When any portion of this presentation is used as a reference, please include attribution to Oncor Electric Delivery Company LLC (Oncor) and include the date of the presentation.

Plans are subject to change due to factors including, but not limited to, load, generation, engineering, system protection and system topology. Clearance availability and weather can impact proposed in-service timeline.
WEST TEXAS PLAN KEY ELEMENTS

• **Convert 69 kV system to 138 kV**
  • Rebuild 69 kV Lines with double-circuit 138 kV construction, one circuit at 69 kV
  • Gradually migrate loads from 69 kV to 138 kV service

• **New 138 kV transmission lines**
  • Create 138 kV loops to enable clearances and improve system reliability
  • Work closely with oil & gas customers to provide expedited service to large single point loads

• **Upgrade and add switching stations**
  • Increase capacity, modern configurations facilitate greater clearance availability
  • Improved system protection and communications
  • Provisions for future expansion and physical security requirements (CIP)

• **Upgrade and add autotransformers with Load Tap Changing (LTCs)**
  • Increase capacity and voltage support; operational flexibility for clearances

• **Upgrade and add substations with LTCs**
  • Increase load serving substation capacity to meet growth plans
  • Increase distribution voltage control capability

• **345 kV Infrastructure**
  • Provide backbone support
  • Reach out to areas where there is extreme load and generation growth, but there is a lack of adequate transmission grid infrastructure
WEST & FAR WEST WEATHER ZONES AGGREGATE LOAD COMPARED TO OIL PRODUCTION

AGGREGATE LOAD  
OIL PRODUCTION (BBL)

WEST & FAR WEST AGGREGATE LOAD (MW)

2012  2013  2014  2015

OIL PRODUCTION (BBL)

TEXAS RRC (http://www.rrc.state.tx.us/)
GREEN - Completed
2015 IMPROVEMENTS COMPLETED & IN-SERVICE

Construct New Midland County NW 345/138 kV Switching Station June 2015 RTP
Construct New Andrews County SO 345/138 kV Switching Station June 2015 RTP
Construct New Dermott Sw. Sta. – Ennis Creek Tap 138 kV Line May 2015 RTP
Upgrade Big Spring Switch – Big Spring West 138 kV Lines May 2015
Install McDonald Road Sw. Sta. – Garden City East 138 kV Line May 2015
Upgrade Midland Airport – Glenhaven 138 kV Line April 2015 RTP
Replace Morgan Creek 138/69 kV Autotransformer June 2015 RTP
Replace North Andrews 138/69 kV Autotransformers June 2015
Upgrade Odessa North – Amoco South Foster – Westover 138 kV Line May 2015 RTP
Upgrade McDonald Road 138 kV Switching Station May 2015
2015 IMPROVEMENTS COMPLETED & IN-SERVICE

Rebuild Holt 138 kV Switching Station as Double-Bus May 2015
Upgrade China Grove Switching Station Terminal Equipment April 2015 RTP
Install Sweetwater Creek 69 kV Capacitors Aug 2015
Upgrade Mason – Screwbean 138 kV Line Dec 2015 RTP
Construct New Midessa South 138 kV Switching Station Nov 2015
Re-arrange connections for combustion turbines at Morgan Creek Dec 2015
Rebuild Lamesa 69 kV Switching Station as Ring Bus Dec 2015
Install Odessa – Midessa South 138 kV Line Dec 2015
Install Eskota Switch 138/69 kV Autotransformer #2 Dec 2015
Upgrade Spraberry 138 KV Switching Station Dec 2015
Rebuild Odessa 138 kV Switching Station as Ring Bus Dec 2015
Acquire existing Xcel 230 kV Line Dec 2015
2016 PLANNED IMPROVEMENTS

