Source: Getty Images

Texas Backup Power Package Webinar

Hosted by North Central Texas Council of Governments

With Speakers: Alison Silverstein, Matt Boms, Fazil Shaikh

January 27, 2026

Housekeeping Items

Welcome all and thank you so much for joining us!

- Please refrain from using any AI note-taking services. **We will be recording the presentation and making the recording and deck available.**
- Please remember to keep microphones muted unless speaking.
- Please use the react feature to chime in on the discussion.
- Feel free to ask questions throughout but there will be a designated Q & A after the presentation.
- **Dial in option:**
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Agenda

Introduction & Objectives; Hannah Thesing, North Central Texas Council of Governments (NCTCOG)

The Why & Origins Behind Texas Backup Power Packages (TBPP); Alison Silverstein, Alison Silverstein Consulting

Commercial & Technical Considerations for TBPP Deployments; Fazil Shaikh, Generac

Public Utility Commission (PUC) Development Process & Where Things Stand; Matt Boms, Advanced Energy United

Discussion

Key Takeaways

Introduction & Objectives

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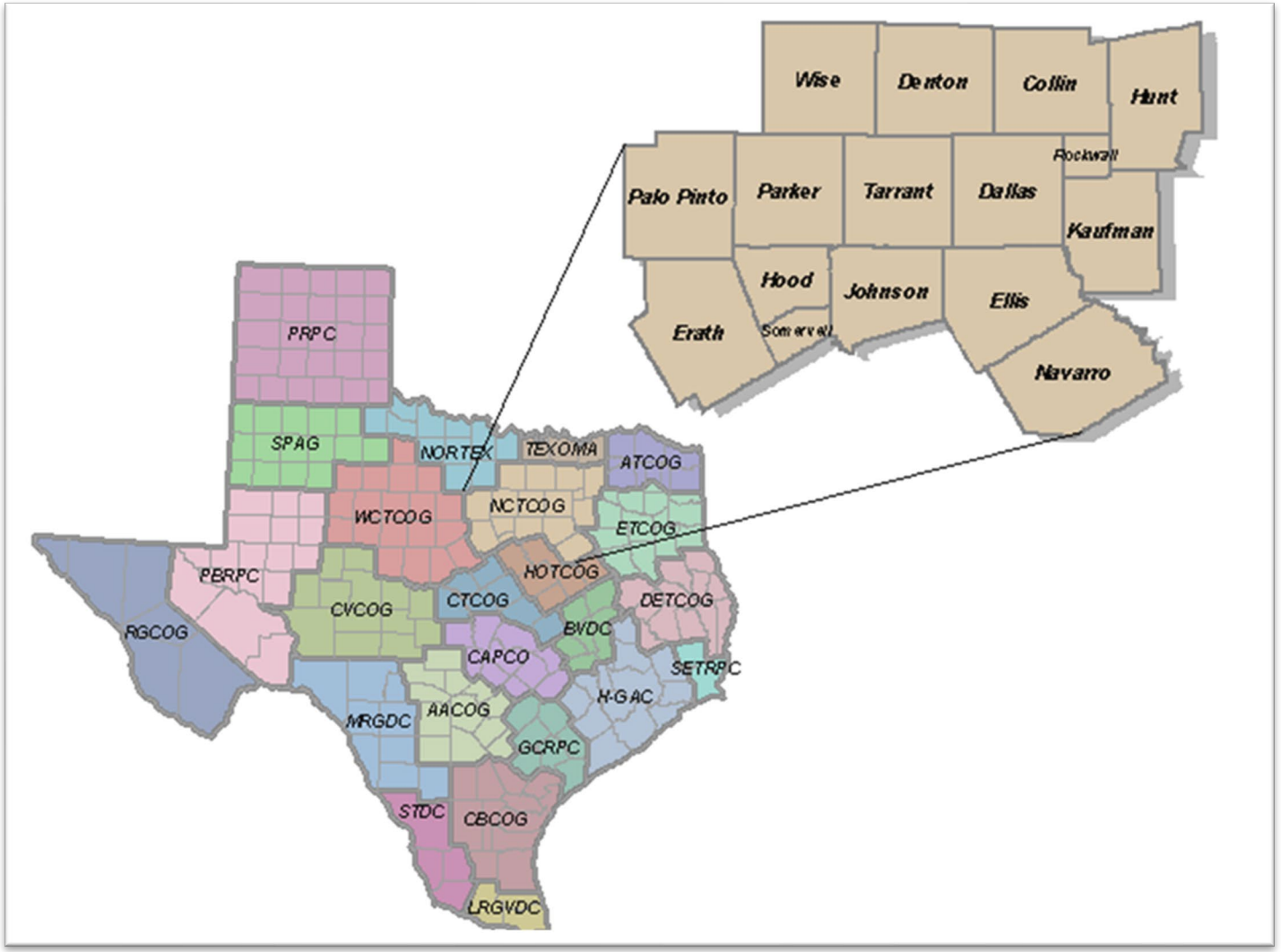
Who We Are

