ERCOT Extra-High Voltage (EHV) Infrastructure Initiative

Update

ERCOT Regional Transmission Planning

October 16, 2024

Agenda

- September RPG – Recap
- 2024 RTP – 765-kV Scope
- 2024 RTP – 765-kV Deliverables

September RPG – Recap

- ERCOT presented the initial holistic 765-kV plan considered in the 2024 RTP
- Initial 765-kV Infrastructure Plan Summary
  - Phase I represented potential maximum benefits considering 2030 load level
  - Phase II represented additional benefits beyond 2030 load level
  - Capital costs not yet considered
- ERCOT is continuing to work on a “765-kV Core” plan (subset of Phase I) to address the 2030 RTP reliability need

2024 RTP – 765-kV Scope

- Two RTP assessments will be performed
  - Standard RTP assessment (without 765-kV Core plan)
    - Corrective Action Plans (CAPs) will be developed for
      - N-1, G-1+N-1, X-1+N-1
        - » Will include 69-kV, 138-kV, and 345-kV
      - N-1-1 maintenance outage scenario
        - » Will include 69-kV, 138-kV, and 345-kV
      - Minimum Deliverability
        - » Will include 69-kV, 138-kV, and 345-kV
  - EHV RTP assessment (with 765-kV Core plan)
    - CAPs will be developed for
      - N-1, G-1+N-1, X-1+N-1
        - » Will include 69-kV, 138-kV, and 345-kV
      - N-1-1 maintenance outage scenario
        - » Will include 345-kV only
      - Minimum Deliverability
        - » Will not be performed

2024 RTP – 765-kV Deliverables

- Two complete RTP CAP lists
  - Standard RTP assessment (without 765-kV Core plan)
  - EHV RTP assessment (with 765-kV Core plan)
- Capital cost comparison between two final RTP plans
- Right-of-Way comparison
- System Loss comparison
- Completed by end of December 2024

Additional – 765-kV vs Standard RTP Plan

- System Stability Analysis
  - Evaluation of existing impacted GTCs
  - Potential impact on Series Compensation
- System congestion analysis
- Completed by mid-January 2025

Questions/Comments

- Please send to:

  Jameson.Haesler@ercot.com

  Gnanaprabhu.Gnanam@ercot.com