



# Rayburn Country Electric Cooperative ERCOT Integration

# Rayburn Country Electric Cooperative



Formed in 1979, added staff in 1986

Serve 5 distribution electric cooperatives

- Approximately 200,000 members
- 95% residential

Peak load is ~1,000 MW

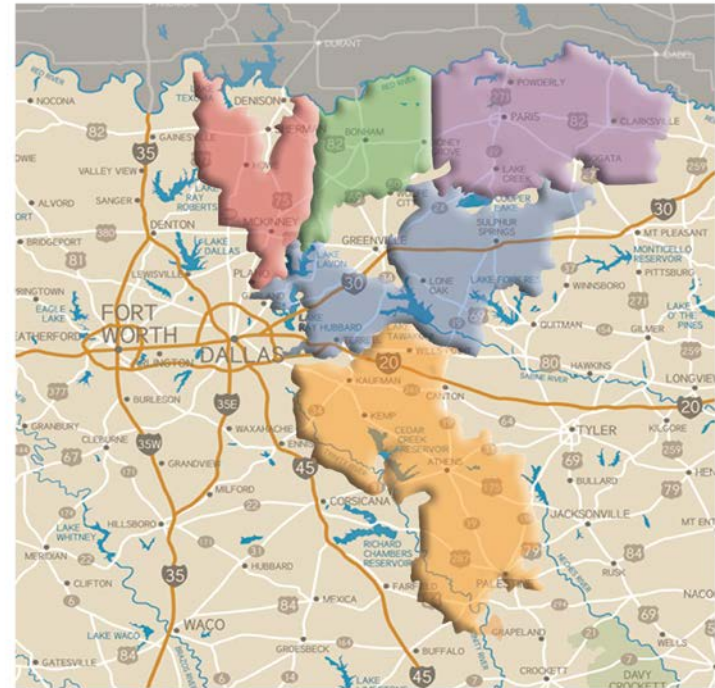
- 15% in Eastern Interconnect; 85% in ERCOT

Power supplied primarily through contracts

- Own minority interest (25%) in Freestone Energy Center in ERCOT
  - Natural gas-fired, combined cycle unit

Own ~160 miles of transmission line, all in Eastern Interconnect

- Originally located in ERCOT



- Grayson-Collin, Van Alstyne
- Fannin County, Bonham
- Lamar County, Paris
- Trinity Valley, Athens
- Farmers Electric, Greenville

# Post 2020 Due Diligence

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Issued RFP for power supply in September 2014

- Requested load serving product for 3 to 5 years, beginning January 1, 2020

Distributed to 16 potential bidders, received responses from 7

- Only 2 met our needs to serve load

SPP Transmission Service

- Bidders would not hold price firm while Rayburn sought approval for firm transmission from SPP
  - Process takes 12-18 months
- SPP does not permit multiple bids to be submitted for transmission service
- Risked product and price not being available once received firm transmission service but being locked in to supplier due to time constraints