A voluntary association of local governments established in 1966

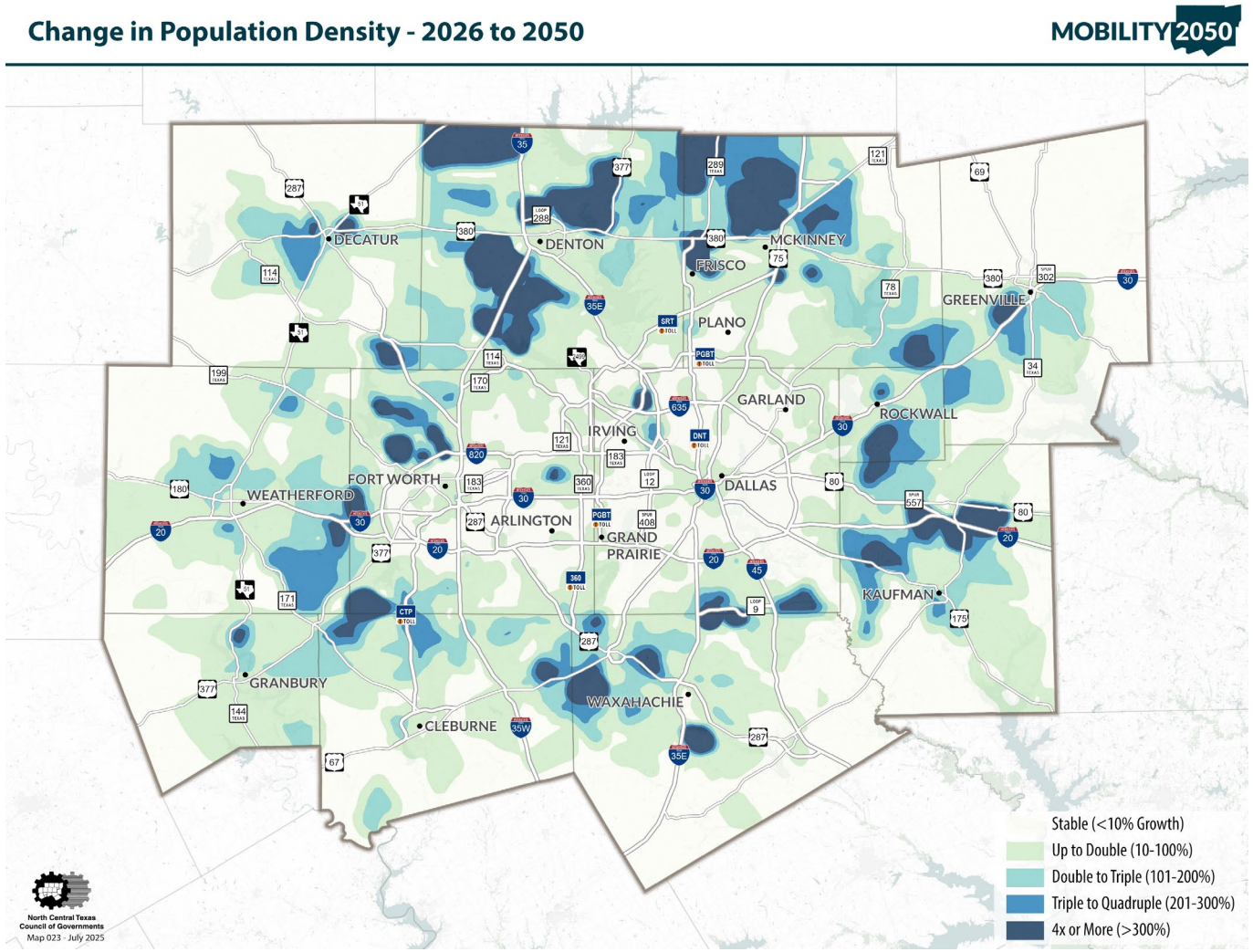
228 member governments, including:

- 16 counties
- 169 cities
- 19 school districts
- 24 special districts



The Challenge: Population and Economic Growth

- As of 2023, fastest growing metropolitan area in the nation*
- Expect 43% increase in population from 2026-2050
  - 2026 Population: 8.5 M
  - 2050 Population: 12.3 M*
- Texas economy 8th largest in the world valued at $2.7 trillion**

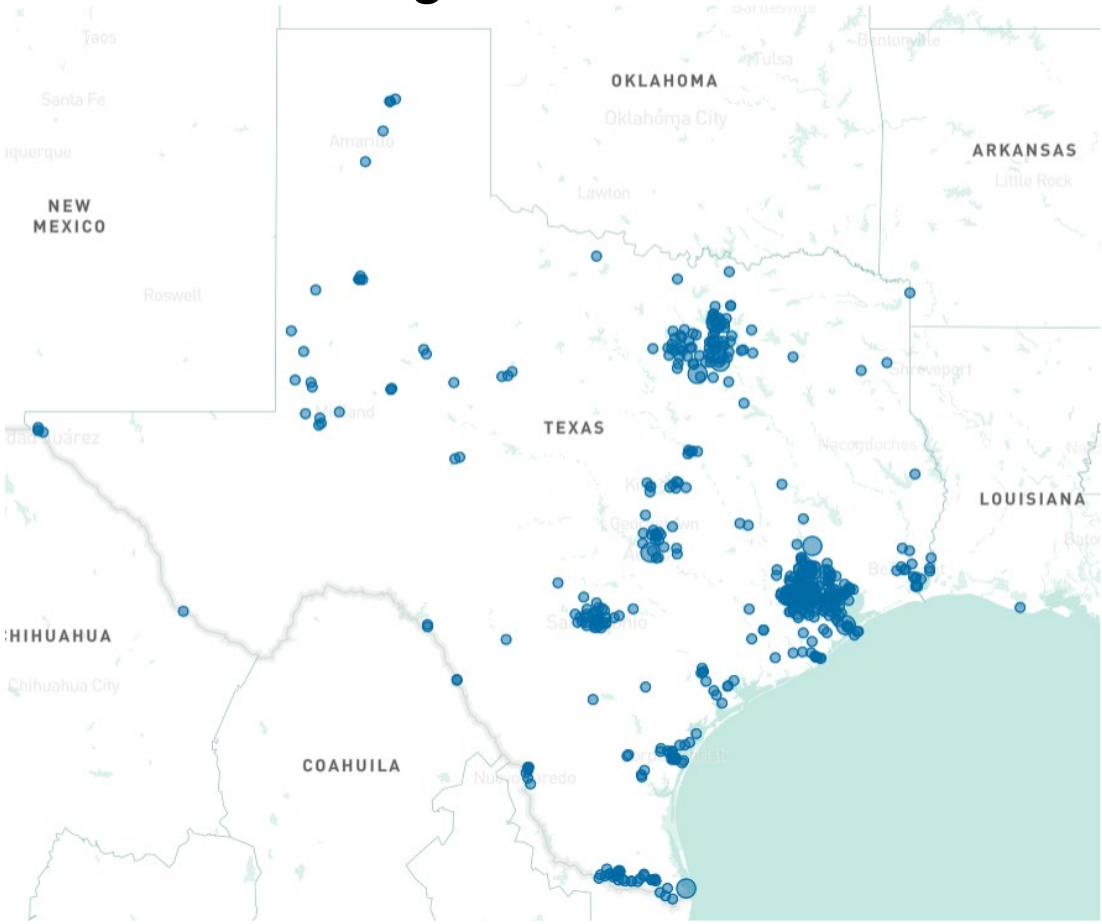


*NCTCOG - Dallas-Fort-Worth Metropolitan Transportation Plan
**https://gov.texas.gov/top-texas-touts-economy

The Challenge: Increasing Number of Critical Facilities

- According to EIA, in 2024 & 2023 average outage was ~**600** & ~**282** minutes, respectively *
- Estimated 31,000 critical facilities in Texas**
- Entities beginning to add resiliency:
  - Large-scale battery capacity has quadrupled since December 2023***
  - Nearly 400 microgrids are in Texas****

Microgrids in Texas**



*https://www.eia.gov/electricity/annual/html/epa_11_03.html
** https://interchange.puc.texas.gov/Documents/57236_2_1438994.PDF
***https://reliablegrid.org/news/texas-grid-operator-sees-calmer-winter-low-blackout-risk-this-season/ ;
**** https://www.onsite-energy-installations.ornl.gov/?page=1&size=20

The Opportunity: The Texas Energy Fund & TBPP

During 88th TX Legislature, Senate Bill 2627 Established Texas Energy Fund(TxEF)

- Appropriated $5B for TxEF FY 2024-2025 and $4B for TxEF in FY 2026-2027
- Administered by Public Utility Commission of Texas (PUCT)
- Included $1.8B for Texas Backup Power Packages (TBPP)

TBPP Program Proposed Eligible Costs:*

- **Grants:** Design and Installation Costs; Any additional costs of ownership or operation
- **Loans:** Procurement and Operating Costs; Any additional misc. cost

More Information:

- Texas Energy Fund (TxEF): https://www.txenergyfund.texas.gov/
- Texas Backup Power Package (TBPP): https://www.txenergyfund.texas.gov/TBPP

*All information is based on current rulemaking and is subject to change

