



## **Item 6: Update on CPS Energy Reliability Must-Run (RMR) and Must- Run Alternative (MRA) Process**

Pablo Vegas  
President and Chief Executive Officer

Woody Rickerson  
Senior Vice President and Chief Operating Officer

Chad V. Seely  
Senior Vice President, General Counsel and  
Corporate Secretary

Board of Directors Meeting

ERCOT Public  
October 10, 2024

# Overview

- **Purpose**

Provide an update on the pending Reliability Must-Run (RMR) and Must-Run Alternative (MRA) processes related to the CPS Energy's Braunig Resources

- **Voting Items / Requests**

No action is requested of the ERCOT Board; for discussion only

- **Key Takeaway(s)**

- ERCOT and CPS Energy continue to negotiate 1) terms of potential RMR Service by CPS Energy's V.H. Braunig Generation Resources, units 1-3 (the Braunig Resources)
- CPS Energy changed the Notification of Suspensions of Operation (NSO) date for Braunig Unit 3 from March 31, 2025 to March 2, 2025. This resolves pre-RMR policy issues
- The deadline to submit responses to the pending ERCOT Request for Proposal seeking MRAs was October 7. ERCOT received one MRA offer
- ERCOT Staff intends to bring recommendations to the R&M Committee and ERCOT Board at the December 2 and 3, 2024 meetings, respectively

# Notices of Suspensions of Operation (NSOs)

Resource	Summer Max Rating	Year in Service	Proposed Suspension Date
BRAUNIG_VHB1	217 MW	1966	March 31, 2025
BRAUNIG_VHB2	230 MW	1968	March 31, 2025
BRAUNIG_VHB3	412 MW	1970	March 2, 2025*

- Because CPS Energy advised that each unit must be inspected and repaired if it were to operate beyond March 31, 2025, and each unit must be consecutively (not concurrently) inspected and repaired, ERCOT explored a potential agreement for potentially earlier inspection and repair of Braunig unit 3 and asked CPS Energy if it would move the suspension date for Braunig unit 3
- On October 3, CPS Energy revised its NSO for Braunig unit 3 so the proposed suspension date is now earlier, on March 2, 2025
- This earlier dates improves the odds that if the Board approves their RMR Service, Braunig units 3 and 1 will be available to serve Summer 2025 peak demand




# Reliability Analysis Conducted

- NSOs submissions prompted a reliability analysis under Public Utility Commission of Texas (PUC) rule 25.502(e) and Protocols § 3.14.1.2
- The reliability analysis looks at transmission-system impacts, not resource adequacy
- The reliability analysis showed ERCOT System performance deficiencies affected by suspension of the Braunig Resources:
  - Transmission facilities loaded above their normal rating under precontingency conditions where the Braunig Resources had an unloading Shift factor of +2% and an unloading impact of +5%;
  - Transmission facilities above 110% emergency loading where the Braunig Resources had an unloading Shift factor of +2% and an unloading impact of +5%; and
  - Cascading under study conditions specified in Protocols § 3.14.1.2(3)(c)(ii)

# Reliability Must-Run (RMR) and MRA Processes

- The reliability findings triggered both
  - the RMR process in which ERCOT and CPS Energy negotiate potential provision of RMR Service by one or more of the Braunig Resources and
  - the MRA process in which ERCOT seeks lower-cost alternatives (MRA Resources) to the provision of RMR Service by one or more of the Braunig Resources
- Under PUC Rule 25.502(e) and ERCOT Protocols § 3.14.1.3, **the ERCOT Board decides** whether to enter into any RMR and/or MRA agreement(s). ERCOT Staff makes a recommendation for the ERCOT Board's consideration

Electric Reliability Council of Texas, Inc. (ERCOT)



**Request for Proposal**  
**For**  
**Must-Run Alternative to**  
**Braunig Reliability Must-Run Agreements**  
Version 1.1

**Date of Release: August 21, 2024**  
**Proposal Deadline: October 7, 2024**

**Revision History**

Date	Author	Version	Change reference
7/25/24	ERCOT	1.0	Initial Version
8/21/24	ERCOT	1.1	Amended Version

