

ICT 2013 Reliability Assessment and Construction Plan Evaluation

Entergy ICT Transmission
Planning Summit
August 7, 2012



Overview

- **Background**
- **Scope**
- **Draft Construction Plan**
- **Results**

Background

- **Reliability Assessment is performed pursuant to Entergy's Open Access Transmission Tariff (OATT) Attachment K.**
- **Objectives:**
 - **Assess of the ability of the Entergy transmission system to perform according to the Planning Criteria.**
 - **Construction Plan Evaluation (CPE) - Evaluate Entergy's Draft 2013-2017 Construction Plan's ability to mitigate any performance deficiencies found.**
 - **Provide basis for development of the Base Plan.**

Background (cont)

- **Draft 2013 RA Report was made available for stakeholder review and comment**
 - Posted on Entergy's OASIS July 5, 2012
 - Stakeholder WebEx held on July 18, 2012
- **Final report is posted on Entergy's OASIS.**
 - Detailed spreadsheets not included in report are posted on Entergy's oasis
 - Background models, data, and other information are posted on Entergy's oasis

Entergy Planning Criteria

- **Planning Criteria**
 - **NERC Planning Standards**
 - **SERC Supplements**
 - **Entergy's Local Planning Criteria**
 - **Entergy's Business Practices (Planning Guidelines)**
- **Posted on Entergy's OASIS**
- **NERC Planning Standards being revised**

2013 RA Scope

- **Contingency Scans**
 - **Category A (System Intact)**
 - Overloads identified for flows greater than 100% RATE A
 - Voltage identified if outside this range ($.95 < V < 1.05$)
 - **Category B (N-1)**
 - Breaker-to-Breaker analysis – Consequential Load (CL) loss reported
 - ICT's 100MW rule – if CL exceeds 100MW, then the bus-to-bus contingency is used to identify overloads and voltage issues
 - Overloads identified for flows greater than 100% RATE A
 - Voltage identified if outside this range ($.92 < V < 1.05$)

2013 RA Scope (cont)

- **Contingency Scans**
 - **Monitored and Contingent Elements**
 - Entergy and its internal areas 69kV and above
 - First Tier 345kV and above
 - CLECO & LUS: Transmission elements with nominal voltage 69 kV and higher
- **Notes**
 - The impact of Operating Guides will be determined during the development of the Base Plan later in the planning cycle
 - Re-dispatch will not be used to mitigate the overloads or voltage issues identified unless identified in a formally documented Operating Guide
 - Non-consequential load loss will be avoided during the development of the Base Plan

2013 RA Scope (cont)

- **Reliability Assessment Contingency Scan Models**
 - **2011 Series U1 (Including 2012-2016 Approved CP projects)**
 - **Near Term**
 - Summer and Winter Peak 2014 and 2018
 - **Long Term**
 - Summer Peak 2021
- **2013-2017 CPE Contingency Scan Models**
 - **2011 Series U2 (Including Draft 2013-2017 App/Prop CP projects)**
 - **Near Term**
 - Summer and Winter Peak 2014 and 2018
 - **Long Term**
 - Summer Peak 2021

2013 RA Scope (cont)

- **Low Hydro Analysis**
 - **2011 Series U1 (Including 2012-2016 Approved CP projects)**
 - **Bull Shoals – off**
 - **Greers Ferry – off**
 - **Sam Rayburn – off**
 - **AECC Hydro #2, AECC Hydro #9, Beaver Dam, Blakely, Bull Shoals Dam, Carpenter, Dardanelle Dam, Degray, Greers Ferry, Murray Hydro (LA), Murray Hydro NLR, Norfolk, Ozark AECC, Ozark Beach, Rayburn, Remmel, Table Rock, and Toledo Bend at 50% capacity**

2013 RA Scope (cont)

- **Load Pocket Analysis (N-1,G-1)**
 - **2011 Series U1 (Including 2012-2016 Approved CP projects)**
 - **Summer 2018**
 - **Western Region**
 - Lewis Creek U1 - off
 - **Amite South**
 - Waterford U3 - off
 - **DSG**
 - Nine Mile U5 - off
 - Michoud U3 - off

Entergy's Draft Construction Plan

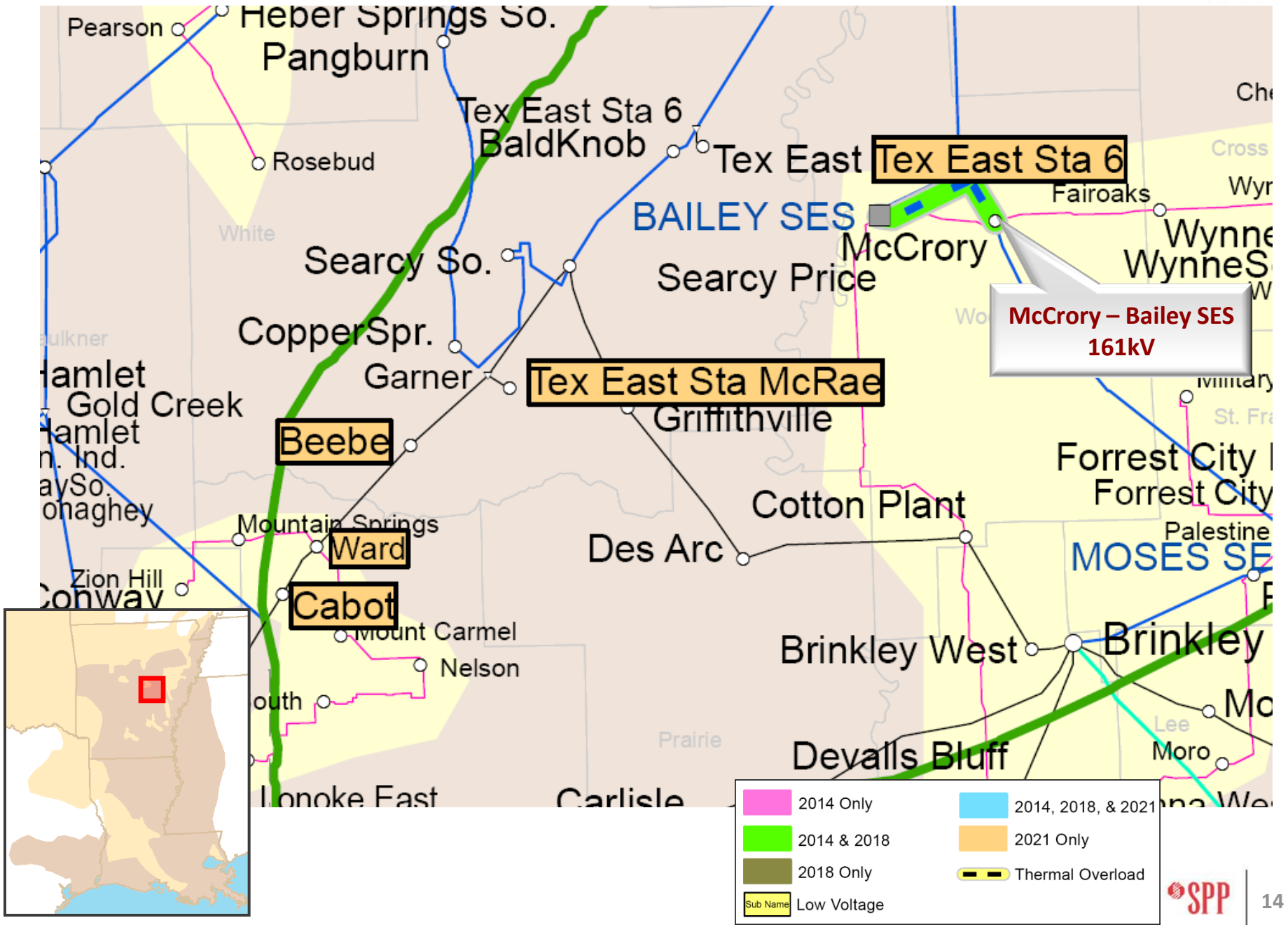
- **May 9, 2012: Original Draft CP 2013-2017 Posted**
- **July 16, 2012: Draft CP 2013-2017 Update 1 Posted**
 - **5 new projects (2 replaced; 1 accelerated from Horizon Plan)**
 - **4 delayed projects**
 - **4 projects changed from Proposed to Approved**
 - **15 projects changed from Approved to Completed**
- **2012 BP and 2012-2016 CP Differences Report**
 - **No differences in projects**

