



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

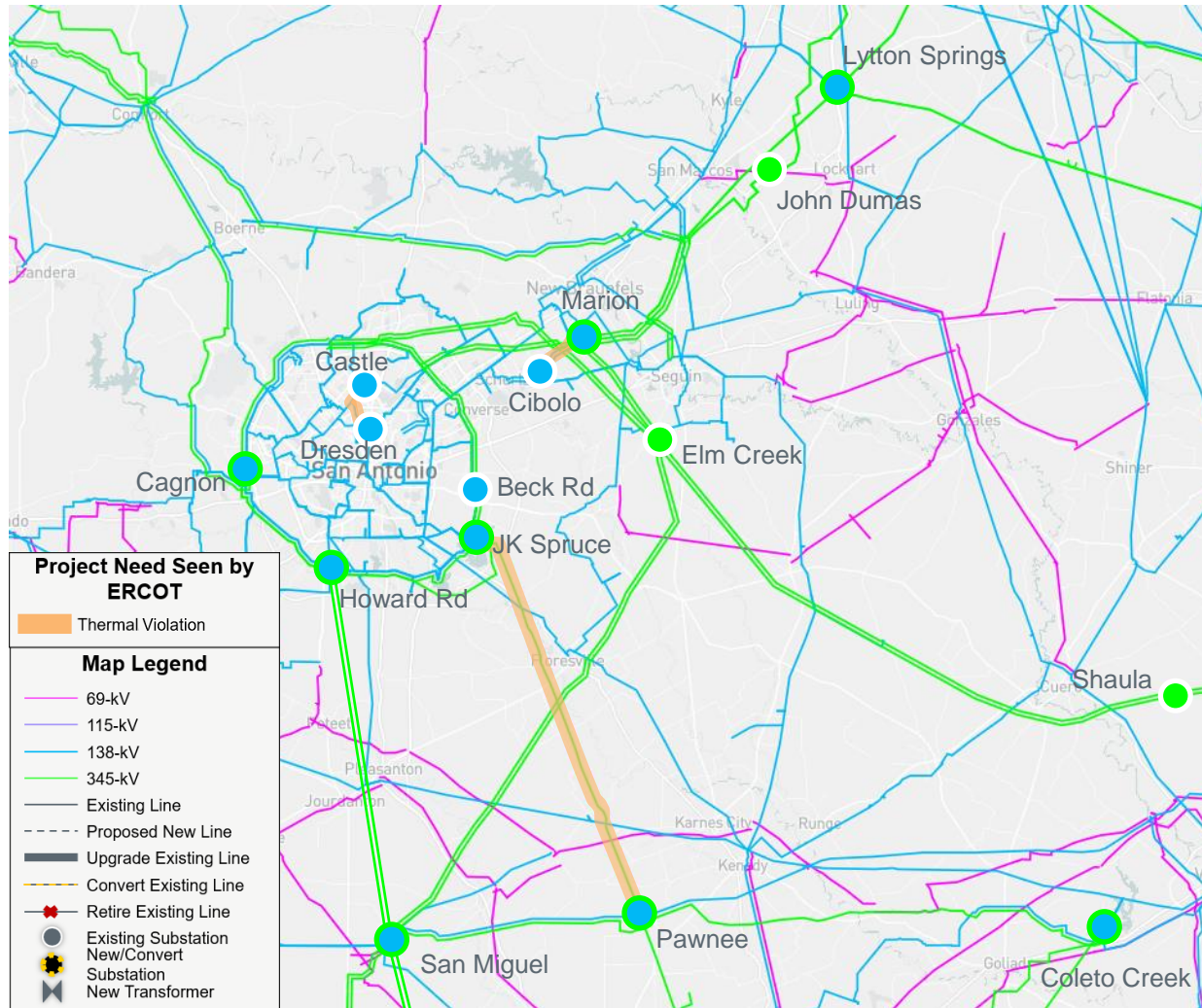
Caleb Holland

RPG Meeting
April 9, 2024

Recap

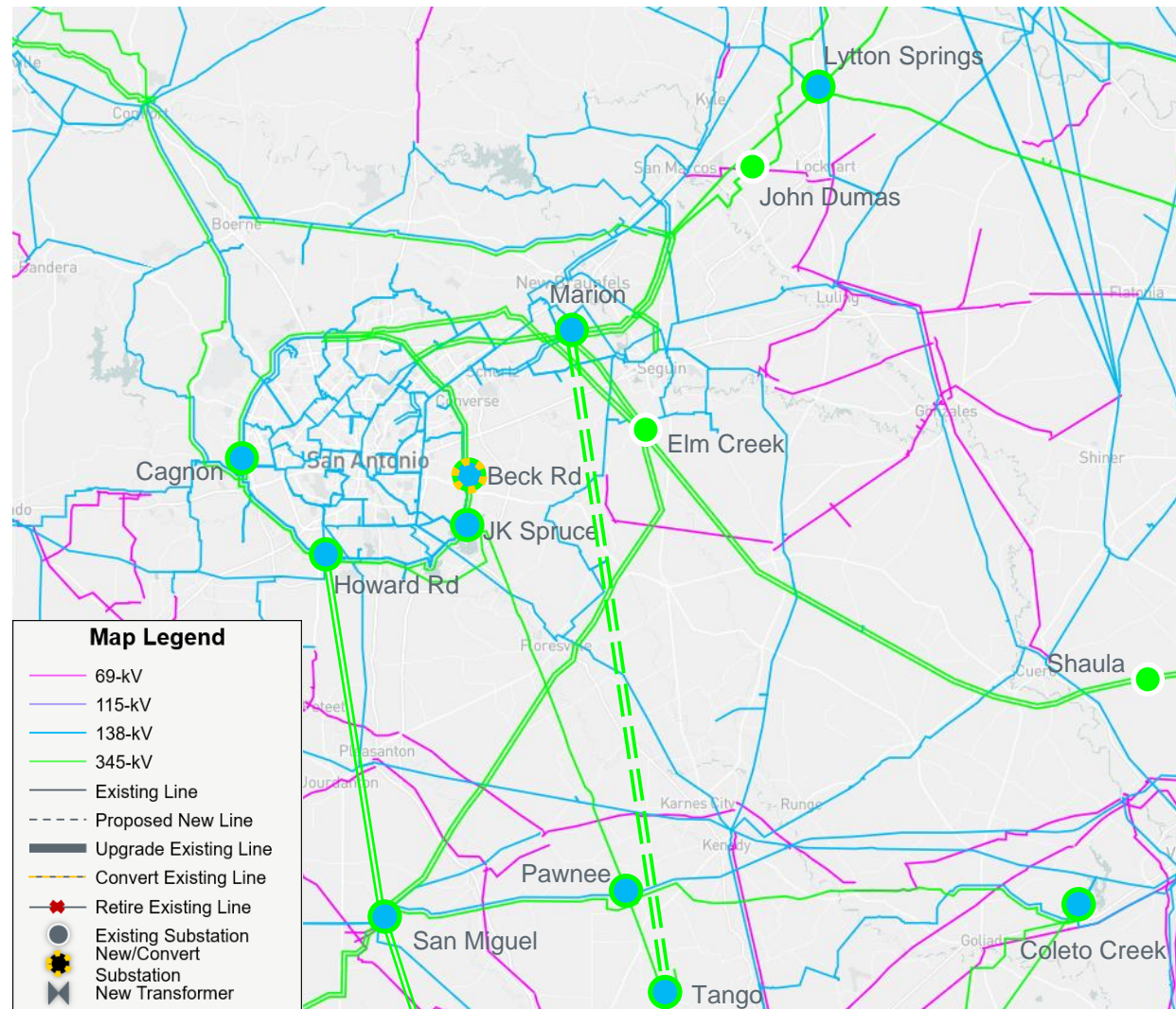
- ERCOT provided the study scope and then status updates at the November 2023 and January, February, and March 2024 RPG Meetings
 - <https://www.ercot.com/calendar/11142023-RPG-Meeting>
 - <https://www.ercot.com/calendar/01172024-RPG-Meeting>
 - <https://www.ercot.com/calendar/02122024-RPG-Meeting>
 - <https://www.ercot.com/calendar/03182024-RPG-Meeting--Webex>
- This project is currently under ERCOT Independent Review (EIR)

