



**7X Energy Frio County Transmission  
Project – ERCOT Independent Review  
Scope**

**Regional Planning Group**  
January 21, 2020

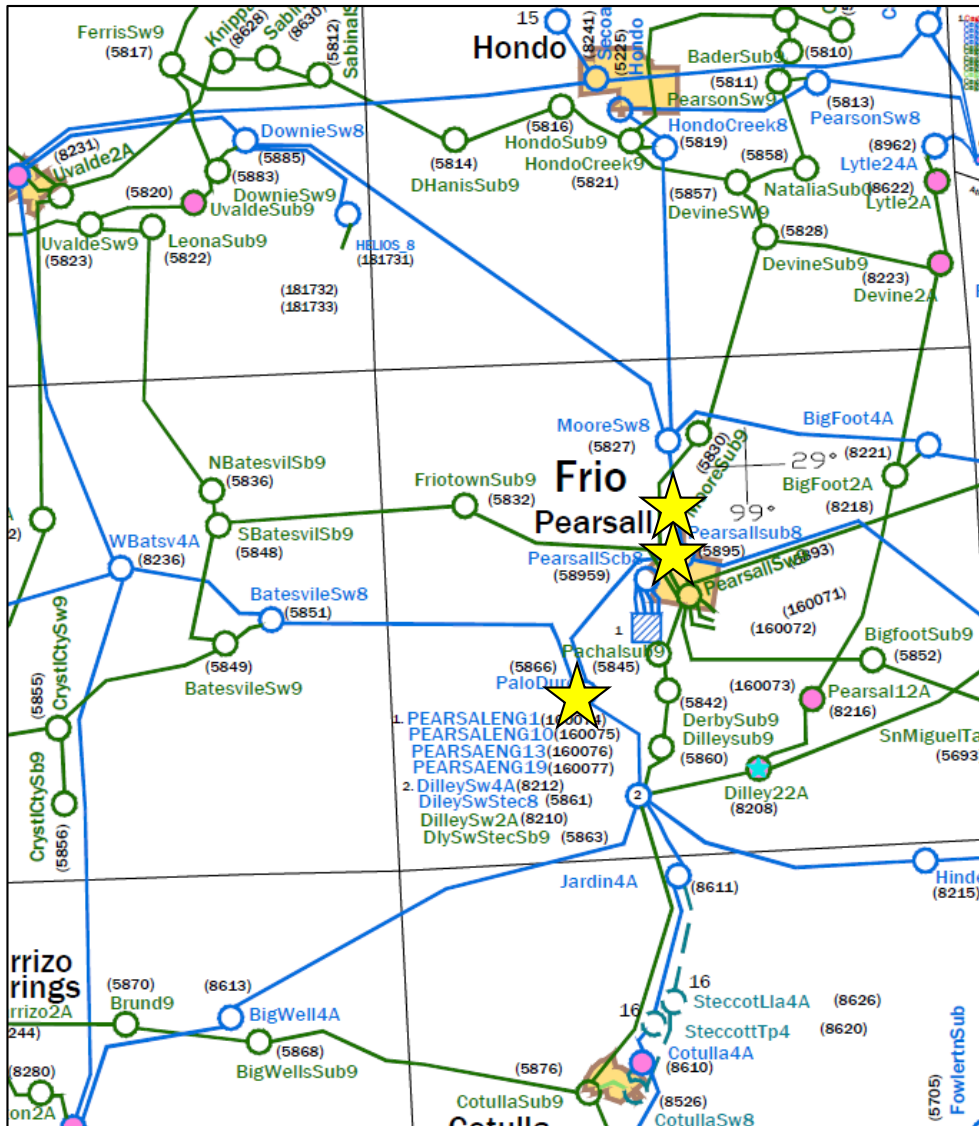
# Introduction

**7X Energy submitted the Frio County Transmission Project to the Regional Planning Group (RPG) in November, 2019 as an economic-driven project to address the transmission congestion in Frio County associated with the addition of new solar generation facilities in the area**