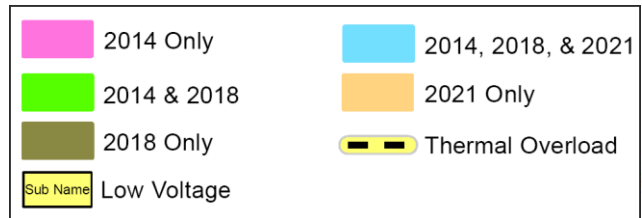
Map Legend

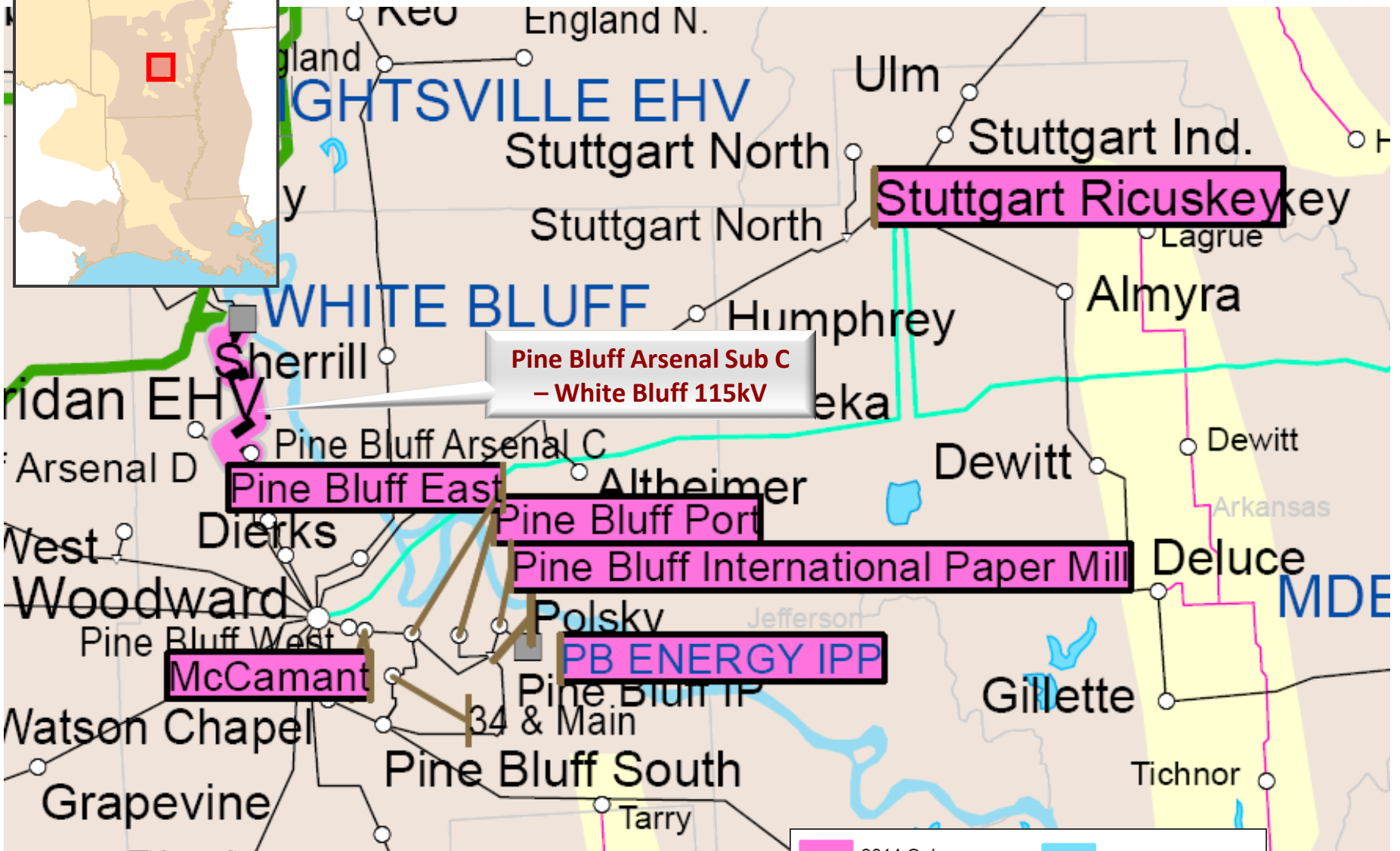
■	Fossil Fuel Power Station	—	765 kV
■	Hydro-Electric Power Station	—	500 kV
■	Nuclear Power Station	—	345 kV
●	Wind Power Station	—	230 kV
○	Substation	—	161 kV
▽	Switching Station	—	138 kV
■	SPP Coverage Area	—	115 kV
■	Entergy ICT Coverage Area	☆	Major Cities
●	Transformer Overload	⚡	AC/DC Ties
■	2014 Only	■	2014, 2018, & 2021
■	2014 & 2018	■	2021 Only
■	2018 Only	■	Thermal Overload
■	Sub Name	■	Low Voltage