Recap – Project Need as Seen by ERCOT



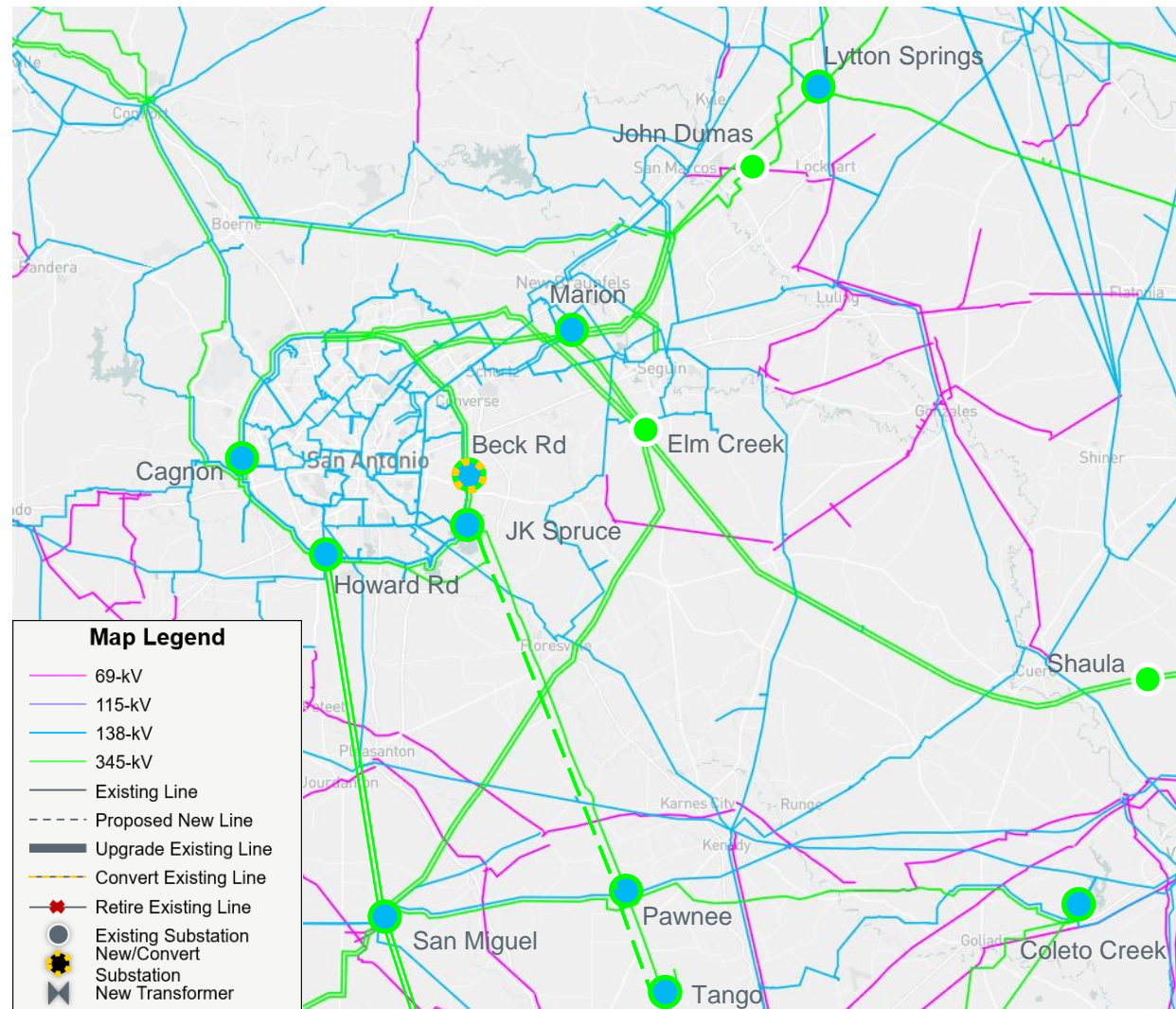
Recap – Option 10

- Construct a new 345-kV double circuit transmission line from Tango to Marion
- Construct a new 345/138-kV switching station on the East side of San Antonio near Beck Rd



Recap – Option 14

- Construct a new 345/138-kV switching station on the East side of San Antonio near Beck Rd
- Rebuild the 345-kV single circuit from JK Spruce to Pawnee into a 345-kV double circuit transmission line
- Rebuild the 345-kV single circuit from Pawnee to Tango into a 345-kV double circuit transmission line
- The Spruce to Pawnee 345-kV rebuild and the Pawnee to Tango 345-kV rebuild will be done without the need for extended outages



Comparison of Short-listed Options

	Option 10	Option 14
Meets ERCOT and NERC Reliability Criteria	Yes	Yes
Improves Long-Term Load Serving Capability	Yes	Yes (Best)
Improves Operational Flexibility	Yes	Yes (Marginally)
Additional transfer circuits from Southern Texas	2	1
Requires CCN* (miles)	~87	~58
Project Feasibility	Yes	Yes
Cost Estimate* (\$M)	~492	~435

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

- Final Short-list: Options 10 and 14

Preferred Option

- Option 14 is selected as the preferred option because it
 - Addresses the reliability violation
 - Provides the best combined long-term load serving capability
 - Requires the least mileage of CCN and ROW
 - Is the least expensive option

Sub-Synchronous Resonance (SSR) Assessment

- Sub-Synchronous Resonance (SSR) Assessment was conducted for the preferred Option 14 per Nodal Protocol Section 3.22.1.3
 - ERCOT found no adverse SSR impacts to the existing and planned generation resources at the time of this study

Next Steps and Tentative Timeline

- Tentative timeline
 - EIR Report to be posted in the MIS
 - April 2024
 - EIR recommendation to TAC
 - April 2024
 - Seek ERCOT Board of Directors endorsement
 - April 2024

Thank you!