**This is a Tier 2 project estimated to cost \$23 million (generic cost estimates)**

- Expected in-service date is July 2021
- Address local congestion related to the addition of new renewable generators that have recently met 6.9(1) conditions in Frio County
- Provide economic benefit and improve generator get-a-way in the area by
  - Rebuilding existing Moore – Big Foot 138-kV line (owned by AEP)
  - Replacing existing Dilley 138/69-kV transformer (owned by AEP)
  - Rebuilding existing Moore – Hondo Creek 138-kV line (owned by STEC)
- This project is currently under ERCOT independent review

# Study Area



# Study Assumptions

- **Study Base Cases**

- Economic base cases for study years 2021 and 2024 will be constructed from the final 2019 Regional Transmission Plan UPLAN cases posted on the MIS on December 23, 2019

# Economic Model Input Assumptions

- **Transmission Updates**

- Transmission projects expected to be in-service within the study area by 2021 and 2024, respectively, at the time of the study will be added to the base cases
  - All recently approved Tier 1, 2, and 3 projects in the South weather zone will be modeled
  - Tier 4 projects that are electrically close to Frio County will be modeled

- **Load Assumption**

- The load forecast will be consistent with the 2019 RTP studies

# Economic Model Input Assumptions

- **Generation Updates**

- All new generator additions in the study area that meet Planning Guide Section 6.9(1) at the time of study (December 2019 GIS) will be added to the base case

INR	Project Name	County	Projected COD	Fuel	Capacity (MW)	Meets Planning Guide Section 6.9(1) Requirements
17INR0035	Las Majadas Wind	Willacy	10/29/2020	WIN	273	07/22/2019
19INR0155	Morrow Lake Solar	Frio	04/01/2021	SOL	200	11/18/2019
20INR0068	Blackjack Creek Wind	Bee	12/15/2021	WIN	240	11/24/2019
20INR0088	West Raymond (El Trueno) Wind	Willacy	12/15/2020	WIN	240	06/06/2019
20INR0272	Rio Nogales AGP Upgrade CT3	Guadalupe	04/20/2020	GAS	19	07/21/2019
21INR0261	Horizon Solar	Frio	12/31/2021	SOL	204	08/09/2019
21INR0276	Elara Solar	Frio	04/01/2021	SOL	178	09/27/2019

# Economic Model Input Assumptions

- **Generation Updates**

- Generation identified as retired or mothballed based on the most recent information available to ERCOT at the time of the analysis will be modeled as offline in the appropriate cases
- Solar, wind, and hydro generation units will be dispatched consistent with the 2019 RTP assumptions
  - Vendor supplied 8,760-hour profiles will be used to dispatch wind and solar generation units consistent with 2019 RTP models

- **Fuel Cost Forecasts**

- Monthly gas prices will be consistent with the 2020 RTP economic assumptions

# Economic Criteria

- The analysis will use the ERCOT economic planning criteria outlined in Section 3.11.2 (5) of the current Nodal Protocols consistent with the 2019 RTP study

<http://www.ercot.com/mktrules/nprotocols/current>

- ERCOT will use 14% as the first-year revenue requirement

[http://www.ercot.com/content/wcm/key\\_documents\\_lists/138702/FinancialAssumptions\\_EconomicCriteria.pdf](http://www.ercot.com/content/wcm/key_documents_lists/138702/FinancialAssumptions_EconomicCriteria.pdf)



# Study Procedure

- System-wide production cost simulations will be performed for study years 2021 and 2024 using UPLAN
- Production cost savings and cost estimates of transmission upgrades provided by TSPs will be used to evaluate the economic benefit of each transmission upgrade option

# Deliverables

- **Tentative Timeline**

- Status updates – February and March RPG meetings
- Final recommendation – April 2020



Stakeholder Comments Also Welcomed to Sun Wook Kang:  
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