Arkansas CPE Results









Stuttgart Ricuskeykey

**Pine Bluff Arsenal Sub C
- White Bluff 115kV**

Pine Bluff East

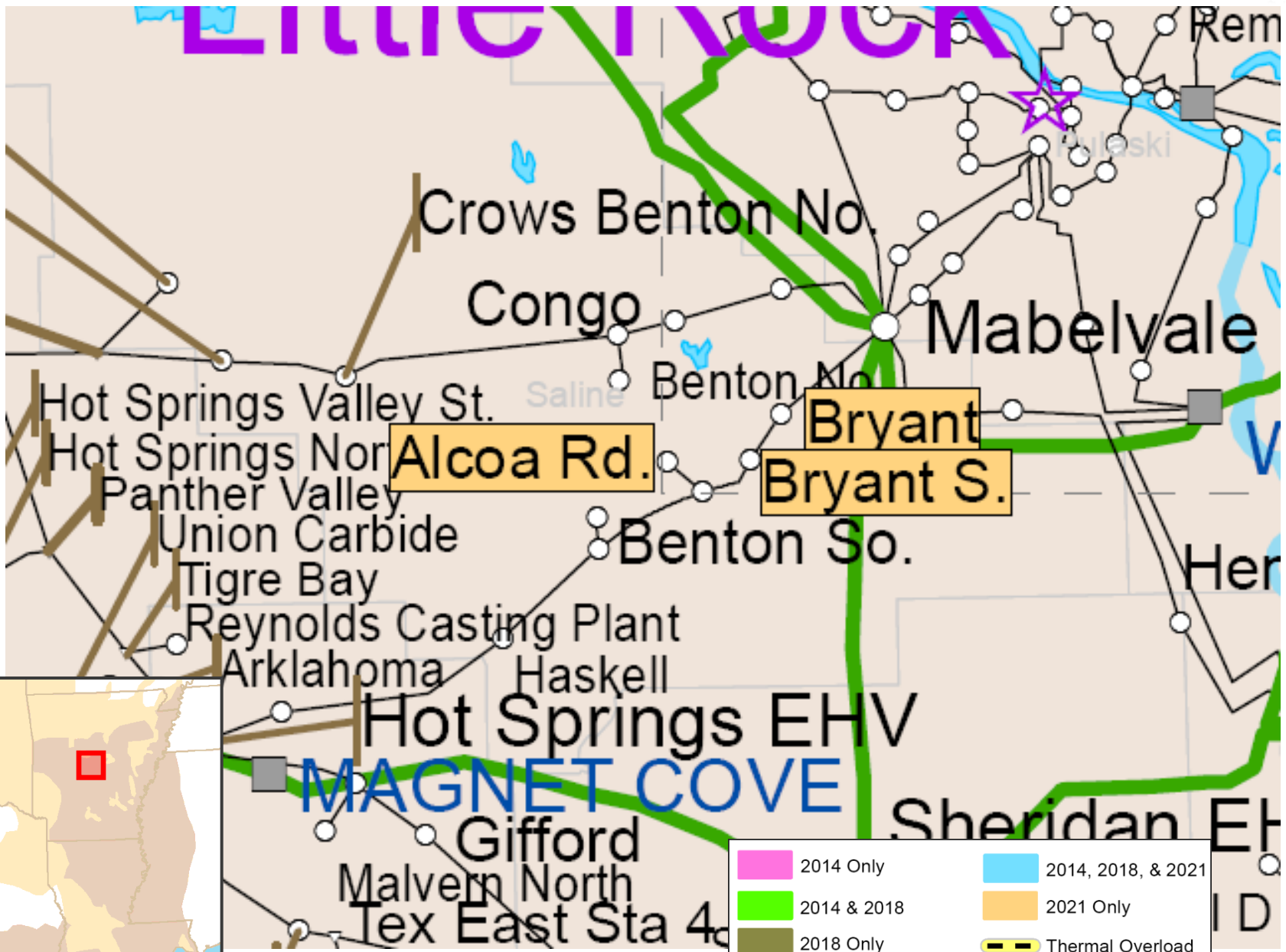
Pine Bluff Port

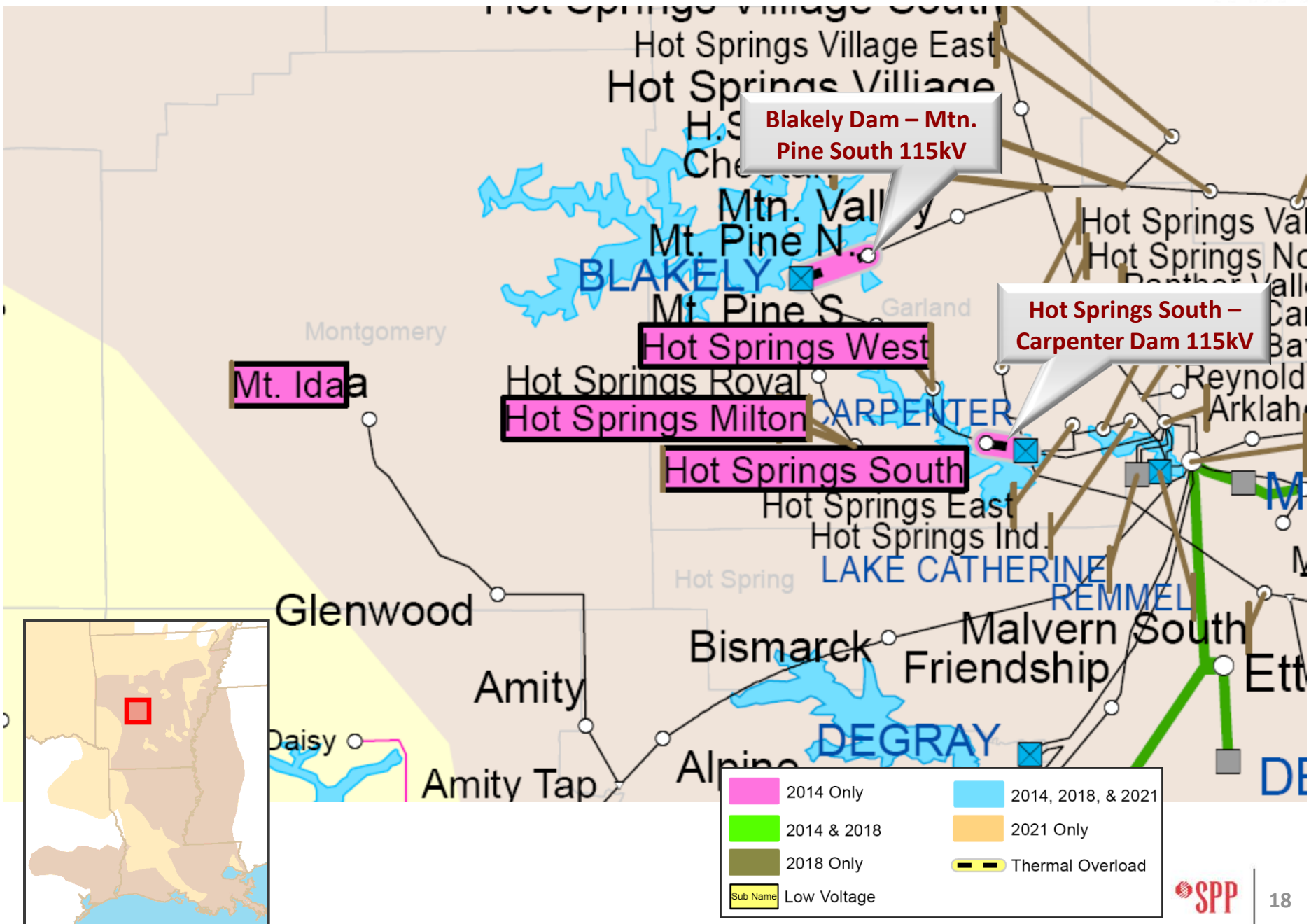
Pine Bluff International Paper Mill

PB ENERGY IPP

McCamant

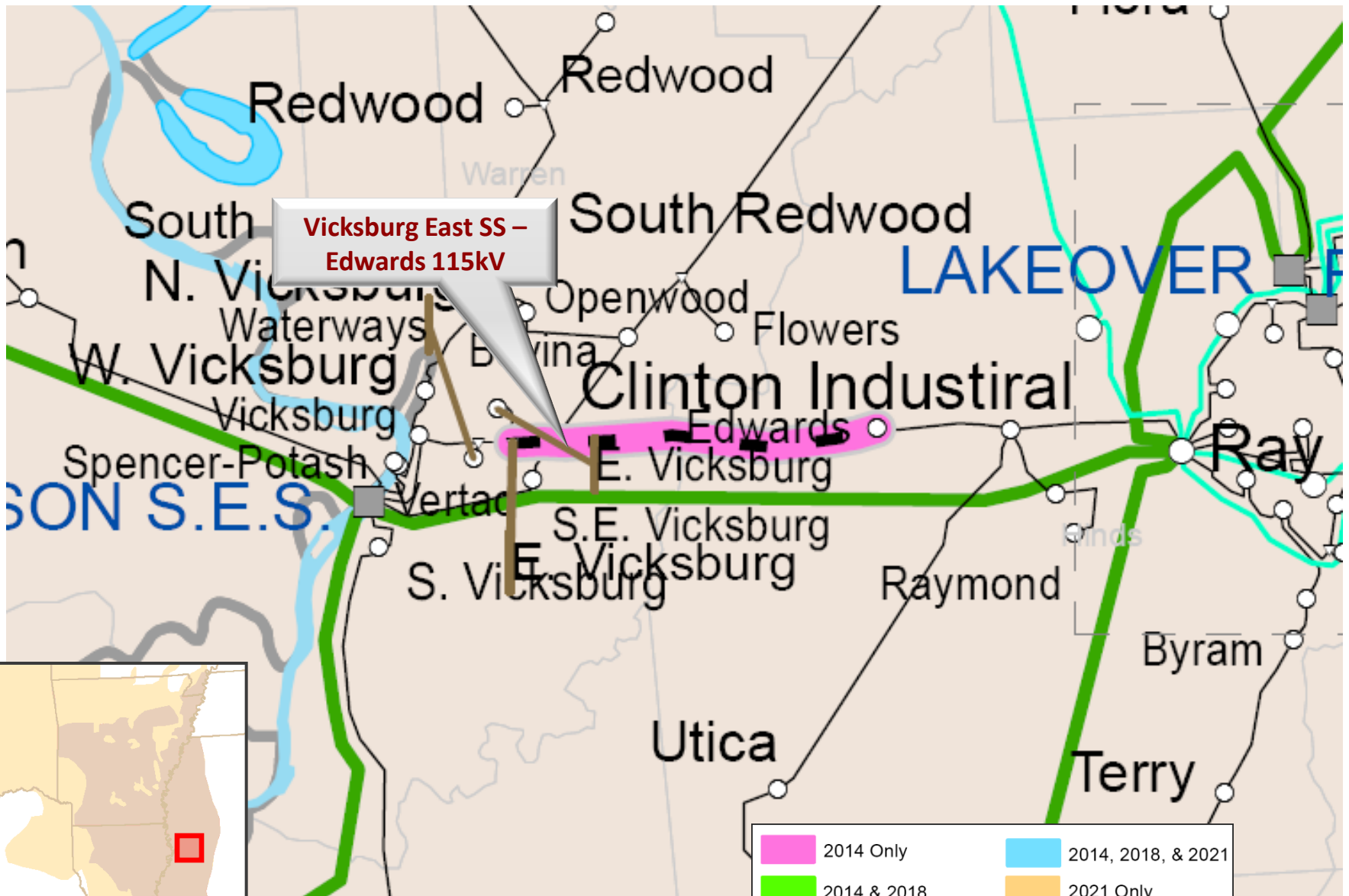
- 2014 Only
- 2014 & 2018
- 2018 Only
- 2021 Only
- Thermal Overload
- Sub Name Low Voltage