1

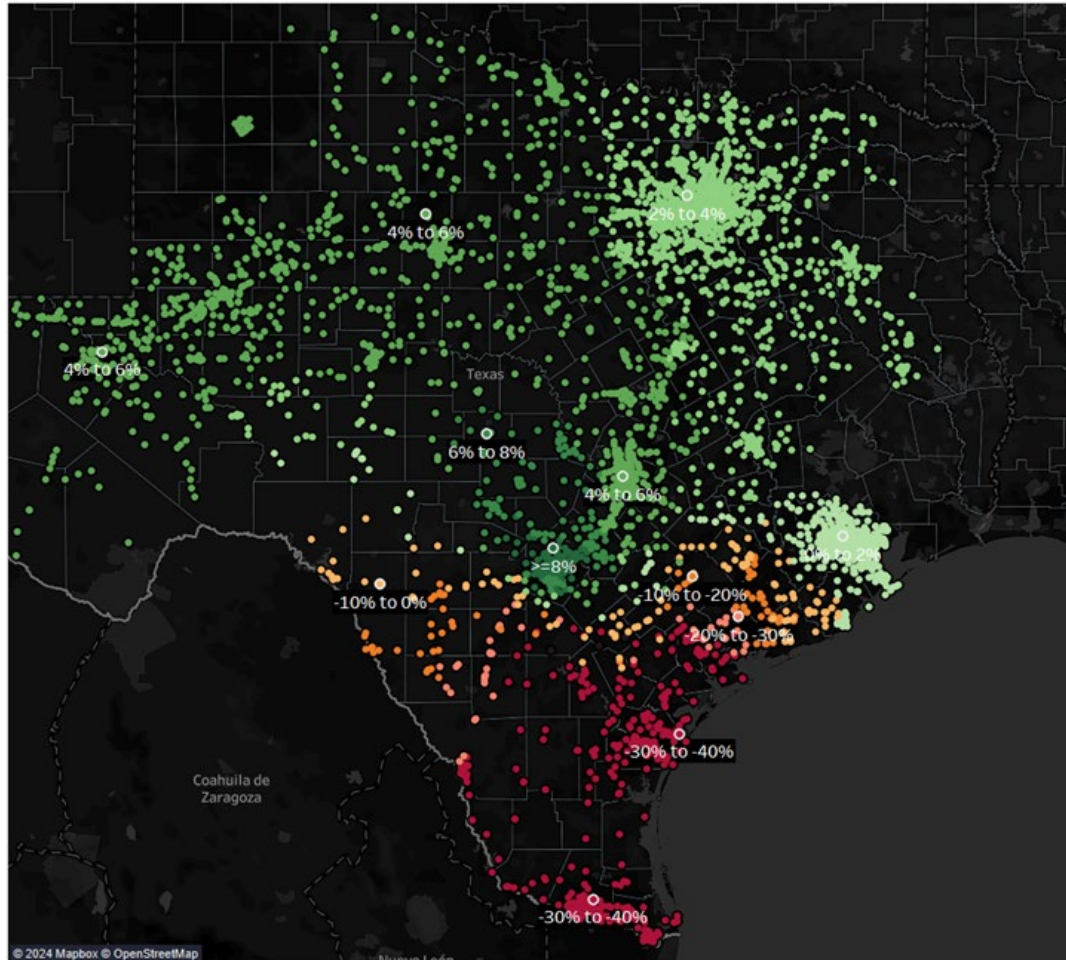
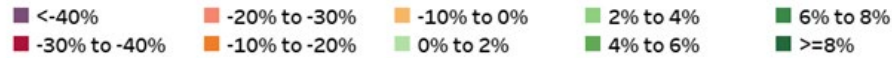
# South Texas Export Interconnection Reliability Operating Limits (IROLs)

- The South Texas Export IROLs were established earlier in 2024 because analysis showed that under certain conditions, involving high system demand plus the outage of a major transmission line and one or more large generation units, the overload of certain transmission lines that deliver power from South Texas to the San Antonio region could lead to cascading outages
- ERCOT is obligated by NERC Reliability Standards to develop a plan to avoid the exceedance of IROLs. This plan includes load shedding, if necessary
- The proposed suspension of the Braunig Resources affects pre- and post-contingency loading on the 345-kV transmission lines that are subject to the South Texas Export IROLs
- Potential RMR or MRA Service would be to reduce loading, when needed, on the 345-kV transmission lines that are subject to the South Texas Export IROLs