The Why & Origins of Texas Backup Power Packages

Alison Silverstein; Alison Silverstein Consulting

Source: Getty Images

Texas Backup Power Package Briefing

Alison Silverstein

Alison Silverstein Consulting

January 27, 2026

Purpose of Texas Backup Power Packages

- Fund energy resilience for critical facilities supporting human health and public safety across Texas, using stand-alone microgrids to protect Texas communities and citizens from growing natural and human threats to the electric grid
- Improve grid service in extreme events by letting T&D utilities rotate outages between circuits w/o limitations for critical facilities
- In the future, use critical facility TBPPs as curtailable load when ERCOT needs emergency capacity

Key features of Texas Backup Power Packages

Create design rules for multi-technology microgrids (TBPPs) serving <= 2.5 MW facilities:

- A TBPP must combine gas or propane generation, solar and storage (or electric schoolbuses)
- Provide at least 48 hours of islanded (off-grid) support for the host facility w/o recharging from the grid or refueling
- Use off-the-shelf commercial components and commercially available controls, communications, cyber-security
- TBPPs must be interoperable and can be aggregated onsite to meet the facility need
- Host must assure on-going maintenance and refueling for the equipment

Critical facilities qualified for TBPPs

- Facilities that communities rely on for health, safety and well-being
  - Health care – hospitals, dialysis centers, clinics
  - Public safety – police, fire, hurricane evacuation routes, community resilience centers, small town gas stations/C stores
  - Assisted living – seniors, children's and disabled communal housing
  - Water and wastewater utilities
  - Other facilities certified as critical by local government officials
- CFs can be owned by governments, non-profits, for-profits
- Critical facilities smaller than 2.5 MW