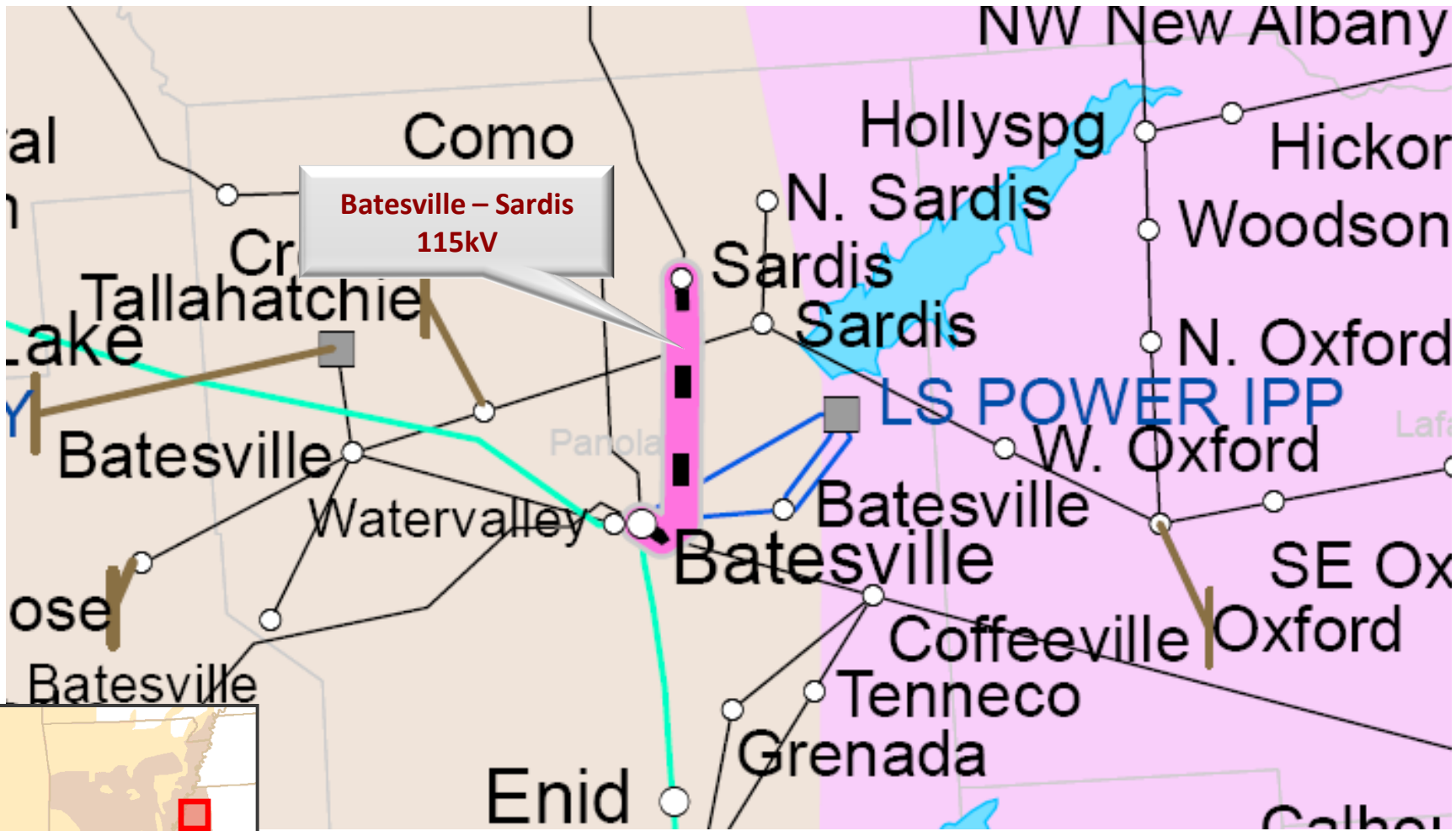


Mississippi CPE Results












 2014 Only	 2014, 2018, & 2021
 2014 & 2018	 2021 Only
 2018 Only	 Thermal Overload
 Sub Name	Low Voltage

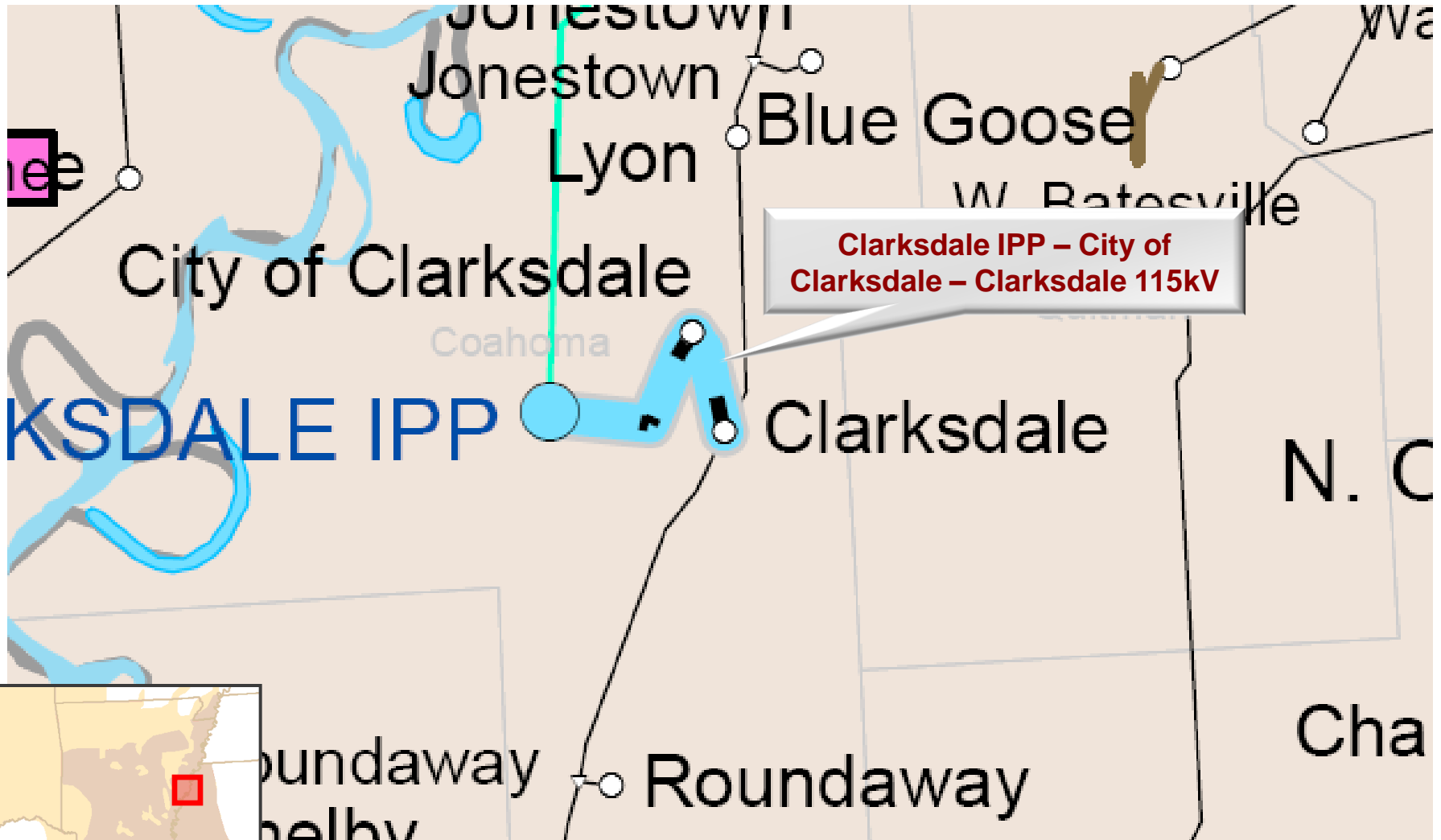


**Batesville - Sardis
115kV**

LS POWER IPP










	2014 Only		2014, 2018, & 2021
	2014 & 2018		2021 Only
	2018 Only		Thermal Overload
	Sub Name		Low Voltage



Clarksdale IPP - City of Clarksdale - Clarksdale 115kV

CLARKSDALE IPP

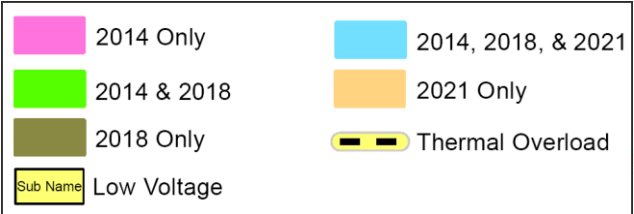
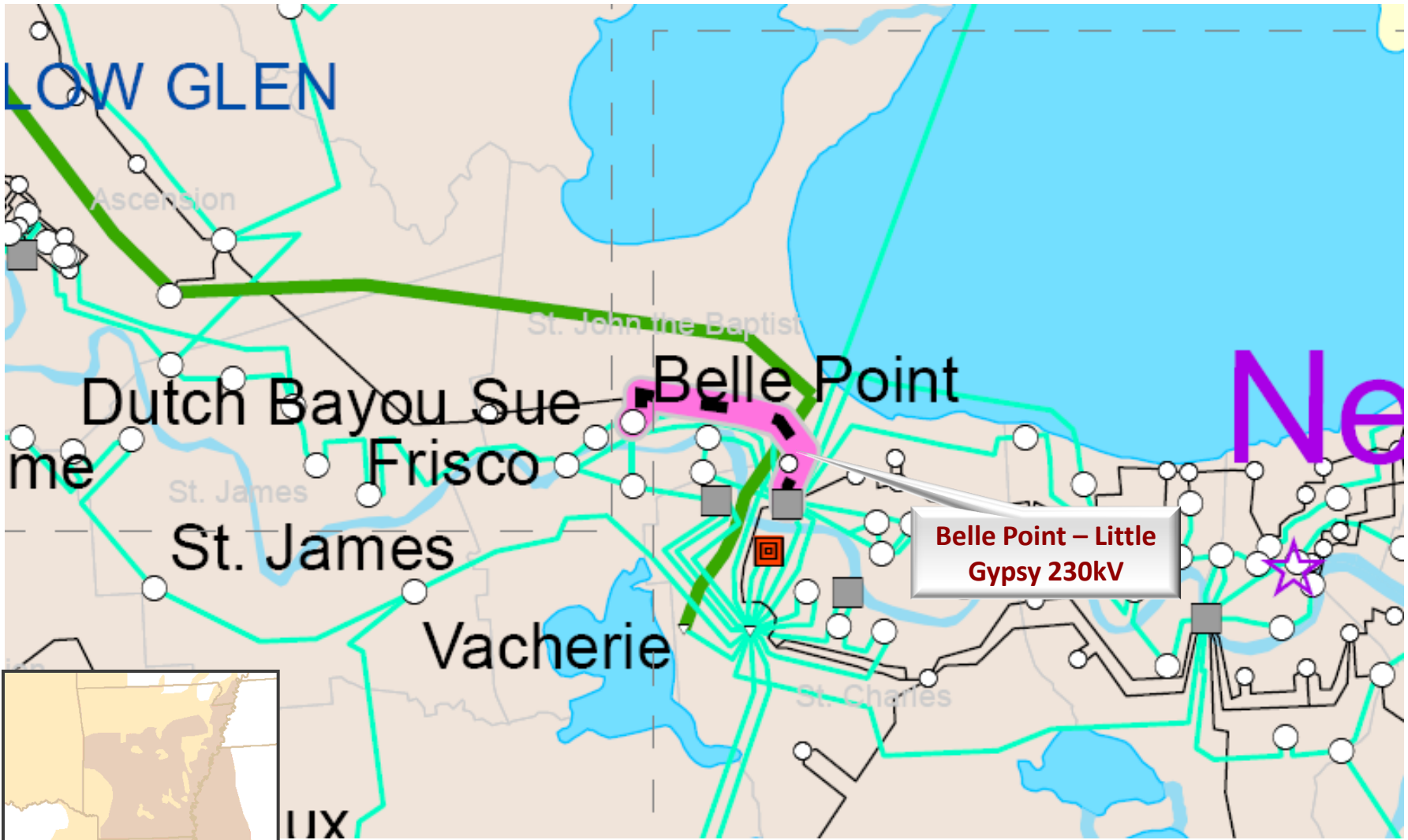


