



WINTER PREPAREDNESS PROGRESS REPORT

PRESENTED BY:

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Chief Grid Optimization & Resiliency Officer (CGORO)

January 25, 2022

Informational Update

AGENDA



- **WINTER PREPARATION RESPONSE STATUS OVERVIEW**
- **COMMITTEE ON EMERGENCY PREPAREDNESS (CEP) RECOMMENDATION STATUS OVERVIEW**
- **PROGRAM CLOSEOUT**

WINTER PREPARATION RESPONSE

STATUS OVERVIEW



- CEP Recommendations
 - Addressed all recommendations for Winter 2022
 - Submitted documentation of actions/plans to the Municipal Utilities Committee (MUC)
- Internal Combined Lessons Learned
 - Corrected or mitigated all items for Winter 2022 with plans put in place for those requiring longer term effort or budget support

All items identified out of the February 2021 event have been addressed in preparation for this Winter 2021-22 to ensure a much better response to any severe winter event.

Market Redesign

- ✓ Attend/monitor PUC & RRC meetings & rulemaking
- ✓ PUC Market Redesign Blueprint (Phase 1)
- ✓ Engage with ERCOT in redesign execution
- ✓ PUC review & update of price cap design
- PUC Market Redesign Blueprint (Phase 2)

Natural Gas (NG) Supply & Plant Operation

- ✓ Plant Specific Weatherization
- ✓ Secured additional NG contracts & NG Storage
- ✓ Increased spare part inventory
- ✓ ERCOT inspections
- ✓ Raised daily NG withdrawal capacity
- ✓ Revised plant outage plans
- Phase 2 PUC Weatherization Requirements

Load Shed Outage Management

- ✓ Improved Load Management program
- ✓ Increased # of interruptible circuits
- ✓ Raised Load Shed capacity
- ✓ Completed 3rd party assessment
- ✓ Update stakeholder on Load Shed process
- Infrastructure & technology improvements

Critical Facilities Support (CoSA & SAWS)

- ✓ Establish list of critical facilities
- ✓ Evaluate list of facilities for infrastructure improvements
- ✓ Provide assessment, recommendation & projected costs to users
- ✓ Improved operational coordination
- ✓ Executive liaison for EOC
- Survey & assess facilities for hardening & microgrids

Communication Improvements (Stakeholder & Customer)

- ✓ Revised Emergency Communications Plan
- ✓ Launched Winter **Reliability** & **Resiliency** Campaign
- ✓ Established Joint Information Center operating procedures
- ✓ Trained with partner Public Information Officers
- Conduct annual training & tabletop exercises

Legend: Black = Complete Blue = Future Programs

PROGRAM CLOSEOUT



This presentation is the closeout of updates on winter preparedness but strengthening **Resiliency** & emergency response capability are a continuing focus. Next steps include:

- Response to any questions/requests from MUC
- Summary report of actions for Board of Trustees
- Assessment of FERC report & recommendations
- Monitor status of long-term action plans
- Identify funding requirements as required for action plans
- Updates to Board Committees

Assessing risks & improving *Resiliency* are an on-going effort as part of our Guiding Pillars & Continuous Improvement focus.



Thank You



Appendix

WINTER READINESS CEP RECOMMENDATIONS



Recommendations for CPS Energy	Status
1, 3: Market Design	Complete
2: Natural Gas Supply	Complete
4: Generation Plant Weatherization	Complete
5, 6: Load Shed Outage Management	Complete
7: Support of SAWS critical facilities	Complete
8, 9: Communications Improvements	Complete
Recommendations for SAWS – Complete	
2, 3, 5, 8, 16: Support SAWS in improving its Resiliency , emergency preparedness, communications protocols & Public Utility Commission of Texas (PUC) compliance	
Recommendations for the Emergency Operations Center (EOC) – Complete	
1-3, 8, 10-14, 18-20, 23-24: Support CoSA's EOC in its efforts to improve its Resiliency , emergency preparedness, communications protocols & overall emergency operations during extended duration outages	

We completed documentation of all actions for the Winter 2021-22 season identifying both immediate actions & on-going plans.

