



CPS Energy – San Antonio South Reliability Project – ERCOT Independent Review (EIR) Status Update

Tanzila Ahmed

RPG Meeting
May 16, 2023

Recap

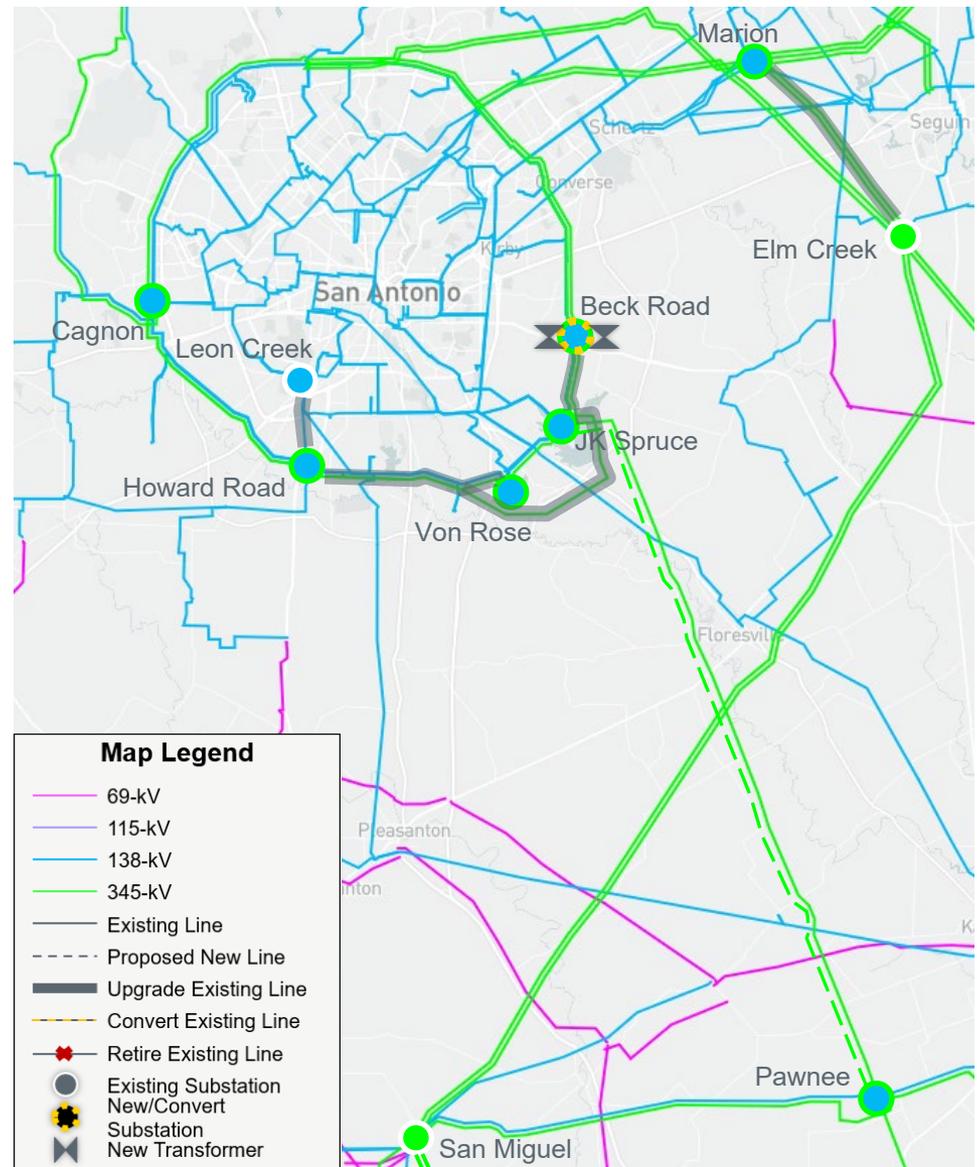
- CPS Energy (CPS) submitted the San Antonio South Reliability Project for Regional Planning Group (RPG) review in December 2022. This is a Tier 1 project
 - Estimated cost \$281 million
 - Requires a Certificate of Convenience and Necessity (CCN)
 - Expected in-service date: June 2027
 - Addresses thermal overloads in the San Antonio area
 - Has a “critical status designation”