	2014 Only		2014, 2018, & 2021
	2014 & 2018		2021 Only
	2018 Only		Thermal Overload
	Low Voltage		

Louisiana CPE Results

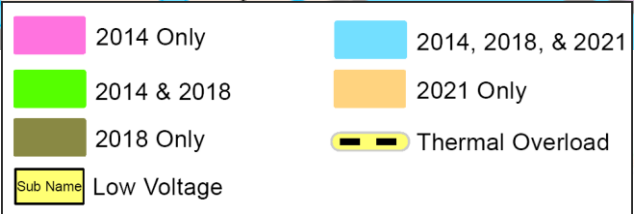
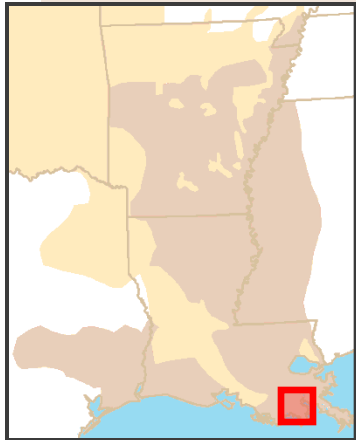


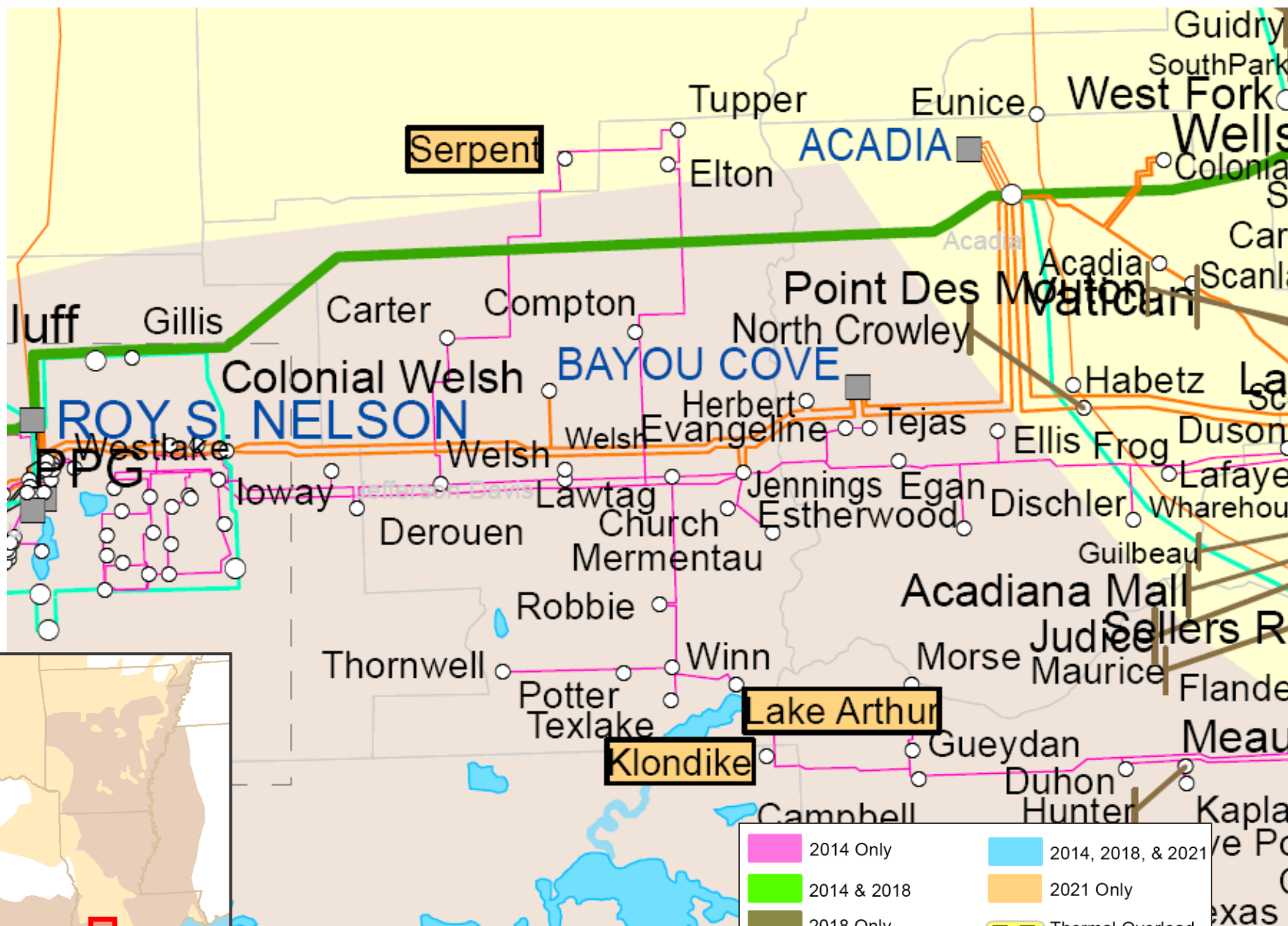