These market issues are not seen for Rayburn's load in the ERCOT Market

# Key Decision Points

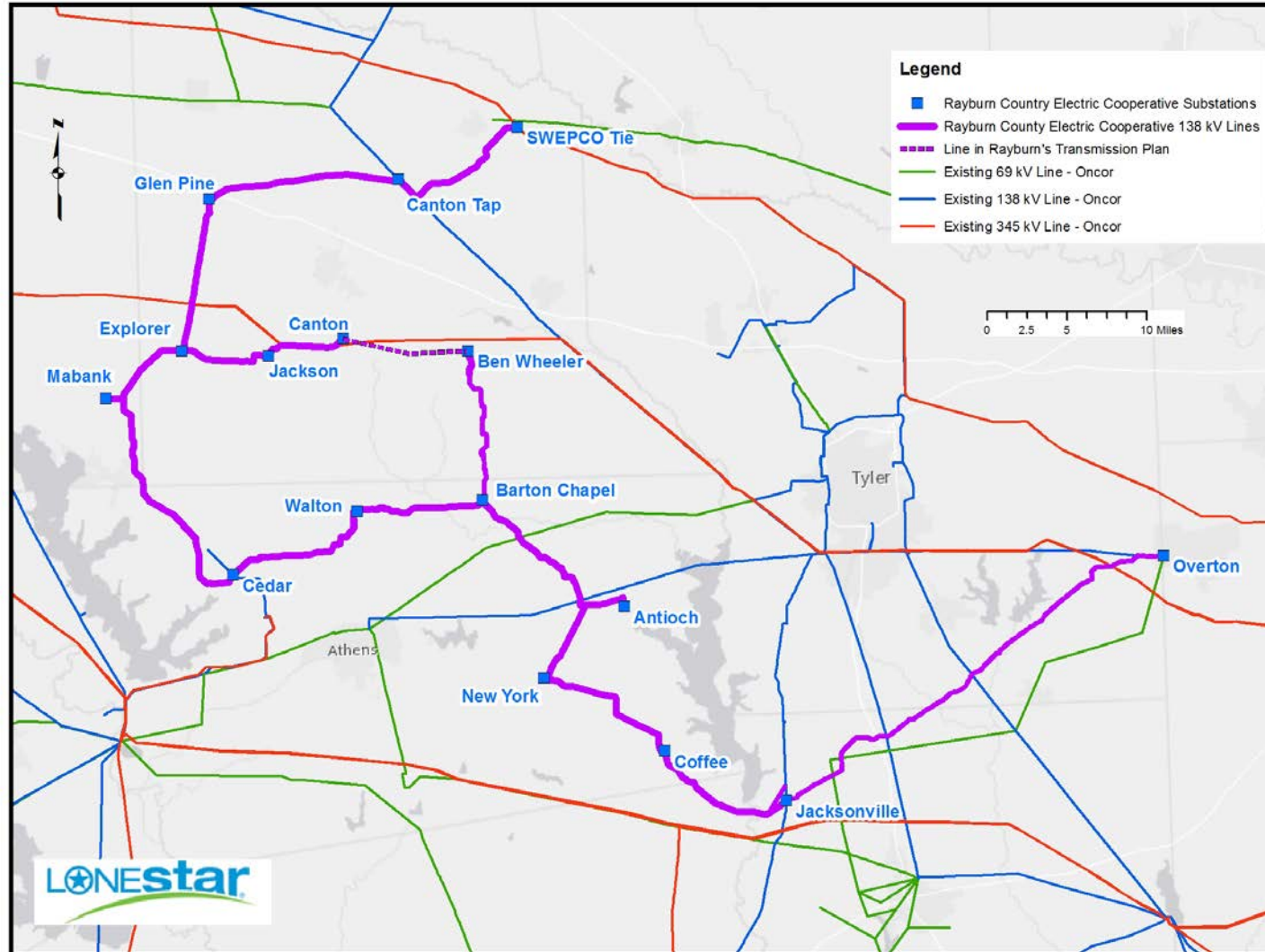
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Rayburn's main reasons for consolidating its load in ERCOT are

- ERCOT is a more liquid and competitive market
- ERCOT power costs forecast to be lower than SPP
- Rayburn would consolidate their NERC Reliability Standard Requirements in one region
- No harms to the Eastern Interconnection or ERCOT systems from the load transition

# Rayburn's Transmission System (currently in Eastern Interconnection)



# Method of Study

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Rayburn & Lone Star engaged PWR Solutions for the Rayburn Integration

- Evaluated 36 options and studied 12 options for integrating the Rayburn load

Four Options were shortlisted

Option #3 stands out as the most cost-effective way of integrating the Rayburn load with ERCOT because this option:

- Provides a diversity of interconnections with two at 138 kV and one at 345 kV
- Was able to use existing ERCOT facilities in a way that they were originally designed and built
- Meets ERCOT Planning & NERC reliability Criteria
- Did not include lines requiring a new Certificate of Convenience or Necessity (CCN)
- Value from TCOS payments of additional load greater than integration cost

# Option #3 Description

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Extend 138 kV buswork from Canton Switch to Canton Tap;

New 345 kV Substation (6 breaker ring bus, to be called Aristotle) on one circuit of the 345 kV Martin Lake – Tricorner line;

New 138 kV (Apollo) Switching Station on the 138 kV Teaselville – Palestine line;