Recap - continued

- CPS presented project overview at the January RPG
 - <https://www.ercot.com/calendar/01252023-RPG-Meeting>
- ERCOT presented project Scope at the February RPG
 - <https://www.ercot.com/calendar/02142023-RPG-Meeting>
- ERCOT presented project Need along with Initial and short-listed Options at the March RPG
 - <https://www.ercot.com/calendar/03222023-RPG-Meeting>
- ERCOT presented Maintenance Outage Scenarios Assessment, Long-term Load Serving Capabilities, and 2022 Summer Peak Operation Case Sensitivity Analysis Results at the April RPG
 - <https://www.ercot.com/calendar/04112023-RPG-Meeting>
- This project is currently under ERCOT Independent Review (EIR)

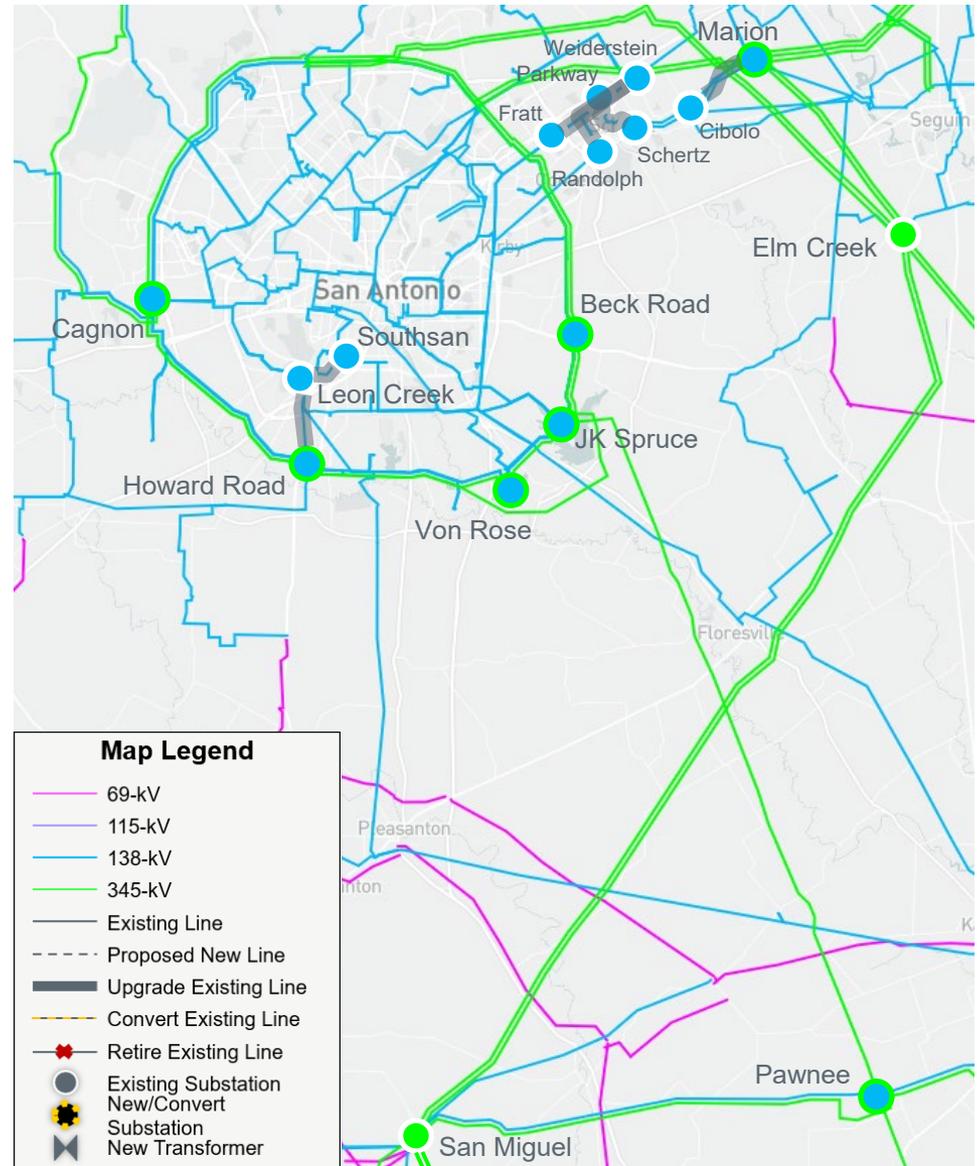
Recap - Option 3

- Rebuild 45.8-mile Spruce to Pawnee 345-kV line to a double circuit transmission line
- Rebuild 35-mile Howard Rd to Spruce and Howard Rd to Von Rose 345-kV transmission lines
- Rebuild 13.9-mile Elm Creek to Marion 345-kV double circuit transmission line
- Rebuild 5.2-mile Beck to Spruce 345-kV double circuit transmission line
- Build Beck Road 345/138-kV switchyard and install two 600-MVA autotransformers