CoSA CEP RECOMMENDATION

PLANT OPERATIONS & SUPPORT – 2



CEP Recommendation: CPS 2	Enhance current practices for purchasing and transporting natural gas
CPS Priority: 1	Resolution: CPS Energy took the following actions to resolve 1) Secured natural gas transportation contracts sufficient to deliver gas for the expected usage 2) Increased daily withdrawal capacity from natural gas storage 3) Added additional natural gas storage capacity
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$80K	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

PLANT OPERATIONS & SUPPORT – 4



CEP Recommendation: CPS 4	Support operational excellence at generation plants through renewed emphasis and focus on best practices
CPS Priority: 1	Resolution: CPS Energy is completing several operational excellence initiatives before the upcoming winter: 1) Implement key elements of weatherization improvement plan 2) Conduct repairs for aging burner systems & upgrades to Spruce fan control system 3) Revise 2021 - 2022 Planned Outage Schedule to maximize CPS Energy's unit availability this winter 4) Perform a detailed inspection of all outside piping & revised Freeze Protection Program at the South Texas Project
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$49.2M	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

OUTAGE MANAGEMENT– 5



CEP Recommendation: CPS 5	CPS Energy should review the automated rotating outages process
CPS Priority: 2	Resolution: 1) Implement improvements in existing systems and infrastructure to manage an ERCOT load shed event of at least 20,000 MW for winter 2021-22 2) Engaged system vendor to design, test, and implement necessary system changes in control system 3) Review and update the Load Shed operating procedures to incorporate lessons learned from this past winter event 4) Perform modeling and assessment of improvements made for winter 2021-22
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$296K	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

OUTAGE MANAGEMENT– 6



CEP Recommendation: CPS 6	Review options for mandatory load shed management and coordinate with critical service providers
CPS Priority: 2	Resolution: 1) Increase load shed capacity through re-assessment of critical circuits and Under-Frequency Load Shed (UFLS) circuits to ensure only the most critical loads are prioritized for uninterrupted service 2) We increased the load shed capacity to manage an event similar to February 2021 through identifying only the most critical loads in the system 3) Criteria will be reassessed based on guidance expected from the PUC later this year
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$139K	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

GRID OPERATIONS & SUPPORT – 7



CEP Recommendation: CPS 7	Assist SAWS in securing redundancy for its critical facilities
CPS Priority: 3	Resolution: 1) Coordinated with SAWS to identify most critical sites and performed high-level review of options 2) Performing detail assessment of most critical sites to design infrastructure options for resilient service 3) Reviewing necessary equipment & assessing operational impacts
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$61K	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

COMMUNICATIONS – 8



<p>CEP Recommendation: CPS 8</p>	<p>Collaborate with the CoSA EOC to develop emergency communications procedures</p> <ul style="list-style-type: none"> A. Simplify customer messaging with focus on safety and clear calls to action B. Revise and enhance how conservation calls are communicated to public C. Develop advanced notification process for mandatory load shed event; Coordinate messaging with the Emergency Operations Center (EOC); Provide advanced notification of mandatory load shed events where possible; Consider informing customer if they are subject to the risk of power loss during mandatory load shed events; Provide customer with key information for support services
<p>CPS Priority: 4</p>	<p>Resolution:</p> <ol style="list-style-type: none"> 1) CPS Energy updating its Crisis Communications Plan with a public relations agency 2) Undergoing training for Online Community Relationship management 3) Develop customer actions for various levels of conservation needs 4) Proactively asking customers to update their emergency contact information 5) Coordinate with the EOC & Joint Information Center on aligned messaging to the public 6) Include key information for support services
<p>Status: Complete</p>	
<p>Estimated Completion Date: 12/31/2021</p>	
<p>Estimated Cost: \$87.6K</p>	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

COMMUNICATIONS – 9



CEP Recommendation: CPS 9	Collaborate with the CoSA and municipal partners to develop a continuous emergency preparedness campaign
CPS Priority: 5	Resolution: CPS Energy met with CoSA and SAWS and determined in the short term, CPS Energy will share Ready South Texas information as part of our ongoing awareness campaign.
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: Included in CPS 8	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