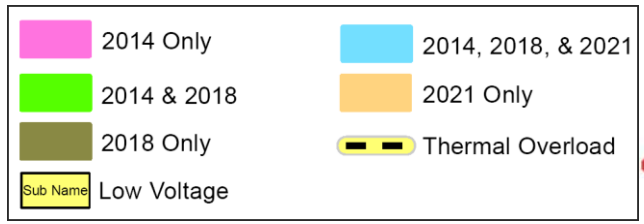
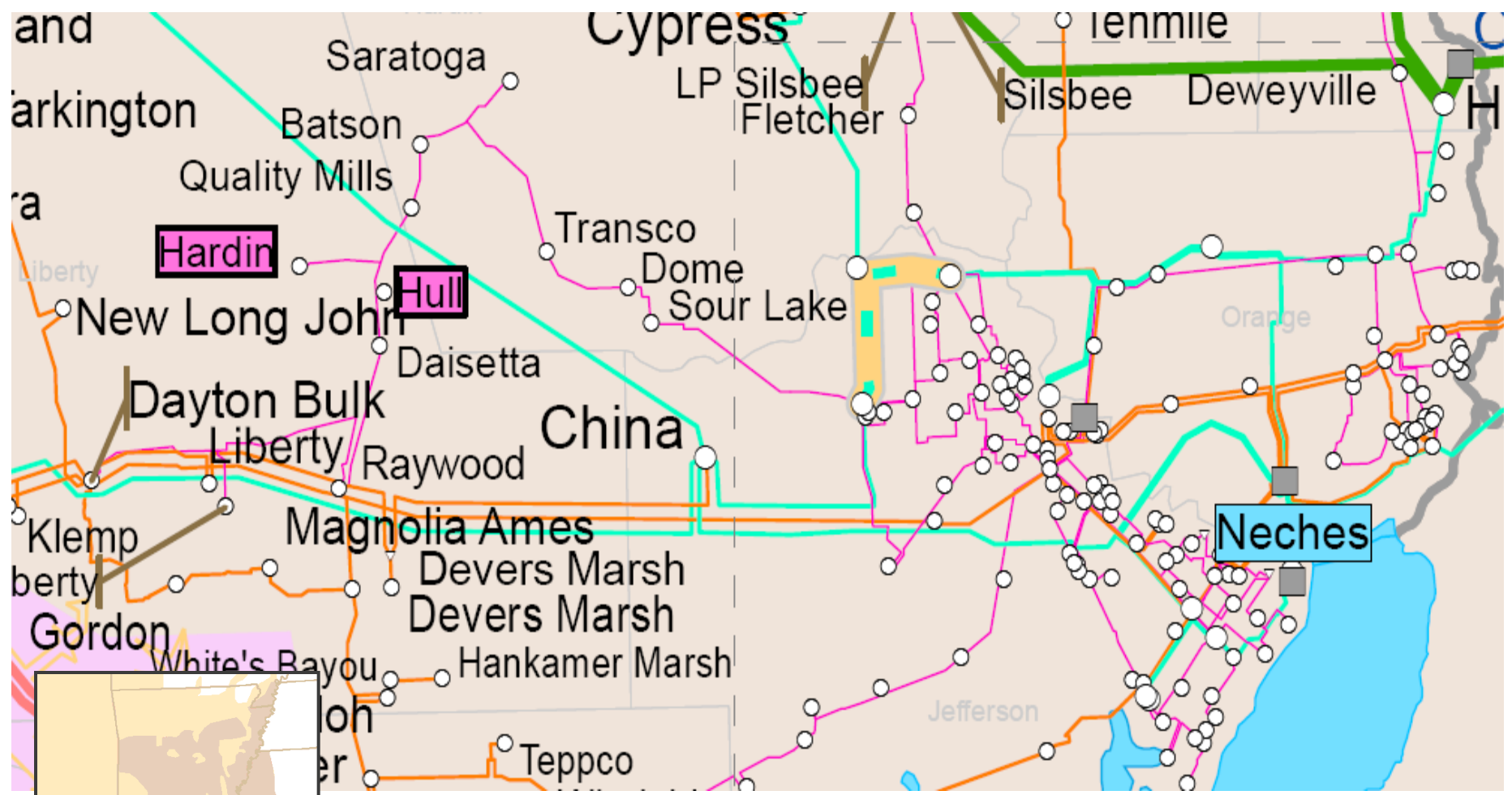
**Clovelly -
Valentine 115kV**

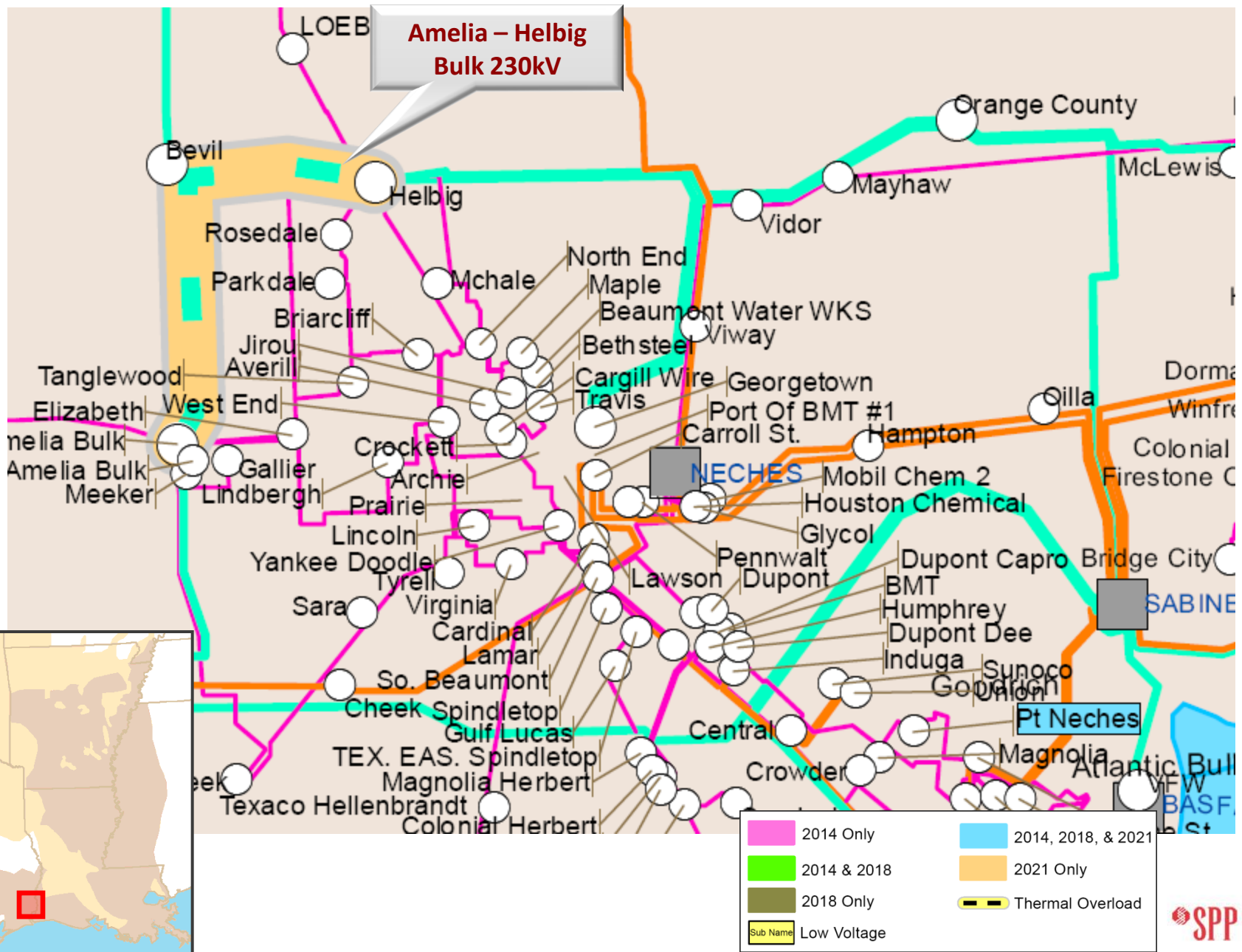


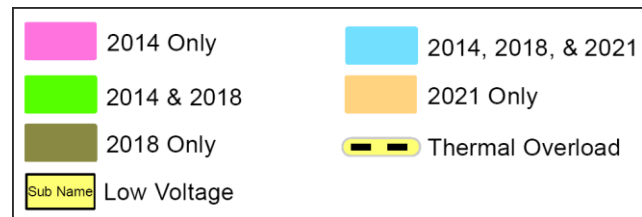
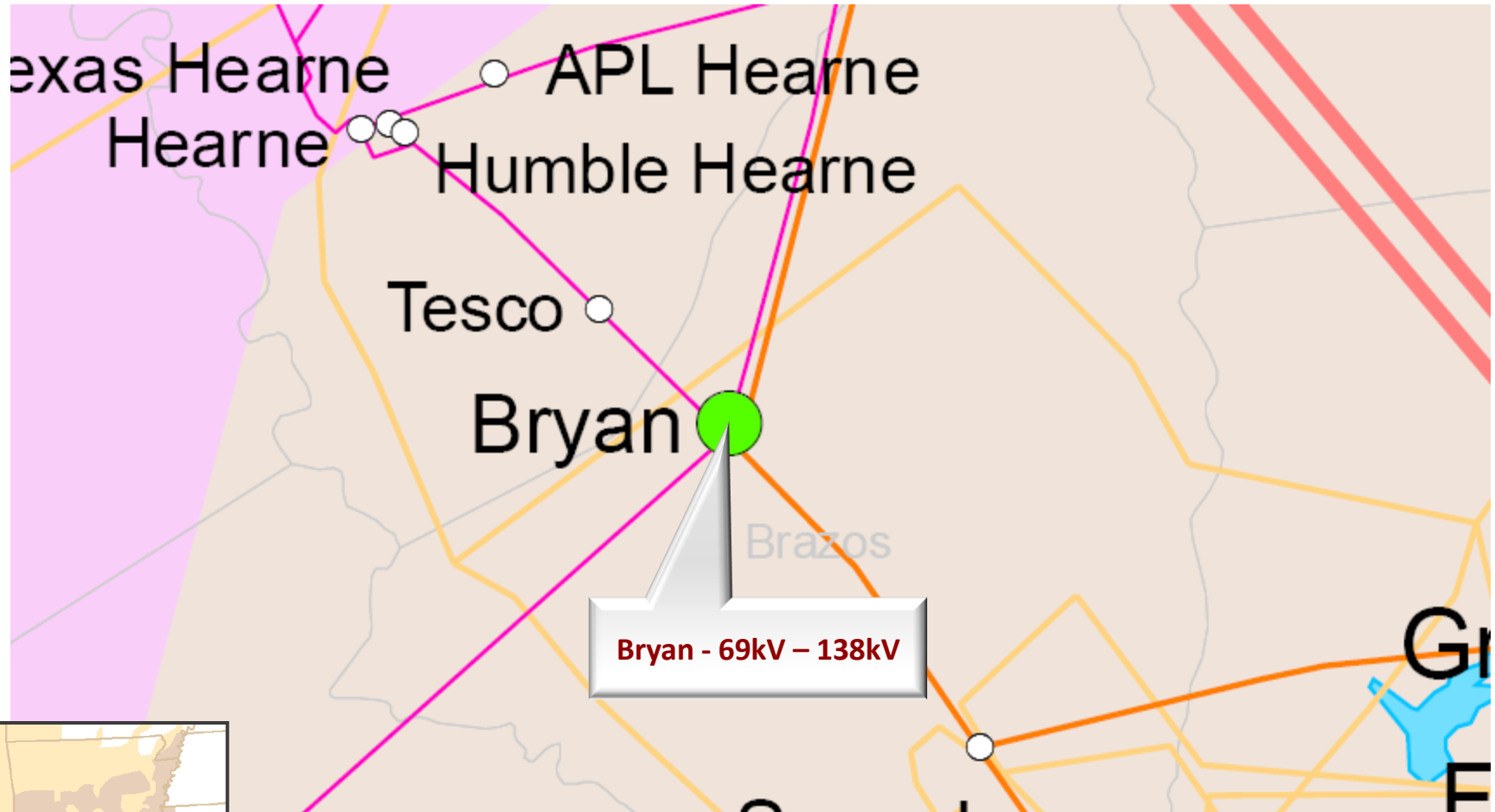


