickly.

## **2) What loan terms should the PUC establish for this program?**

The point of this program is to protect Texas communities, not make money. The maximum TBPP loan rate should be three percent, as specified in PURA §34.0104(f)(3) for loans to new dispatchable electric generating facilities. However, since many of the community-critical facilities that will apply for TBPP grants and loans are owned by governments and non-profits that are chronically under-funded, the Commission could support these communities by setting the TBPP loan rate at 1 or 2% to minimize borrowing costs and maximize TBPP accessibility and deployment.

All TBPP loan repayments should be used to fund additional TBPP grants and loans.

## **3) How should the PUC ensure that backup power package facilities do not participate in the sale of energy or ancillary services?**

Build contract language into all grants and loans warning that violation of this provision may cause the revocation of the grant or loan. Include the provision that sale of energy or ancillary services applies not only to actions of the facility owner but also participation in any commercial aggregation or virtual power plant – this is necessary to assure that the full capability of the BPP remains available to protect the critical facility and community for two days of backup operation if a grid failure occurs, not to enhance the host facility's revenues.

An annual attestation by the property owner or manager to the Commission, stating that the facility has not been used to sell energy or ancillary services, seems appropriate to satisfy this requirement.

**4) What reporting requirements should grant and loan recipients provide to the PUC in connection with this program?**

Grant and loan recipient reporting should include:

- Verification that the TBPP funds have been spent on TBPP installation and maintenance and refueling contracts.
- Annual reporting on TBPP usage (including the attestation that the units have not been used to sell energy or ancillary services) and on any problems with TBPP unit performance, vendors and contractors.

**5) What program functionality is necessary to administer this program?**

Once the backup power packages have been fully designed and specified to meet rigorous performance and interoperability requirements, with full detail on how to mix and match them to satisfy a wide variety of user characteristics, and those specifications have been released for manufacturer and maintenance vendor fulfillment, ongoing TBPP program management will include numerous functionality requirements including:

- The intention that the program's goal is to award funds to as many qualified applicants as possible to maximize TBPP deployment and community resilience, rather than to restrict or hoard fund awards.
- Once the various TBPP unit specs have been finalized and released and manufacturers are building TBPP units, the TBPP administrator will have to verify that all units and models that manufacturers produce actually meet all of the TBPP specs and performance requirements and actually perform as interoperable. Over the long term, this function could be performed through adoption of IEEE-Standards Association certification, but over the short term Texas buyers will need some entity working on behalf of the Commission to verify that early TBPP units are legitimate and interoperable before they are offered to the market with TEF-TBPP funding.
- Creation and management of a clear, user-friendly, robust application process.
- Creation and maintenance of an excellent set of applicant support tools, including an online pre-application TBPP design and cost estimation tool (see discussion in item 6) below).

- Excellent program marketing and education, including collaboration with service associations, municipalities, utilities and others to get TBPP information out to every town and potential critical facility.
- Aggressive recruiting, initial and ongoing review and approval of TBPP manufacturers, engineering and sales vendors and maintenance-refueling-testing vendors to assure that they are fully meeting all TBPP designs and program requirements and specifications.
- Prompt processing of applications and awards, including providing clear feedback to entities that submitted insufficient applications to help them prepare successful applications.
- Effective tracking of applications and awards and examination of patterns of error or failure for continuous improvement of the user's experience and success.
- Maintenance of information on TBPP vendors and maintenance and refueling package vendor availability, pricing and quality feedback, with the opportunity for users to provide feedback and complaints on vendor performance.
- Collection and maintenance of data on TBPP system performance to assure that potential common issues associated with predetermined system designs, controls, installation, or specific vendors or packages are identified quickly, monitored, solutions are found and deployed at minimal cost to TBPP owners.
- Management of ongoing reporting to the Commission, TBPP users, and the public on TBPP awards, TBPP usage, performance, and initial and on-going costs, including tracking and publicly reporting on any unsatisfactory package or maintenance and refueling vendors.
- Management of regular assessments of TBPP program effectiveness, with respect to both technical features (TBPP effectiveness) and funds disbursement (both policy and process effectiveness), to identify any needs or opportunities for improvement.