Restrictions

- Commercial energy facilities, private schools and for-profit entities that don’t directly serve health & safety aren’t eligible CFs
- TBPPs must use fossil generation + batteries + solar combo to achieve full 48-hour service
- TBPPs funded by the Texas Energy Fund can’t sell energy or ancillary services or inject energy into the grid or ERCOT market
- Critical facility TBPPs can be used to reduce the host’s electric bill (e.g., peak reduction) but probably can’t be in a VPP
- Only packages that meet the Texas Public Utility Commission’s TBPP rules can receive TEF funds

TBPP funding

- $1.8 billion of the $10 billion Texas Energy Fund is committed to fund critical facility acquisition and installation of TBPPs
- Qualified critical facilities can receive $500/kW of TBPP capacity up to 2.5 MW per site, plus a low-cost loan (may be forgivable)
- The PUCT is developing TBPP management rules now and will then start work on the application process
  - PUCT intends to recognize qualified TBPP vendors and let them market to CFs and act as agents to submit TBPP funding applications
  - Vendors can offer a variety of funding options (direct sale, lease, resilience-as-a-service, supplemental loans)
  - Still many details to work out (award criteria, max awards, vendor obligations, …) before the TBPP application site is open, funds are awarded and TBPP hardware can be installed

Commercial & Technical Considerations for TBPP Deployments

Fazil Shaikh; Generac

Source: Getty Images

Commercial & Technical Considerations

Fazil Shaikh – TBPP Stakeholder Webinar

Based on original legislation and PUC Draft Rule.
Subject to Final PUC Rule.

TBPP Program Overview

Based on original legislation and draft rule. Subject to Final PUC Rule.

≥ 48h continuous operation

Battery ≥ 1h of peak load capacity

Solar ≈ 6h to recharge battery

Immediate islanding on outage

Scalable up to ~2.5MW per site

- **State Resilience Program:** $1.8B Texas Energy Fund program for critical-site backup power (grants up to $500/kW + loans)
- **High-Resilience Backup System:** On-site generator + battery + solar – *an integrated microgrid that can run independently of the grid.*
- **Keep Critical Services Online:** Designed so hospitals, 911 centers, water plants, etc., have adequate backup-power (partial or full facility) and can stay operational during utility outages including extended durations.

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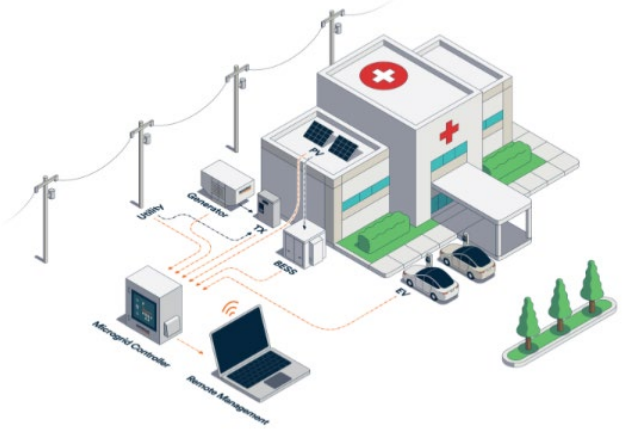
Microgrid Systems - Intro

Planned Resilience for Critical Services



- **Resilience During Outages**
  Microgrids can operate independently of the grid, keeping critical services online during extended outages (48+ hours or more).
- **Scalability for Different Facility Sizes**
  Systems can be tailored from small emergency shelters to large facilities, ensuring flexibility for diverse entities
- **Redundancy**
  Integration of solar and battery with engine can improve system redundancy
- **Optimized Performance**
  Smart controllers coordinate generator, battery, and solar for efficient load management, fuel savings, and emissions
- **Smooth Transition from Utility**
  Islanding options can be tailored to minimize downtime when switching from grid to microgrid.
- **Future-Ready Design**
  Provides a future-ready energy foundation that can evolve as community needs change.