Texas CPE Results



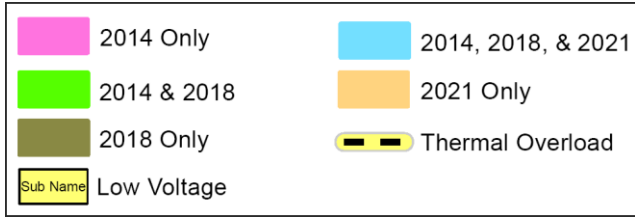
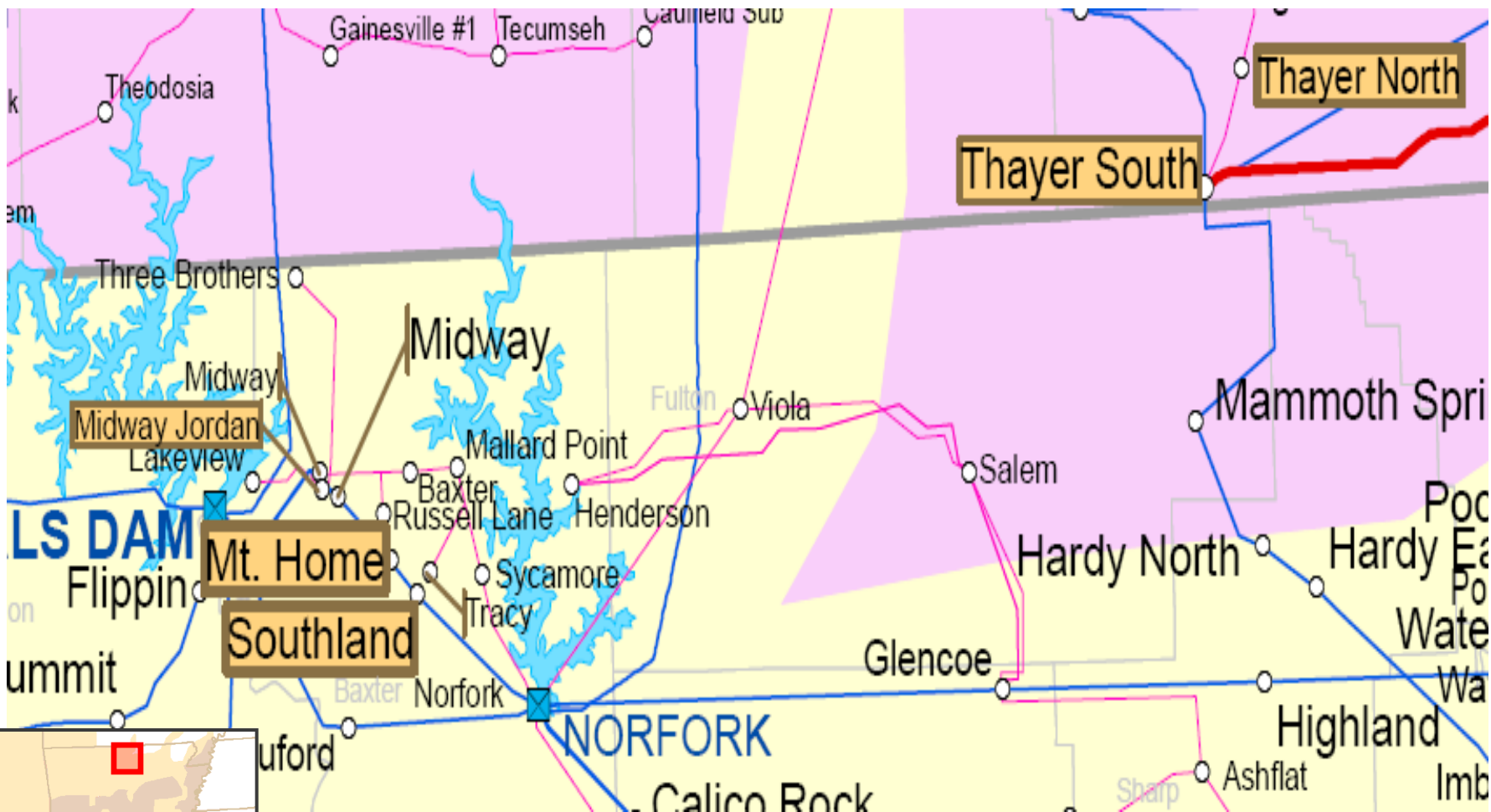