## **6) What application guidance will potential applicants require?**

Most TBPP applicants will be small, under-funded entities that aren't represented by lawyers or energy consultants, but by overworked facility managers or staff who know their facility is critical to their community. Thus the TBPP application and associated guidance should be as clear and simple as possible about the program's rules and limits. Application guidance could include:

- The purpose of the TPP and TBPP program and opportunity.
- The broad definition (community health, safety and well-being) and specific categories for qualifying (and non-qualifying) facilities, with the indication that these categories do not limit funding potential.
- Explanations of the TBPP packages and how they will perform before and during a local or widespread power emergency (with access to detailed package specs). This should include how the electric school bus option could be leveraged for multiple purposes, with

a link to electric school bus purchase rebate options that could lower costs for qualifying entities.

- The size limits for TBPP installations (actual facility load and max 2.5 MW), how to determine your facility's load, and a calculator to determine the mix of TBPP units (including the electric school bus option) appropriate to that load.
- The application site should include a pre-application TBPP sizing calculator that can take user input (type of facility, recent electric usage, physical site configuration, location) and offer an initial TBPP configuration with estimates of all TBPP deployment costs including engineering, procurement, installation, permitting, and multi-year operational costs including refueling, maintenance, and testing. It should also estimate the physical footprint for the TBPP and fuel package and indicate any security and placement requirements and recommendations, and list all approved TBPP vendors and refueling and maintenance vendors in the applicant's region.
- The pre-application TBPP configuration tool should output fully intelligible reports that the applicant can take directly to a city or facility manager for discussion and consideration, and take to vendors for detailed engineering and pricing estimates that would be submitted with the full application.
- A clear, easy-to-use, user-tested on-line application process.

#### **Other questions arising from Workshop and filed comments**

##### **7) Will local facilities that communities rely on for health, safety and wellbeing, including governmental, private and non-profit entities, be eligible for Texas BPP Program funding?**

Yes, the Purpose statement of PURA §34.0202 is clear – “to facilitate and provide funding for the design, procurement, installation, and use of Texas backup power packages to ensure the reliability or adequacy of an electric power grid ... for facilities on which communities rely for health, safety and well-being.” This language does not distinguish between ownership or types of facilities, but clearly intends that the role of the facility supporting community health, safety and well-being is what matters, not who owns it.

Note, however, that the statutory language uses the term “critical facilities” without reference to either “critical loads” or “critical natural gas facility” as defined in PURA §25.52. The Commission must interpret this as a deliberate intent to distinguish “critical facilities” and “facilities on which communities rely for health, safety and well-being,” as used in the Texas Power Promise and Backup Power Package sections, from the definition of critical facilities or



critical loads elsewhere in PURA. The point of PURA §34.0202-0205 is to protect community resilience by protecting the facilities on which they depend, so the Commission and the Texas BPP Advisory Commission should establish qualifying criteria with attention to the community as well as the facility – e.g., a gas station and convenience store may not be critical to community safety and well-being in Houston or San Angelo, but it could be critical in small towns in deep rural TX. Thus, a letter from a local mayor or city council explaining how the applying facility directly serves community health, safety and well-being (subject to meeting other criteria such as PURA §34.0205(e)(1)) in the event of a local emergency or power failure should be acceptable to satisfy BPP qualifications.

**8) Will the Commission specify categories of facilities that qualify for TBPP funding?**

Yes, the Commission should specify categories of facilities that qualify for TBPP funding, but not make those categories exclusive or limiting (per the comments in 7) above). Most of the categories specified in PURA §25.52(c)(1) (“Loads for which electric service is considered crucial for the protection or maintenance of public safety; including but not limited to hospitals, police stations, fire stations, critical water and wastewater facilities”) and (f) (medical facilities) clearly meet the TPP purpose of supporting community health, safety and well-being. But additional categories will matter in the event of a local or widespread grid outage, including senior living centers, community heating or cooling centers and small town gas station-convenience stores. The Commission’s rules should respect and make room for local variations in what facilities are needed and valuable when the lights go out (subject to the stated limits in PURA §34.0205(e)).