BLUE - Underway
PLANNED 2016 IMPROVEMENTS & ESTIMATED IN-SERVICE

Rebuild Wink Switching Sta and Install 138/69 kV autotransformer #2 Winter 2016
Upgrade Morgan Creek – Cosden 138 kV Line Winter 2016 RTP
Install Midessa – Midessa South 138 kV Line Winter 2016
Install Aruba – Spraberry 138 kV Line Spring 2016 RTP, RPG Approved
Rebuild Means – Fullerton 69 kV Line Spring 2016
Install Garden City East – Aruba 138 kV Line Spring 2016 RTP, RPG Approved
Rebuild Midessa South – Midland East 138 kV Line Summer 2016 RTP
Rebuild Paul Davis – Paul Davis Tap 138 kV Line Summer 2016
Install Castile Hill 138 kV Capacitors Summer 2016
PLANNED 2016 IMPROVEMENTS & ESTIMATED IN-SERVICE

Construct New Midessa South 345 kV Switching Station Fall 2016
Install Midessa South – Spraberry 138 kV Line Fall 2016
Rebuild Odessa EHV – Spraberry 138 kV Line Fall 2016
Construct New Yucca Drive (Permian Basin) 138 kV Switching Station Fall 2016
Construct New Yucca Dr – Barstow NW 138 kV Line Winter 2016-17 RPG and CCN Approved, (Portion of Permian Basin – Culberson 138 kV Line)
Rebuild Fullerton – Andrews 69 kV Line Winter 2016-17
Rebuild Screwbean – Culberson 138 kV Line Winter 2016-17 RTP
Rebuild Holt – North Andrews 138 kV Line Winter 2016-17 RTP
Construct New Fullerton Switching Station Winter 2016-17
2017 PLANNED IMPROVEMENTS

BLUE - Underway
Construct New McKenzie Draw 138 kV Switching Station Spring 2017
Construct New McKenzie Draw – Texaco Mabee 138 kV Line Spring 2017 RPG Approved, CCN under PUCT review
Rebuild Amoco Midland Farms – XTO 138 kV line section Spring 2017
Rebuild Andrews County South – North Andrews 138 kV Line Spring 2017 RTP, RPG upcoming
Construct New Wolf (formerly Monahans) 138 kV Switching Station Spring 2017
Install Holt – Andrews County South/North Andrews 138 kV Line Fall 2017 RTP, RPG Upcoming
Rebuild Holt 138 kV Switching Station Fall 2017
Construct New Yukon 138 kV Switching Station Fall 2017 RTP, RPG Approved
Install Wink – Yukon 138 kV Line Fall 2017 RTP, RPG Approved
PLANNED 2017 IMPROVEMENTS & ESTIMATED IN-SERVICE

Construct New Culberson 138 kV Switching Station Fall 2017
Install second circuit on Wink – Culberson 138 kV Line Fall 2017
Construct New Barstow NW – Culberson 138 kV Line Fall 2017 RPG and CCN Approved (Portion of Permian Basin – Culberson 138 kV Line)
Install second circuit on Yucca Dr (Permian Basin) – Culberson 138 kV Line Fall 2017
Construct New Sand Lake 138 kV Switching Station Fall 2017
Rebuild Texaco Mabee – Texaco Mabee Tap 138 kV Line Fall 2017
2018 PLANNED IMPROVEMENTS

BLUE - Underway
PLANNED 2018 IMPROVEMENTS

Rebuild Yucca Dr (Permian Basin) – Barilla Junction 138 kV Line (Joint with AEP) RPG under review

Construct New Mason 138 kV Switching Station
Construct New Mason – Sand Lake 138 kV Double-Circuit Line Future RPG & CCN

Install Delaware Basin Reactive Support Project RTP

Rebuild Midland County NW – Midland East Double-Circuit 138 kV Line
Rebuild Big Spring West – Stanton East 138 kV Line
Rebuild Morgan Creek – Sun Switch 138 kV Line
Rebuild Midland East – Spraberry 138 kV Line
QUESTIONS/DISCUSSION