



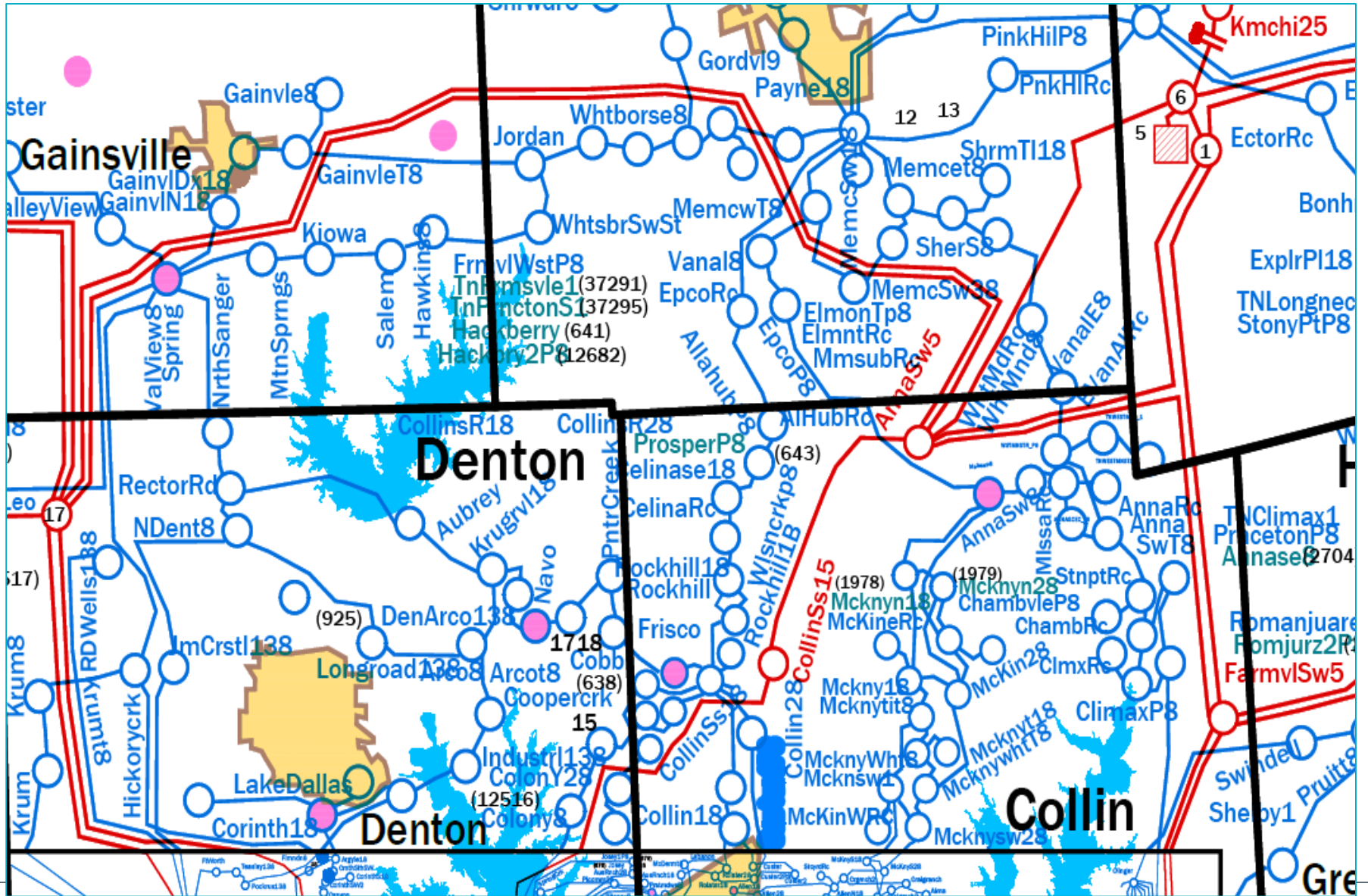
**ERCOT Independent Review of BEC and  
RCEC Northeast Denton County and Celina-  
Prosper Transmission Project – Study Scope  
and update**