**9) Should the Commission award TBPP funds for loads greater than 2.5 MW, or greater than the actual facility load?**

PURA §34.0204(f) is clear that the Commission may provide loans or grants for TBPPs to “serve not more than 2.5 MW of load at the host facility.” This means that there is no justification for using Texas Energy Fund dollars for any facility to procure one kW of capacity over 2.5 MW. If a facility owner wants to acquire more TBPP or other backup capacity in excess of 2.5 MW, then it should buy that capacity with its own funds, not with TEF-TPP funds.

As noted in item 1) above, it will be unavoidable that many TPP-qualifying facilities will end up receiving a combination of TBPP units whose total size exceeds the facility’s actual size. However, the research entity that designs TBPP units should survey many TPP-qualifying entities to determine the appropriate set of TBPP sizes that can be combined efficiently to serve most of the TPP critical facilities and use cases without excessive over-capacity and cost. The research facility should also develop a suite of TBPP configurations and rules that can be poured into the later TBPP configuration tool (discussed in item 6 above).

The Commission should limit the sizing of TBPP units close to actual facility load, subject to the reality that recent heat waves and ambient heat are driving most users’ peak loads to unprecedented heights. Therefore, the Commission should encourage applicants to apply for and invest in energy efficiency and demand response assistance from utilities, REPs and the Texas PACE Authority, but be willing to fund slightly higher TBPP sizing based on recent rather than decade-long load levels.

**10) What are permissible TBPP use cases? Once a TBPP is installed, can the owner use it for behind-the-meter purposes such as peak-shaving, demand response or 4CP management?**

Only within limited circumstances – once a TBPP has been installed behind the critical facility’s meter, its purpose and primary function under the statute is to be ready to provide the facility at least 48 continuous hours of islanded operation without refueling or connecting to a

separate power source (PURA §34.0204(3)) if a local or widespread grid failure occurs. This is the justification for using taxpayer funds to improve community resilience by giving critical facilities back-up power; there is no such justification for using taxpayer funds to give critical facilities new revenue or savings opportunities.

The Commission's TBPP rules should set limits on how much and for what purposes TBPP hosts can use their facilities. Two suggestions:

- Peak-shaving, 4CP management and other behind-the-meter uses that run the TBPP to reduce or disconnect load are allowed only if their total use per standard refueling cycle preserves at least 40 hours of fully islanded operating capability to perform during an actual grid outage.
- In the event of a grid supply shortfall, ERCOT may electronically call on portions or all of the TBPP fleet to go into islanded operation for no more than 4 hours per event. If this occurs, then ERCOT should pay the islanding TPBB facilities the same amount per kWh of load relief that it pays ECRS providers for the same event-specific relief, and reimburse each responding TBPP for replacement fuel costs.

#### **11) Can a utility partner with TBPP-qualifying facilities to receive TPP funds?**

No. The point of the Texas Power Promise and TBPPs is to protect critical facilities and communities from grid failures, not to allow utilities to coopt TBPP funds. Coops and munis could help critical facilities fund TBPP costs that are not covered by TPP-TEF grants and loans, but are not eligible to receive any TBPP funds. A utility could help its local TPP-qualifying facilities know of TBPP funding availability, help them apply for the funds, and help its other customers by conducting circuit segmentation to take advantage of TBPP-created outage management improvements.

#### **12) Would strict emissions controls compromise the directive to minimize TBPP operational cost?**

No. Emissions controls will be built into the design of the backup power packages; the statute indicates that the entire package should be “engineered to minimize operations costs”

(PURA §34.0204(1)), so the emissions controls will be part of an integrated package design and should not materially increase the owner's operating costs.