Long-Term West Texas Export Special Study - Update

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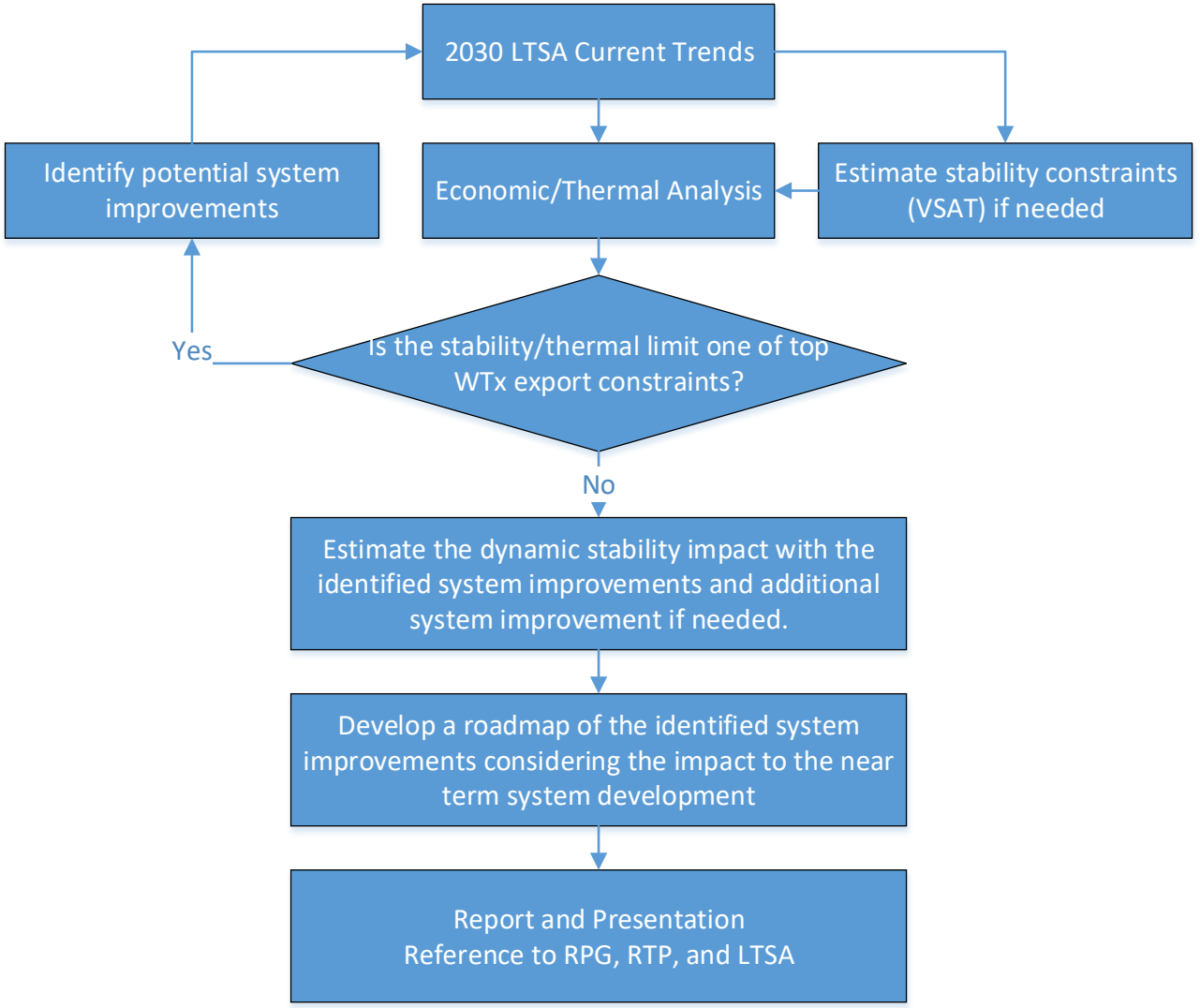
Outline

- Recap: Methodology
- Study Progress Update
- Next Steps

Methodology



Progress Update

Tasks	Description	Status	Comments
1	Study Case Developments	In Progress	Steady State Cases (Complete) Economic Cases (Complete) Dynamic Cases (In Progress)
2	Year 2030 Simulation and Improvement Identification	In Progress	
3	Year 2023 Simulation and Improvement Identification	Not Started	
4	Roadmap Development	Not Started	
5	Reports	Not Started	

Study Cases Overview

Study Year	Wind	Solar	Battery	System Load in the Reliability Case (GW)
	Capacity (GW)	Capacity (GW)	Capacity (GW)	
2023(1)	36.0	15.1	1.5	~42
2030(2)	64.4	34.4	2.6	~48

(1). Include planned projects met Planning Guide 6.9(1) by 12/31/2020

(2). Based on the 2020 Long Term System Assessment Y2030 Current Trends scenario

Assumptions

- West Texas export flow is measured as the sum of the flow on the 16 345 kV circuits
  - Riley – Krum West Switch DCKT 345 kV
  - Jacksboro Switching – Willow Creek Switch and Jacksboro Switching – Henderson Ranch Switch DCKT 345 kV
  - Graham SES – Parker Switch DCKT 345 kV
  - Clear Crossing – Willow Creek Switch DCKT 345 kV
  - West Shackelford Station – Sam Switch and West Shackelford Station – Navarro DCKT 345 kV
  - Brown Switch – Killeen Switch DCKT 345 kV
  - Big Hill – Kendall DCKT 345 kV
  - Jacksboro Switching – Krum West Switch SCKT 345 kV
  - Comanche Switch – Comanche Peak SES SCKT 345 kV

Assumptions (continued)

- Reliability Assessments
  - Energy Storage Resources (ESRs) are dispatched at 0 MW with voltage support capability

- Economic Assessments
  - 90% of the calculated stability limit will be applied in the economic assessments, which is consistent with the Transmission and Security Operating Procedure

Consideration of Improvements

- Identify cost-effective system improvements to provide both near-term and long-term benefits to address the following challenges and improve WTX export capability
  - Steady state thermal and voltage constraints
  - Stability constraints
  - Curtailment

Next Steps

- A transmission workshop is scheduled on February 23, 2021
  - http://www.ercot.com/calendar/2021/2/23/219574
  - Vendors and industry SMEs will present the transmission technologies that could improve the power transfer capability

- ERCOT expects to complete the study in Q2 2021 and will provide regular updates at future RPG meetings