Microgrids enable planned resilience- keeping critical services running during outages so communities recover faster and stay safer

Micro-Grid System Components - Simplified

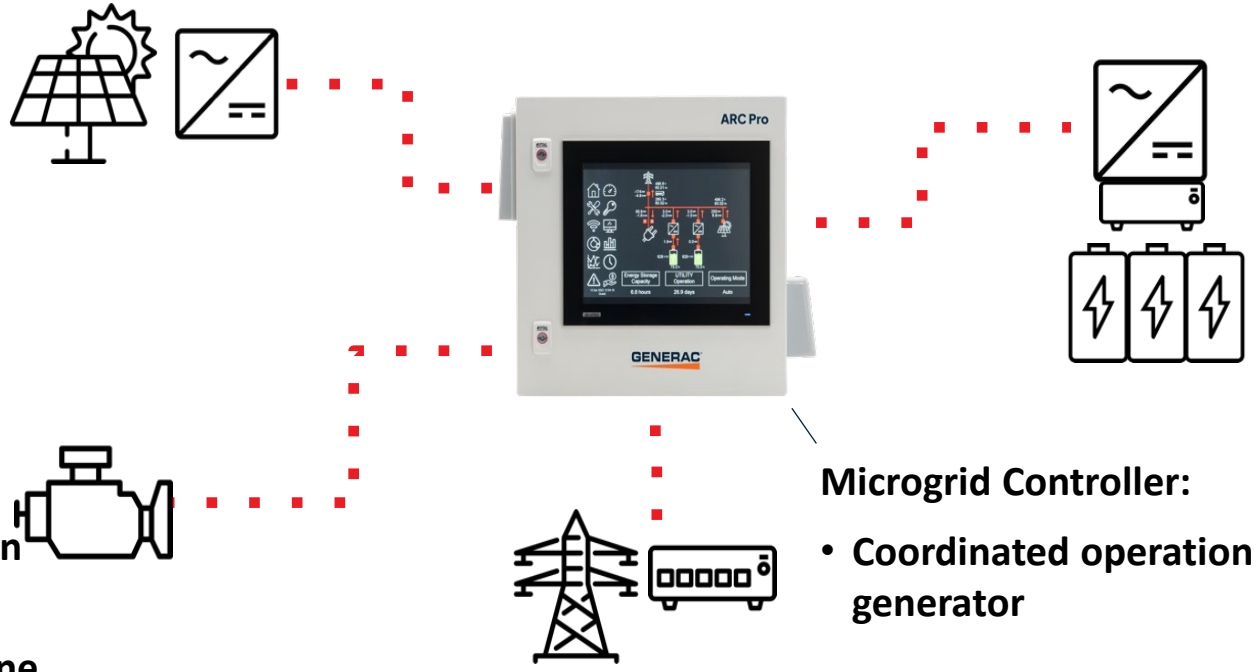
TBPP requires Generator, BESS, Solar

Solar PV:

- On-site solar array
- Charges battery
- Reduces fuel use

Battery (BESS):

- Can support islanding, engine efficiency, energy savings



Generator (NG/Propane):

- Main source for long-duration power
- Natural gas preferred; propane for sites without gas

Microgrid Controller:

- Coordinated operation with utility, load, solar, generator

Components designed to meet applicable standards, certifications, and requirements (e.g., UL, IEEE, AHJ)

Design & Sizing Flexibility

No One-Size-Fits-All:

- TBPP system tailored to each facility's needs, within program guidelines

Engineered for Resiliency:

- Multi-asset design maximizes system resiliency and reducing operating costs

Fuel Choice:

- Natural gas generators are ideal for long duration outages
- Propane is an alternative for sites without gas (ensure on-site fuel for ≥48h)