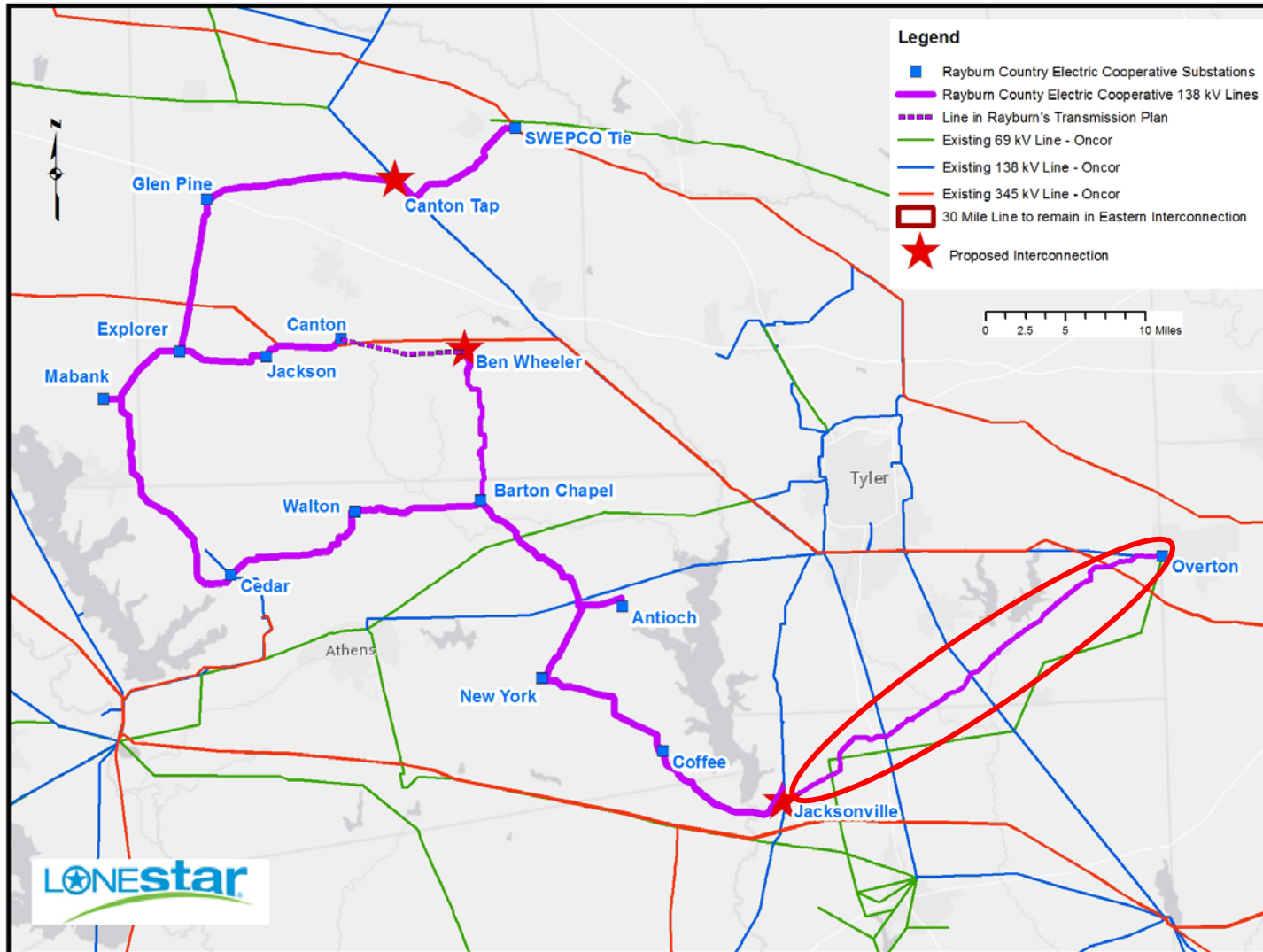
345/138 kV 650 MVA autotransformer at the Aristotle 345 kV Substation;

Expand the Ben Wheeler Substation to accommodate the Aristotle 345 kV substation and Canton Substation connections;

Extend the 138 kV Coffee to Jacksonville single circuit 138 kV line 0.5 miles into the new Apollo 138 kV switching station; and

Incremental 138 kV upgrades on 2.1 miles of 138 kV

# Rayburn – ERCOT Integration Plan





# Benefits of Proposal

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Rayburn's load is forecast to 190 MW in 2020

Annual TCOS Revenue Requirements as a result of the Rayburn integration expected to be less than annual TCOS payments from the new load based on preferred integration option

- All three proposed interconnections have existing ERCOT facilities within 1 mile

Transferring the Rayburn load has potential to defer the need for a \$25 MM reliability project in SPP

- An additional project in SPP's planning process that is still confidential may also be deferred