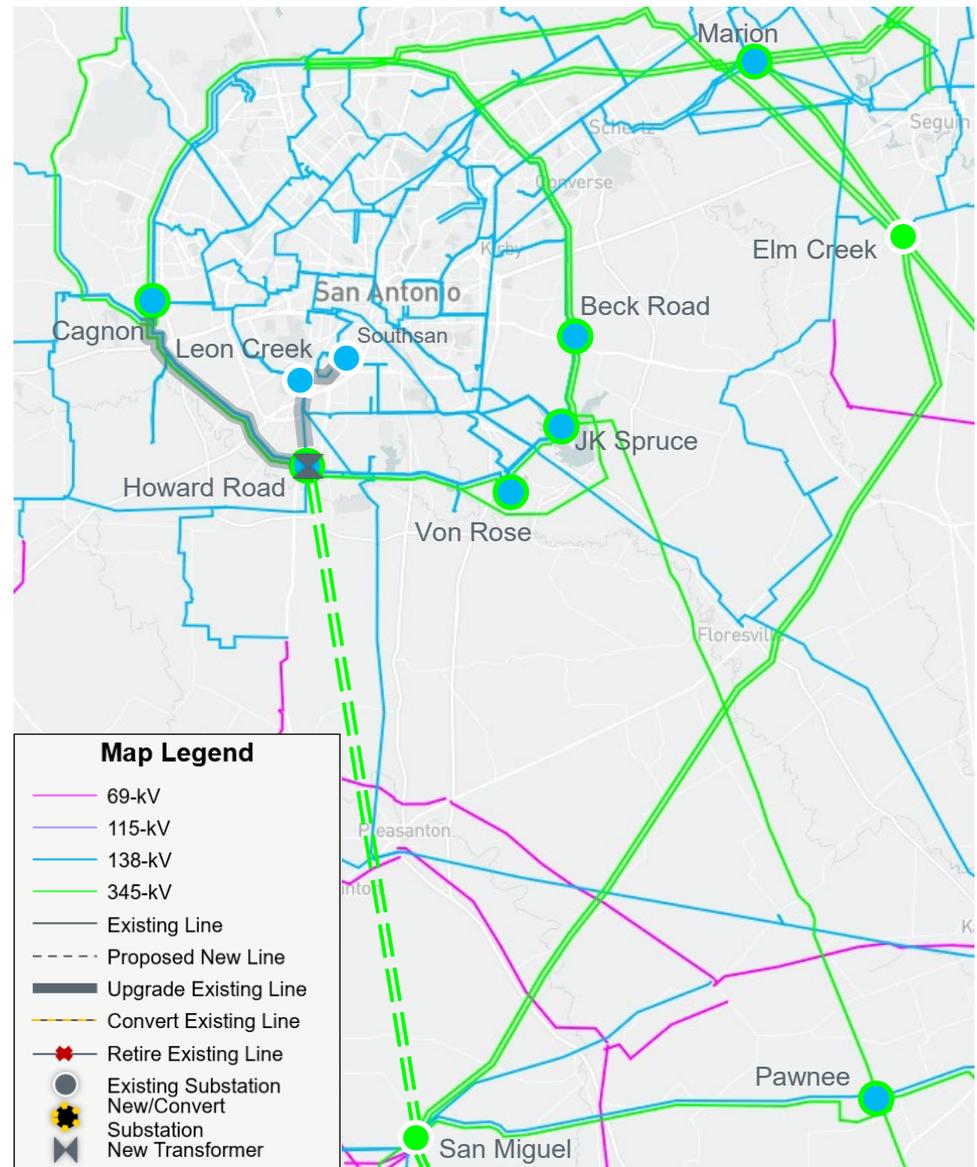
Recap - Option 4

- Rebuild 4.9-mile Howard Rd to Leon Creek 138-kV transmission line
- Rebuild 2.9-mile Leon Creek to Southsan 138-kV transmission line
- Rebuild 4.1-mile Fratt to Parkway 138-kV transmission line
- Rebuild 5.5-mile Randolph to Weiderstein 138-kV transmission line
- Rebuild 4.8-mile Marion to Cibolo Double Circuit 138-kV transmission line
- Rebuild 2.8-mile Schertz to Parkway 138-kV transmission line