Medical Center

500 kW; natural gas

500 kW; 500 kWh

100 kW-dc

Emergency Shelter

25 kW; propane

25 kW; 25 kWh

5 kW-dc

Microgrid Example

Case Study – Client Confidential

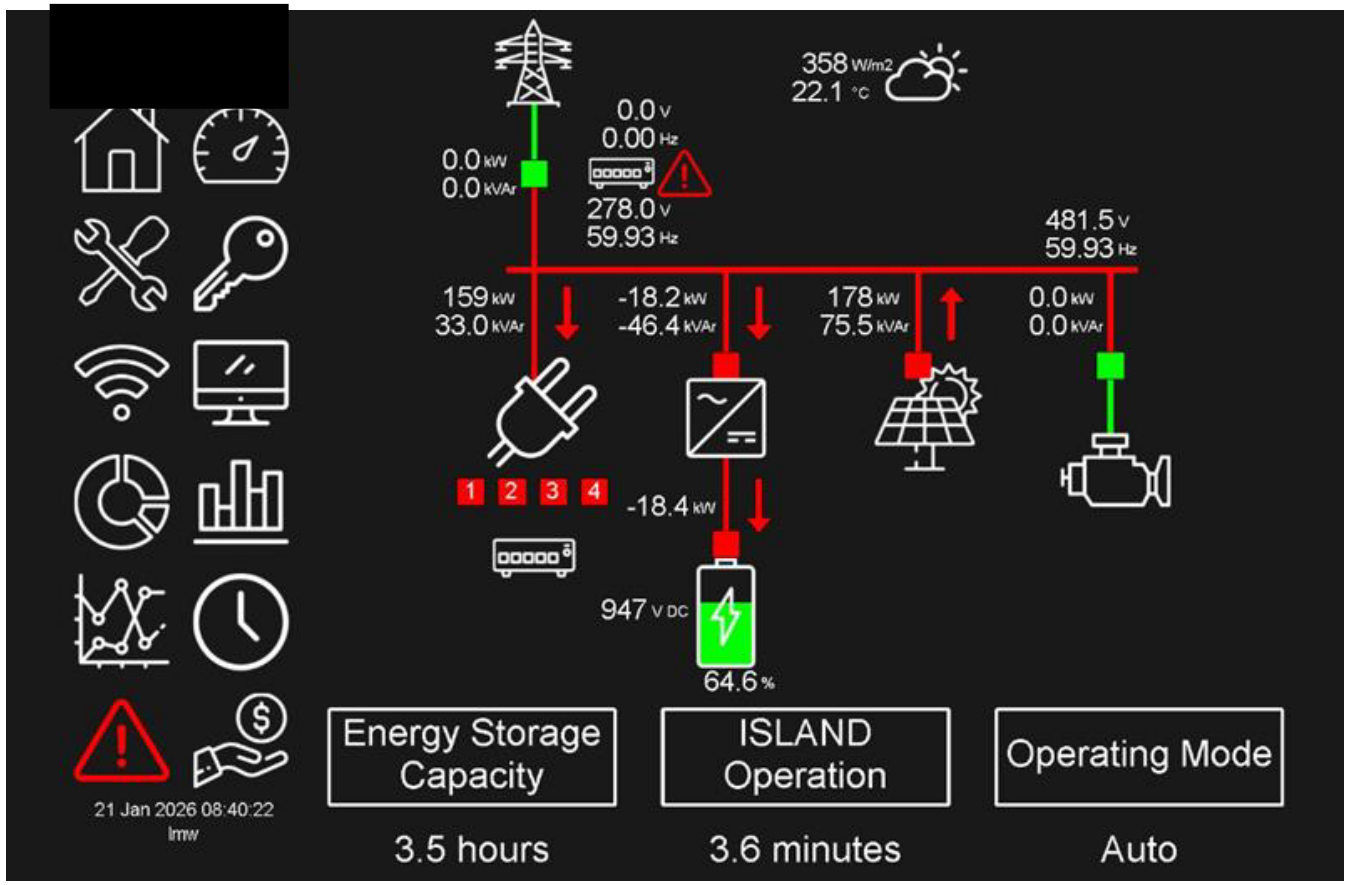
(For educational purposes, projects NOT TO PUC Program spec)

System Goals:

- Primarily Resiliency – Full Facility Backup Power
- Energy Savings

Microgrid Resources:

- 30kW Backup Generator and ATS
- 20kW Solar PV
- 60kW BESS (Battery)
- Microgrid Controller
- SEL Protective Relay (utility required)



