



## AEPSC LRGV Transmission System Addition – ERCOT update

RPG Meeting  
August 18, 2015

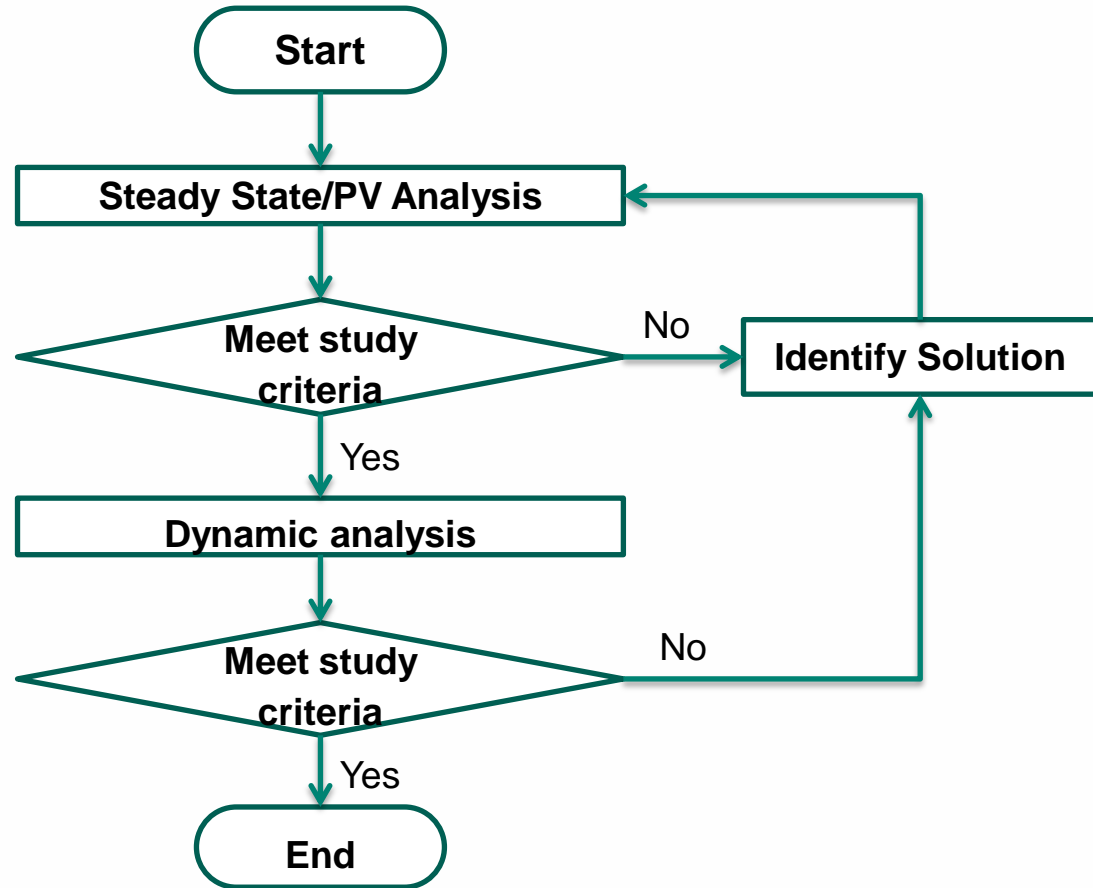
# Status of AEPSC LRGV RPG Project Review

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- ❑ The AEPSC LRGV project has gone through the comment period and study mode and is in ERCOT Independent Review.
  
- ❑ ERCOT is working on the study scope to assess the need of the Lower Rio Grande Valley import project.
  - Current status:
    - ERCOT developed the draft study scope

# Study Assumption

- ❑ Study Area:
  - The primary focus is the system in the South weather zone, particularly the transmission system in the Lower Rio Grande Valley.
- ❑ Proposed Study Process:



# Study Assumption

## □ Study Case:

- Steady state:
  - 2021 South/South Central (SSC) peak case from the 2015 Regional Transmission Plan (RTP) (based on the 2015 SSWG Dataset B)
- Dynamic analysis
  - 2021 DWG Flat Start case

Location	2021 SSC RTP Load	SSWG 2021 Summer Peak Load	AEP 2021 Summer Peak 90/10 Forecast	AEP 2021 Winter Peak 90/10 Forecast
South Central	14272	14296	N/A	N/A
Southern	7421	7150	N/A	N/A
Valley	2727	2469	2660	2911

- The Valley load consists of the following six zones in the study case:
  - 610 (E Valley), 615 (W Valley), 800 (BPUB), 829 (SHRY), 875 (MVEC\_E), 876 (MVEC\_W)

# Study Assumption

- The following generators meet the Planning Guide Section 6.9 requirements as of August 10, 2015 and are already included in the 2021 RTP base case.