MARKET REDESIGN – 1



CEP Recommendation: CPS 1	A. Support legislation development that ensures ERCOT has sufficient reserve capacity from all generation sources B. Support the state's evaluation of making an investment to connect to grids outside of Texas C. Suggest that the state pursue efforts to guarantee loans to build or contract additional capacity to meet demands
CPS Priority: 6	Resolution: CPS Energy is engaging in 34 meetings addressing 37 PUC rulemakings & ERCOT protocol revisions that address energy market redesign. We will continue to monitor and engage until closure.
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$144K	

Note: Administrative Closeout Also Complete

CoSA CEP RECOMMENDATION

MARKET REDESIGN – 3



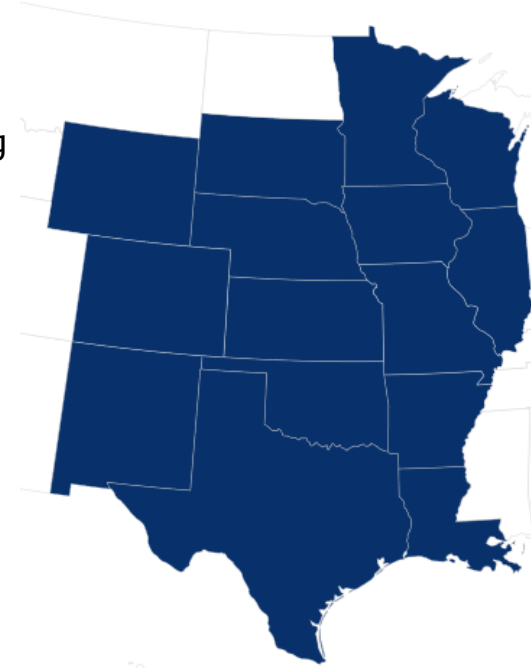
CEP Recommendation: CPS 3	Support development of legislation that ensures ERCOT has sufficient energy reserve capacity from all generation sources
CPS Priority: 6	Resolution: CPS Energy is engaging in 34 meetings addressing 37 PUC rulemakings & ERCOT protocol revisions that address energy market redesign. We will continue to monitor and engage until closure.
Status: Complete	
Estimated Completion Date: 12/31/2021	
Estimated Cost: \$144K	

Note: Administrative Closeout Also Complete

WINTER READINESS

EXTERNAL ACTIVITIES

- Electric Reliability Council of Texas (ERCOT) “Roadmap to Improving Grid **Reliability**”, updated policies & procedures to increase “operating margin”
- Public Utility Commission of Texas (PUC) Rulemaking to Establish Electric Weatherization Standards (2 phases)
- Federal Energy Regulatory Commission’s (FERC) Final Report “The February 2021 Cold Weather Outages in Texas & the South Central United States”
- PUC “Market Redesign Blueprint” (2 phases)
- Railroad Commission rulemaking around critical designation of natural gas infrastructure & natural gas curtailment standards



CPS Energy remains actively engaged in multiple efforts at the state level to continue to improve the overall grid **Resiliency & represent the interests of our community.**

WINTER PREPARATIONS



Plant Operations & Support



- Enhanced weatherization completed
- Third-party validation of improvements
- Increased natural gas storage ability
- Moved plant maintenance schedule ahead of winter months

Outage Management



- Improved load shed capacity with more circuits to minimize customer impact, i.e., better rotation of outages
- Third-party validation of improvements
- Additional use of advanced technologies

Grid Operations & Support



- More collaboration with the City of San Antonio, Bexar County, SAWS & emergency managers
- Review of procedures completed
- Updated procedures for winter operations

Emergency Preparedness



- Ongoing participation in local, state & federal training
- Executive liaison assigned to regional Emergency Operations Center

Stakeholder Communications



- Ongoing collaboration with the City of San Antonio, Bexar County, SAWS & emergency operations
- Launched stakeholder text alerts
- Engaging in public input & feedback opportunities

Customer Communications



- Review & refresh communications plans
- Multi-pronged approach to reach customers
- Updated 100,000 customer contacts through Manage My Account to date
- Community Town Halls & Utility Assistance Fairs

Policy Activity



- Engaging with local, state & federal regulators & policy makers
- Participating in regulatory proceedings
- Involved in development of ERCOT protocol revisions

We are committed to continuing overall infrastructure & communications improvements to ensure **Reliability & Resiliency** for our customers.