Microgrid Example

Case Study – Client Confidential

Utility Outage

1. PRC identifies grid outage and initiates Microgrid intervention
2. Open transition
3. Gen starts (<10 seconds) and operates for minimum run time
4. BESS comes online and gen turns off
5. PV+BESS meet load until low charge
6. Gen is started once again to meet load
7. Utility returns, load reconnects to utility, microgrid powers down

Customer benefits of Microgrid include 1) Full facility backup 2) Redundancy 3) Cybersecure System 4) Energy Savings

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Operations & Maintenance

Regular Maintenance & Testing:

- System commissioning – documented and procedural, on-site expertise
- Scheduled system readiness tests
- Routine generator inspection and oil, battery health checks, PV maintenance, multi-point recurring inspection for warranty adherence

Compliance:

- Cybersecure remote monitoring
- PUC Reporting Requirements (to be defined)

DIESEL FUEL VS. NATURAL GAS MAINTENANCE PLAN COMPARISON

In generator maintenance, it's also extremely important to consider fuel type. The chart below highlights key differences, in the required maintenance of diesel fuel compared to natural gas.

Maintenance Item	Diesel	Natural Gas
Visual Inspection	●	●
Check/Change Engine Oil	●	●
Change Engine Oil Filter	●	●
Check/Change Air Filter	●	●
Inspect/Change Belt & Hoses	●	●
Inspect/Replace Starting Batteries	●	●
Replace Controller Battery	●	●
Inspect/Change Engine Coolant	●	●
Perform Load Bank Test	●	●
Change Fuel Filter	●	
Inspect/Clean Fuel Tank	●	
Analyze Fuel	●	
Diesel Fuel Treatment	●	
Fuel Polishing (Restore Old Fuel)	●	
Document Maintenance	●	●

PUCT Development Process & Where Things Stand

Matt Boms
Executive Director
Texas Advanced Energy Business Alliance

Source: Getty Images

Question & Answer Session

Source: Getty Images

Key Takeaways

PUCT Draft Proposal

- Proposal at https://interchange.puc.texas.gov/ - Control Number: 59024 - Item Number: 2
- Public comments due **January 30, 2026;** Implementation timeline is unknown
- PUCT requesting feedback on required **cost share, electric school buses as a TBPP power source, and public entities being required to grant secured interest for loans**
- NCTCOG encourages reviewing subsections b-f
  - (b)(1): Applicant Eligibility
  - (c): TBPP Funding
  - (e): Application Requirements and Process
  - (f): Application Review

Next Steps

- Consider submitting comments on draft rules and track updates; www.txenergyfund.texas.gov/TBPP
- **Evaluate your facility site for TBPP**
- Prepare application materials

Resources

- TBPP Program Website: https://www.txenergyfund.texas.gov/TBPP
- Recording of this webinar, presentation, and one-pager on Texas Backup Power Program available at www.dfwcleancities.org/events
- Information on Energy Efficiency Initiatives in NCTCOG region https://www.nctcog.org/trans/quality/air/for-everyone/energy-efficiency-clean-energy
- Subscribe to our Air Quality Funding and Dallas-Fort Worth Clean Cities eblast to kept up to date on this and other opportunities: www.nctcog.org/stay-informed ‘

Speaker Contacts

Alison Silverstein
Consultant
Alison Silverstein Consultant
alisonsilverstein@mac.com

Fazil Shaikh
Senior Director, Strategy & Growth
Generac
Fazil.Shaikh@generac.com

Mat Boms
Executive Director
Texas Advanced Energy Business Alliance
mboms@texasadvancedenergy.org

NCTCOG Transportation Contacts

Hannah Thesing
Air Quality Planner II
NCTCOG
hthesing@nctcog.org

Savana Nance
Principal Air Quality Planner
NCTCOG
snance@nctcog.org

Lori Clark
Senior Program Manager
& DFWCC Director
NCTCOG
lclark@nctcog.org

North Central Texas Council of Governments

dfwcleancities.org

@NCTCOGTrans

cleancities@nctcog.org

linkedin.com/dfwcleancities/