# The MRA RFP Seeks MRAs with a “Helping” Shift Factor

## Max. Shift Factor



- The Braunig Resources are located where there is a 8.76% shift factor that reduces (or helps relieve) south to north loading on the transmission lines that are subject to the South Texas Export IROLs
- Likewise, the MRA RFP seeks MRAs from any locations with helping shift factors
- Shift factors will be considered in ERCOT’s recommendations to the Board in December

## Additional Key MRA Requirements

- The RFP seeks
  - Generation Resources, including Energy Storage Resources (ESRs), that were not included in the ERCOT reliability need evaluation
  - Settlement Only Generators or Distributed Generation
  - Demand Response (DR)
- MRA Service start and end dates can range from April 1, 2025 through March 31, 2027. QSEs have flexibility in offering by season and offered seasons do not have to be contiguous
- Hours the MRAs must be available to provide MRA Service vary by Season; they are 4 hours during spring and fall, 5 hours during summer, and a total 9 hours during winter (4 hours in mornings, 5 hours in afternoons/evenings)
- There is a 3-hour max duration for deployment of DR or ESR MRAs
- There are caps on the number of deployments for DR MRAs: 10 times per each Season, except 25 times per each summer



# Initial Summary of Proposed MRA Submissions

- ERCOT received one proposal for one, 200 MW, multi-hour Energy Storage Resource (ESR) MRA by the submission deadline
- MRA Service proposed to start in summer 2026 and end on March 31, 2027
- Located in a site with a helping shift factor
- ERCOT will be conducting eligibility and qualification analysis of the proposed ESR MRA

**Key Takeaway:** No proposals for MRA Service in 2025 were received

# RMR Negotiations

- ERCOT and CPS Energy have been negotiating
  - terms of potential RMR Service by CPS Energy’s Braunig Resources
  - potential terms of a pre-RMR outage, inspection, and repair of Braunig unit 3 starting before April 1, 2025. (This topic is now resolved)
- CPS Energy moved the proposed suspension date of Braunig unit 3 to March 2, 2025
- Numerous meetings have been held, focusing most on lost opportunity cost if Braunig unit 3’s outage began before any RMR Service (now resolved); the outage, inspection and repair processes for all units, including how to control costs as unit conditions are assessed; and the costs of any potential RMR Service from each unit
- Most recently, CPS Energy raised a potential issue regarding the long lead times for needed parts for unit repairs. ERCOT is seeking more information on this topic

# Evaluation of Potential RMR and MRA Resources

- ERCOT will conduct a qualification analysis on the potential MRA
- Thereafter, ERCOT will analyze the Braunig Resources and, if qualified, the potential MRA to form a recommendation for the Board. This recommendation will include, at a minimum,
  - a comparison of the alternatives to RMR Service against the feasibility, cost and reliability impacts of RMR Service;
  - the timeframe in which ERCOT expects each unit to be needed for reliability;
  - the type and scope of reliability concerns identified for each RMR Unit or MRA, as applicable
- ERCOT anticipates the cost and reliability analysis will compare the cost of the service of an RMR or MRA Resource to the value of the reduction in expected hours of unserved energy (EUE) provided by the Resource using a Value of Loss of Load (VOLL) of \$35,000/MWh over one and two years
- The cost for RMR and/or MRA Service will include standby costs, operating costs, and (for RMR only) an incentive factor
- ERCOT will recommend to the Board whether any RMR and/or MRA options are a cost-effective solution to the reliability needs found in the ERCOT reliability analysis. It can include a combination of RMR and/or MRA Services