INR	Name	MW	Fuel	County	Weather Zone
06INR0022c	Baffin Wind	202	Wind	Kenedy	Southern
11INR0054	Midway Wind	161	Wind	San Patricio	Southern
11INR0057	Cameron Wind	165	Wind	Cameron	Southern
11INR0062	Patriot Wind	180	Wind	Nueces	Southern
11INR0079a	Shannon Wind	200	Wind	Clay	North
12INR0068	Sendero Wind	78	Wind	Jim Hogg	Southern
12INR0070	Green Pastures	300	Wind	Knox	North
13INR0020a	Rattlesnake I	211	Wind	Glasscock	Far West
13INR0050	Logans Gap I	211	Wind	Comanche	North Central
13INR0052	Los Vientos III	200	Wind	Starr	Southern
14INR0023	Longhorn North	200	Wind	Briscoe	North
14INR0025a	South Plains I	200	Wind	Floyd	North
14INR0031	Baytown Chiller	270	Gas	Chambers	Coast
14INR0032a	Route 66	150	Wind	Randall	North
14INR0038	PHR Peakers	390	Gas	Galveston	Coast
14INR0039	Ector Energy	341	Gas	Ector	Far West
14INR0040	Redgate G	225	Gas	Hidalgo	Southern
14INR0047	Wake Wind	299	Wind	Dickens	North
14INR0053	Spinning Spur 3	194	Wind	Oldham	North
14INR0072	Briscoe Wind	150	Wind	Briscoe	North

# Study Assumption

- The following generators meet the Planning Guide Section 6.9 requirements as of August 10, 2015 but are **NOT** included in the 2021 RTP base case. They will be added to the study case. These projects met the 6.9 requirements after the RTP case was developed.

INR	Name	MW	Fuel	County	Weather Zone
08INR0018	Gunsight Mt	120	Wind	Howard	Far West
12INR0059b	Barilla Solar 1B	7	Solar	Pecos	Far West
13INR0055	Javelina Wind	250	Wind	Zapata	Southern
14INR0023b	Longhorn South	160	Wind	Briscoe	North
14INR0025b	South Plains II	150	Wind	Floyd	North
14INR0045a	Torrecillas Wind A	250	Wind	Webb	Southern
14INR0045b	Torrecillas Wind B	250	Wind	Webb	Southern
15INR0021	Los Vientos V	110	Wind	Starr	Southern
15INR0036	OCI Alamo 5	95	Solar	Uvalde	West
15INR0037	Los Vientos IV	200	Wind	Starr	Southern
15INR0070_1	OCI Alamo 6	160	Solar	Pecos	Far West
16INR0003	Freeport LNG	11	Gas	Brazoria	Coast
16INR0024	Hidalgo & Starr	250	Wind	Hidalgo	Southern
16INR0048	Roserock Solar	150	Solar	Pecos	Far West
16INR0052	OCI Alamo 7	110	Solar	Haskell	North
16INR0055	Chapman Ranch Wind I	250	Wind	Nueces	Southern
16INR0057	Sky Global One	51	Gas	Colorado	South Central
16INR0062	Electra Wind	360	Wind	Wilbarger	North
16INR0073	East Pecos Solar	100	Solar	Pecos	Far West

# Study Assumption

- The following generation projects in the Valley have a signed interconnection agreement but as of August 10, 2015 do not meet Planning Guide Section 6.9 requirements for inclusion in the base cases. However, they will be included in a sensitivity analysis.

INR	Name	MW	Fuel	County	Weather Zone
14INR0013	San Roman 1	103	Wind	Cameron	Southern
16INR0004	LaPaloma G	730	Gas	Cameron	Southern
16INR0005	Brownsville	871	Gas	Cameron	Southern

- Transmission projects modeled in the study case:
  - The following two placeholder projects in the LRGV will be removed from the 2021 RTP base case.
    - NorthHill (98455) to Zia (9838) 345kV line project
    - STATCOM at Pharr (5762)
  - The RTP base case also has the following projects modeled in the study area and they will also be removed from the base case.
    - Cross Valley Project tap at South McAllen (345kV)
    - Second South McAllen (8371) 345-138kV auto
    - Second Palmito (5966) 345-138kV auto
  - There are no TPIT(Transmission Project Information Tracking) projects in the Valley that need to be added to the RTP case.

# Study Assumption

- Status of key generators in the study base case
  - Frontera Facility (524MW) is offline in the 2021 study base case
  - DC Tie: Assume 300MW export to Mexico for N-1 analysis and 0 MW transfer for G-1+N-1 and X-1+N-1 analysis.
- Contingencies and criteria of reliability analysis
  - The study will include all contingencies consistent with Planning Guides Section 4.1.1.2 and criteria consistent with 2015 RTP.
  - NERC TPL-001-4 Contingency categories P1-P7.
- Wind and solar dispatch
  - The maximum dispatch of the added wind units will be consistent with the assumptions applied in the RTP.

Weather Zone	Coast	Far West	North	North Central	South	South Central	West
Average Capacity Factor	4%	7%	5%	3%	10%	2%	7%

- The dispatch of the added solar units will be 70% of their maximum capacity, consistent with the RTP assumption.



# Additional Analyses ERCOT May Perform

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- Long term analysis
- Economic analysis
- Sensitivity analysis with projected LNG load in the valley
- Sensitivity analysis with the AEPSC forecasted 2021 90/10 winter load
- LRGV transmission system export capability analysis

# Next Steps

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- ❑ ERCOT will conduct the Independent Review of the need to address the reliability issues that limit the power import into the Lower Rio Grande Valley area.
- ❑ Please send comments on the study scope to Prabhu Gnanam:  
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Questions?