**Regional Planning Group**  
August 22, 2017

# Introduction

- ❑ High load growth in northeast Denton County and the Celina/Prosper region was observed and forecasted per Brazos Electric Cooperative (BEC) and Rayburn Country Electric Cooperative (RCEC)
- ❑ The high load growth has created the need for the transmission improvement in the area. This high load growth region is currently fed via three main 345kV sources at West Denton, Collin and Anna Switch
- ❑ BEC and RCEC submitted a joint project (Tier 1 with cost estimate of \$72.9 million) for Regional Planning Group (RPG) review in April 2017
- ❑ Oncor commented on this RPG project and submitted project alternatives for consideration

# Transmission System map of the study area



# Study Case

## ❑ Base Case

- The latest 2022 North/North Central (NNC) summer peak case from the 2017 Regional Transmission Plan (RTP) was used to create the base case for this study
- The study region consists of NNC with focus on Denton and Collin counties

## ❑ Load Forecast Changes\*

- The 2022 load forecast in the study area was updated to reflect the load growth and additions provided by the Transmission Owners
- The load levels in non-study region were scaled to balance the generation/load in the case

## ❑ New Generation Review

- The Generator Interconnection Status (GIS) report was reviewed to identify any new generator resources meeting Planning Guide Section 6.9 requirements for inclusion in the planning models near the study region
- No generation additions were required

## ❑ Transmission Updates

- Convert all current non-breakered load serving stations along Collin – Epco – Payne corridor into breakered stations
- Add new double circuit contingency along Collin – Arco 138kV double circuit

***\*Transmission Owners BEC and RCEC submitted load forecast changes in the study area. ERCOT is working on verifying the load forecast changes with them.***

# Contingencies and Criteria

## ❑ Contingencies for Study Region

### ➤ NERC TPL-001-4 and ERCOT Planning Criteria

([http://www.ercot.com/content/wcm/current\\_guides/53526/04\\_050115.doc](http://www.ercot.com/content/wcm/current_guides/53526/04_050115.doc)):

- Normal system condition (P0)
- N-1 conditions (P1, P2-1, P7)
- X-1 + N-1 {X-1 is 345 kV Auto outages}
- G-1 + N-1 {G-1 worst case only}

## ❑ Criteria

### ➤ Thermal

- Monitor all transmission lines and transformers in study region (excluding GSU and PUNs)
- Use Rate A for pre-contingency conditions
- Use Rate B for post-contingency conditions

### ➤ Voltages

- Monitor all busses 100 kV and above
- Voltages exceeding their pre-contingency and post-contingency limits
- Voltage deviations exceeding 8% on non-radial load busses

# Load Forecast Changes

- ❑ 236 MW load increase on the existing stations and 161 MW load addition on the proposed new stations (total 397 MW)\*

Station Name	Bus #	Load in 2017 RTP 2022 NNC case	Load from TO for 2022
FRISCO	681	72.1	89.1
COBB	638	20.8	28.0
PNTHRCREEK	649	101.1	116.3
PARVIN	654	63.7	81.3
NAVO2	33662	95.3	110.0
OAKPOINT	623	37.2	49.6
CUSTER	655	63.7	86.1
ROCKHILL	675	98.0	124.1
CELINARC	6943	21.2	73.3
PROSPER	643	24.5	49.3
GENTLECRK	613	34.6	41.3
ALHUB_RC	6826	18.2	44.5
CHAMB_RC	6875	31.9	49.8
AUBREY	652	52.9	28.7
Proposed 1	na	na	32.0
Proposed 2	na	na	27.0
Proposed 3	na	na	101.7
<b>Total</b>		<b>735.1</b>	<b>1,132.1</b>

*\*ERCOT is still working on these load forecast changes with BEC and RCEC.*

## Next Step

- ❑ Test for reliability criteria violations
- ❑ Identify and evaluate project alternatives
- ❑ Tentative Timeline
  - September Independent Review (RPG)
  - September TAC
  - October Board of Directors



# QUESTIONS?