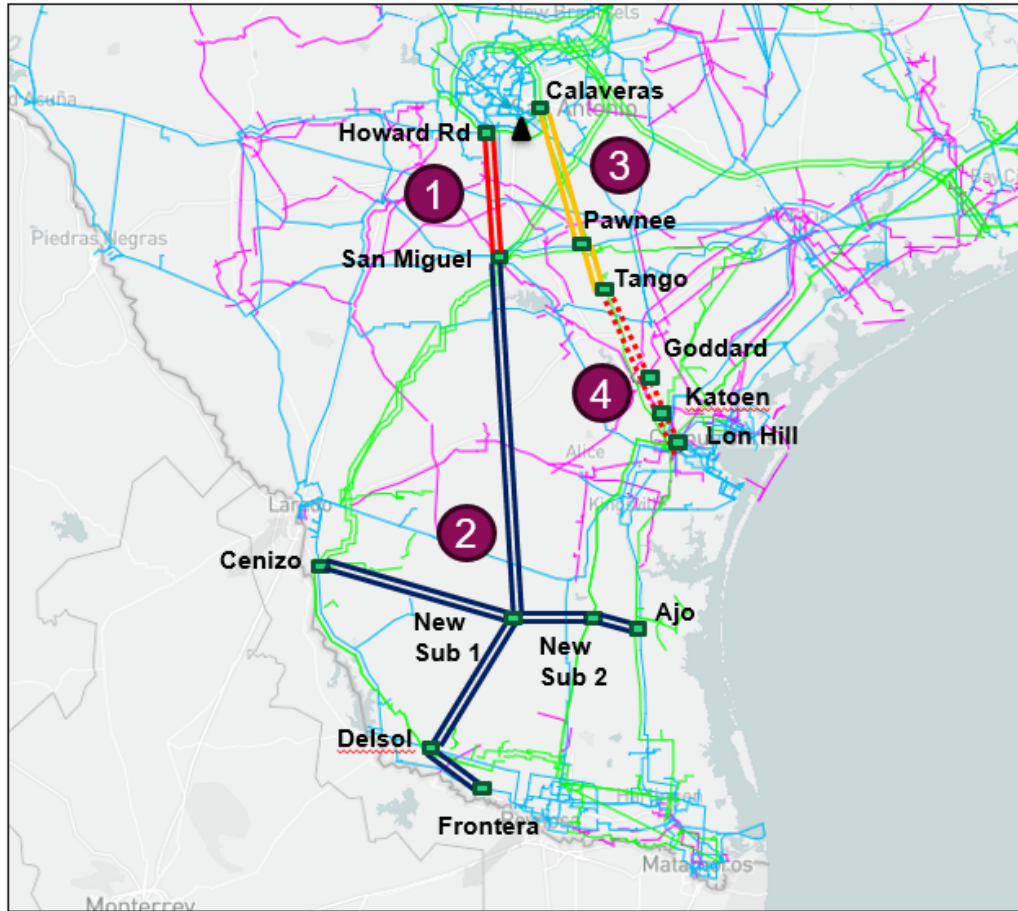
# Evaluation of Potential RMR and MRA Resources

- The Protocols (3.14.1.5 Evaluation of Alternatives) specify the factors ERCOT must consider in forming its recommendation
  - (a) The degree to which the option addresses the identified performance deficiency;
  - (b) The total expected cost of each option;
  - (c) Expected unit performance of the Generation Resource proposed for suspension of operations, including start-up time, minimum run-time, minimum down-time, and historical unit outage data;
  - (d) Operational limitations of proposed MRAs, including start-up times, minimum run-times, ramp periods, and return-to-service times;
  - (e) Other operational constraints or operational benefits of the proposed option; and
  - (f) Any other factors which ERCOT determines are relevant to the evaluation, and for which ERCOT can develop quantifiable criteria with which to evaluate all proposed options

## Evaluation of Potential RMR and MRA Resources

- In evaluating the expected impact to Customers due to the performance deficiency, ERCOT shall consider the following factors:
  - (a) Expected amount of Customer Demand affected (MWh);
  - (b) Expected number of hours during which Customers will be affected;
  - (c) Number of Customers affected;
  - (d) Possible additional Customer impacts due to unforeseen conditions, such as Generation Resource unavailability, transmission circuit Outages, or Load variation due to extreme weather; and
  - (e) Potential economic impact to Customers

# Exit Strategy from Any RMR and/or MRA Service



ID	Project Name	Status
1	San Antonio South Reliability I Project	Endorsed ISD: 2027
2	LRGV Transmission Improvement Project	Endorsed ISD: 2027
3	San Antonio South Reliability II Project	Endorsed ISD: 2029
4	Tango-Goddard-Kateon-Lon Hill 345-kV Line Upgrade to DCKT	Conceptual (ISD: NA)

▲ Braunig VHB1, 2, and 3 : Total 859 MW

**Key Takeaway:** The ERCOT Board has already endorsed transmission projects that are expected to eliminate the need for any RMR or MRA Service. The estimated earliest in-service date is June 2027, and ERCOT is urging TSPs to accelerate these projects

# RMR and MRA Processes Timeline