Stakeholder comments also welcomed through:

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Appendix A – Transmission Projects Added to Study Case

TPIT No	Project Name	Tier	Project ISD	TSP	County
67992	CPSE_345- kV_Howard_Switching_Station,CPSE_Hamilton_to_MedCtr_U pgrade,CPSE_Medina_to_36th_Street_Upgrade	Tier 3	26-Jan	CPS	Bexar
71873	CPSE_Hill Country Auto# 2 Impedance Upgrade	Tier 3	25-Jun	CPS	Bexar
71917	Upgrade STEC Castroville to Pearson to 138-kV	Tier 2	25-May	STEC	Medina
71935	STEC_71935_HCCastrovl138	Tier 2	25-Feb	STEC	Medina
72882	LCRATSC_Lockhart_Luling_69kV_TL_Overhaul	Tier 4	25-Jun	LCRA TSC	Caldwell
73050	LCRATSC_JohnDumas_Substation_Addition	Tier 4	25-Feb	LCRA TSC	Caldwell
73053	Wimberley Loop to New Substation	Tier 2	27-May	PEC	Hays
73417	LCRATSC_Schumansville_SheriffsPosse_StormHardening	Tier 4	25-May	LCRA TSC	Guadalup e
73793	LCRATSC_McCartyLaneEast_Zorn_TL_Storm_Hardening	Tier 4	25-May	LCRA TSC	Hays
73838	LCRATSC_Redwood_SanMarcos_TL_Upgrade	Tier 4	25-May	LCRA TSC	Hays
75682	Add Branch between Libra and Elm Creek	Tier 4	23-Nov	CPS	Wilson
76790	Upgrade Pearsall Auto	Tier 4	27-May	STEC	Frio
73025	CPSE_NEW_SHAULA	Tier 4	24-Nov	CPS	Dewitt

Appendix B – RTP Placeholder Projects Removed from Study Case

RTP Project ID	Project Name	TSP	County
2023-SC5	Beck Road 345/138-kV Substation Expansion	CPS	Bexar
2023-SC19	South to Central Texas 345-kV Double-Circuit Line Additions	AEN, AEP, LCRA, ONCOR	San Patricio, Bee, Karnes, Wilson, Guadalupe, Comal, Hays, Travis, Williamson
2023-SC10	Wiseman 138-kV Substation Addition and CPS Multiple Cap Bank Additions	CPS	Bexar, Comal

Appendix C – Generation Added to Study Case

GINR	Project Name	Fuel	Project COD	Capacity (MW)	County
22INR0366	BRP Libra BESS	OTH	01/26/2024	206.21	Guadalupe
22INR0368	Padua Grid BESS	OTH	12/01/2024	51.39	Bexar
22INR0422	Ferdinand Grid BESS	OTH	05/31/2026	202.65	Bexar
23INR0027	Cachena Solar SLF	SOL	12/31/2025	600	Wilson
23INR0154	Ebony Energy Storage	OTH	04/01/2024	203.5	Comal
23INR0381	Soportar ESS	OTH	03/15/2025	102.11	Bexar
24INR0427	CPS AvR CT1 Rotor Replacement	GAS	01/30/2024	11.3	Bexar
25INR0223	Uhland Maxwell	GAS	04/15/2025	181.1	Caldwell
22INR0251	Shaula I Solar	SOL	10/30/2025	205.2	DeWitt
22INR0267	Shaula II Solar	SOL	05/30/2026	205.2	DeWitt

Appendix D – G-1 Generators and X-1 Transformers

G-1 Generators	X-1 Transformers
Guadalupe – GUADG_GAS1 GUADG_GAS2 GUADG_STM5	Hill Country – Ckt 1 345/138-kV
San Miguel – SAN_SANMIGG1	Marion – Ckt 1 345/138-kV
Spruce – CALAVER_JKS2	San Miguel – Ckt 1 345/138-kV
	Skyline – Ckt 1 345/138-kV