Recap - Option 5 – CPS-Preferred Option with Additional Upgrades

- Construct new 50-mile Howard Road – San Miguel 345-kV double circuit transmission line
- Rebuild 14.9-mile Cagnon to Howard Road 345-kV double circuit transmission line
- Rebuild 4.9-mile Howard Road to Leon Creek 138-kV transmission line with a minimum Rate A of 698 MVA
- Add a third 600-MVA 345/138-kV autotransformer at Howard Road substation
- Rebuild 2.9-mile Leon Creek to Southsan 138-kV transmission line



Comparison of Short-listed Options

	Option 3	Option 4	Option 5
Meets ERCOT and NERC Reliability Criteria	Yes	Yes	Yes
Improves Long-Term Load Serving Capability	Yes (Better)	Marginally	Yes
Improves Performance in Summer Peak Operations Case Sensitivity	Yes	No	Yes
Improves Operational Flexibility	No	No	Yes
Provides an additional transfer path from Southern Texas	No	No	Yes
Requires CCN (miles)	No	No	Yes (~50)
Project Feasibility	Yes	No	Yes
Cost Estimate* (\$M)	505.6**	N/A	329.1

* Cost estimates were provided by Transmission Service Providers (TSPs)

** Cost may increase to include additional transmission upgrade

- Based on TSP feedback, Option 4 was deemed infeasible due to long-term customer outages required for construction
- Although Option 3 provides better Long-Term Load Serving Capability, Option 5
 - Provides better operational flexibility
 - Provides a new 345-kV transfer path from Southern Texas
 - Is the least cost option

Preferred Option

- Option 5 is selected as the preferred option because it
 - Addresses reliability violation
 - Improves Long-Term Load Serving Capability for future load growth in the area
 - Improves operation flexibility
 - Provides an additional transfer path from Southern Texas to San Antonio
 - Is the least cost feasible option

Additional Sensitivity Analyses

- Generation Addition Sensitivity Analysis

- Per Planning Guide Section 3.1.3(4)(a), ERCOT performed a generation addition sensitivity by adding the generation listed below to the preferred option case. The additional resources were modeled following the 2022RTP methodology. ERCOT determined relevant generators do not impact the preferred option

GINR	Project Name	Fuel Type	Capacity (MW)	County
19INR0022	Monte Alto I	WIN	189.00	Willacy
19INR0023	Monte Alto 2 Wind	WIN	272.76	Willacy
20INR0086	Arroyo Solar	SOL	180.00	Cameron
21INR0226	Equinox Solar 1	SOL	200.00	Starr
21INR0391	Grandslam Solar	SOL	121.89	Atascosa
22INR0251	Shaula I Solar	SOL	205.20	DeWitt
22INR0257	Corazon Solar Phase II	SOL	203.90	Webb
22INR0267	Shaula II Solar	SOL	205.20	DeWitt
23INR0061	Noria Solar DCC	SOL	145.00	Nueces
23INR0093	Alila Solar	SOL	256.50	San Patricio
25INR0223	Uhland Maxwell	GAS	184.00	Caldwell

- Load Scaling Sensitivity Analysis

- Per Planning Guide Section 3.1.3(4)(b), ERCOT performed a load scaling sensitivity and concluded that the load scaling did not have a material impact on project need

Additional Analyses

- Congestion Analysis
 - Congestion Analysis is being performed for the preferred Option 5 using the 2022 RTP 2027 Final Economic case
- Sub-Synchronous Resonance (SSR) Assessment
 - SSR assessment is being performed for the preferred Option 5 per Nodal Protocol Section 3.22.1.3

Next Steps and Tentative Timeline

- Tentative timeline
 - Final Status update at June RPG meeting
 - EIR Report to be posted in the MIS
 - June 2023
 - EIR recommendation to TAC
 - June 2023
 - Seek ERCOT Board of Directors endorsement
 - August 2023

Thank you!



Stakeholder comments also welcomed through:

Tanzila.Ahmed@ercot.com

Robert.Golen@ercot.com