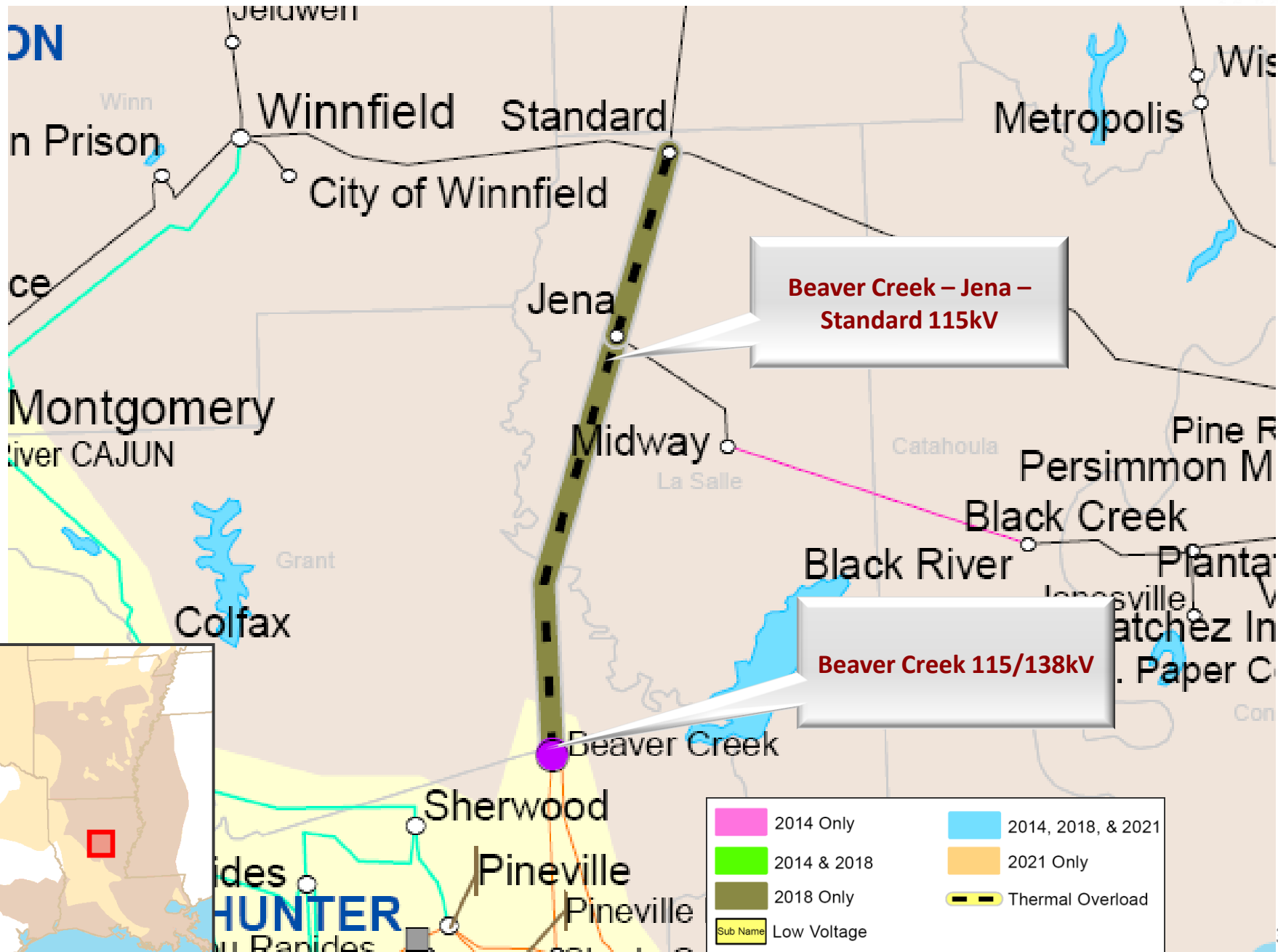


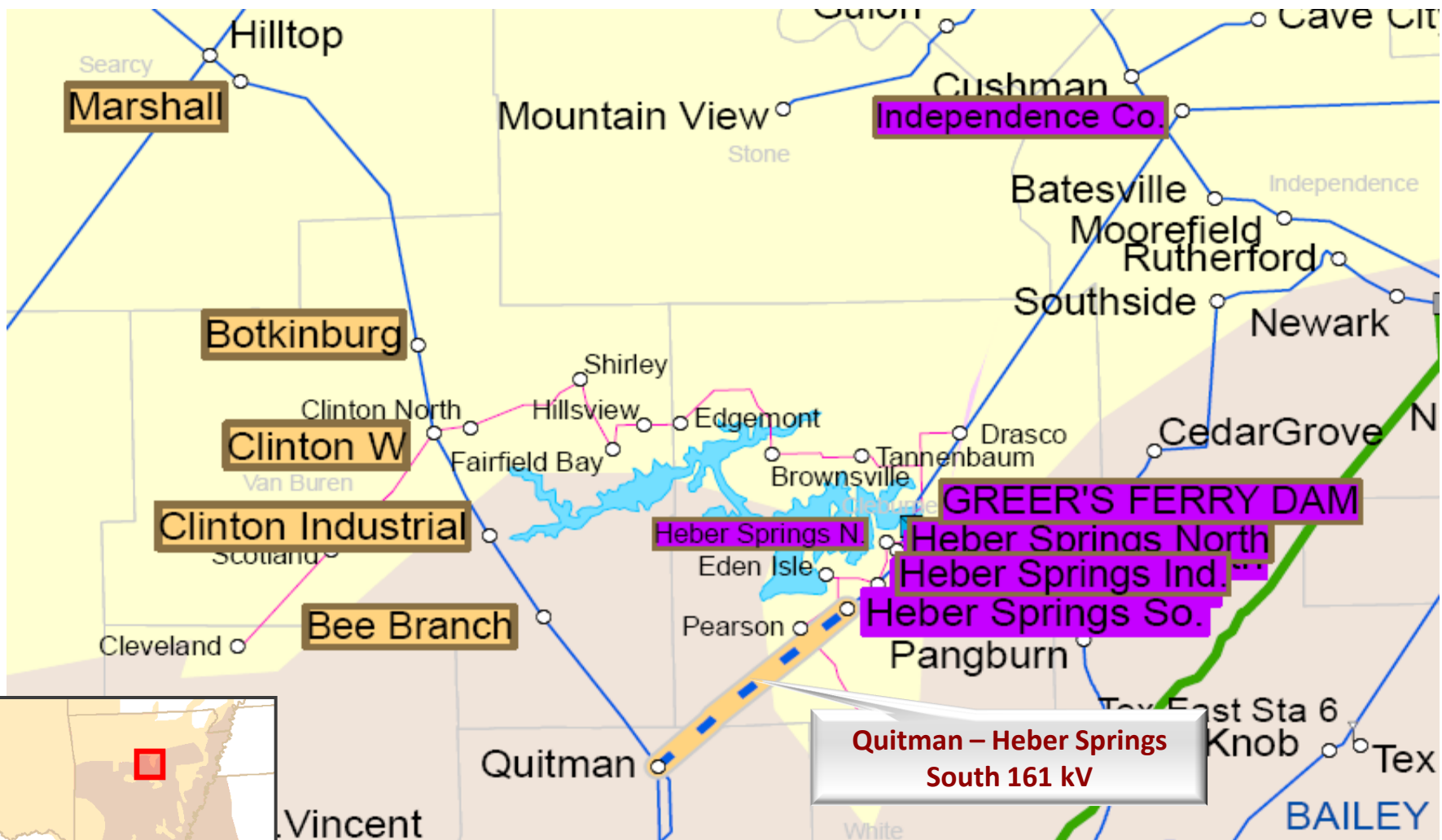


Low Hydro Results





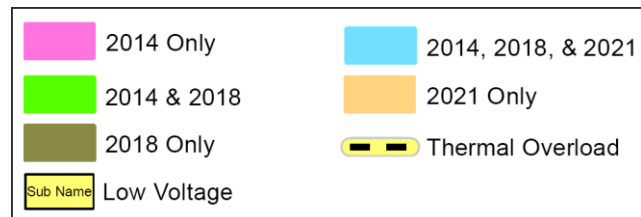


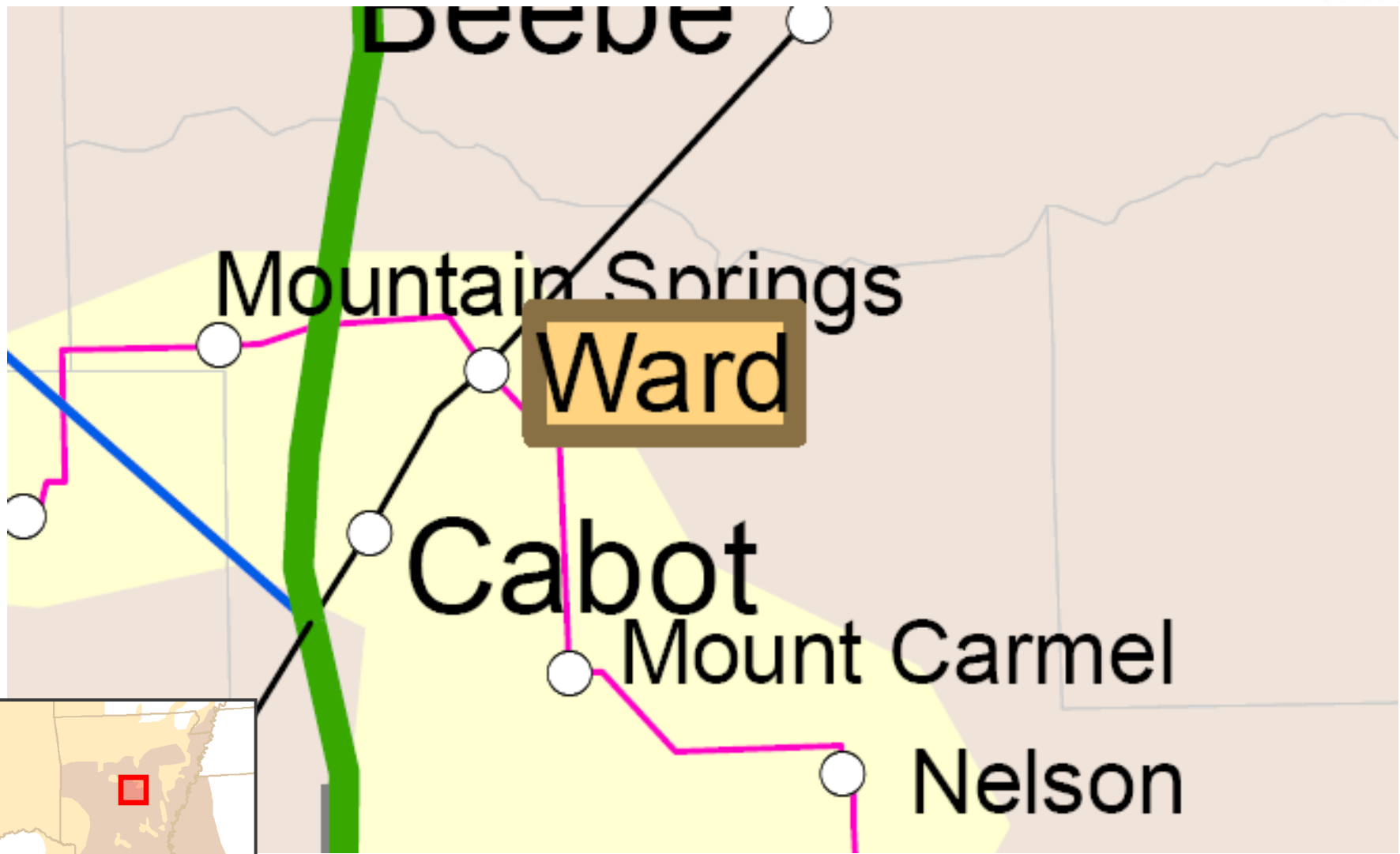


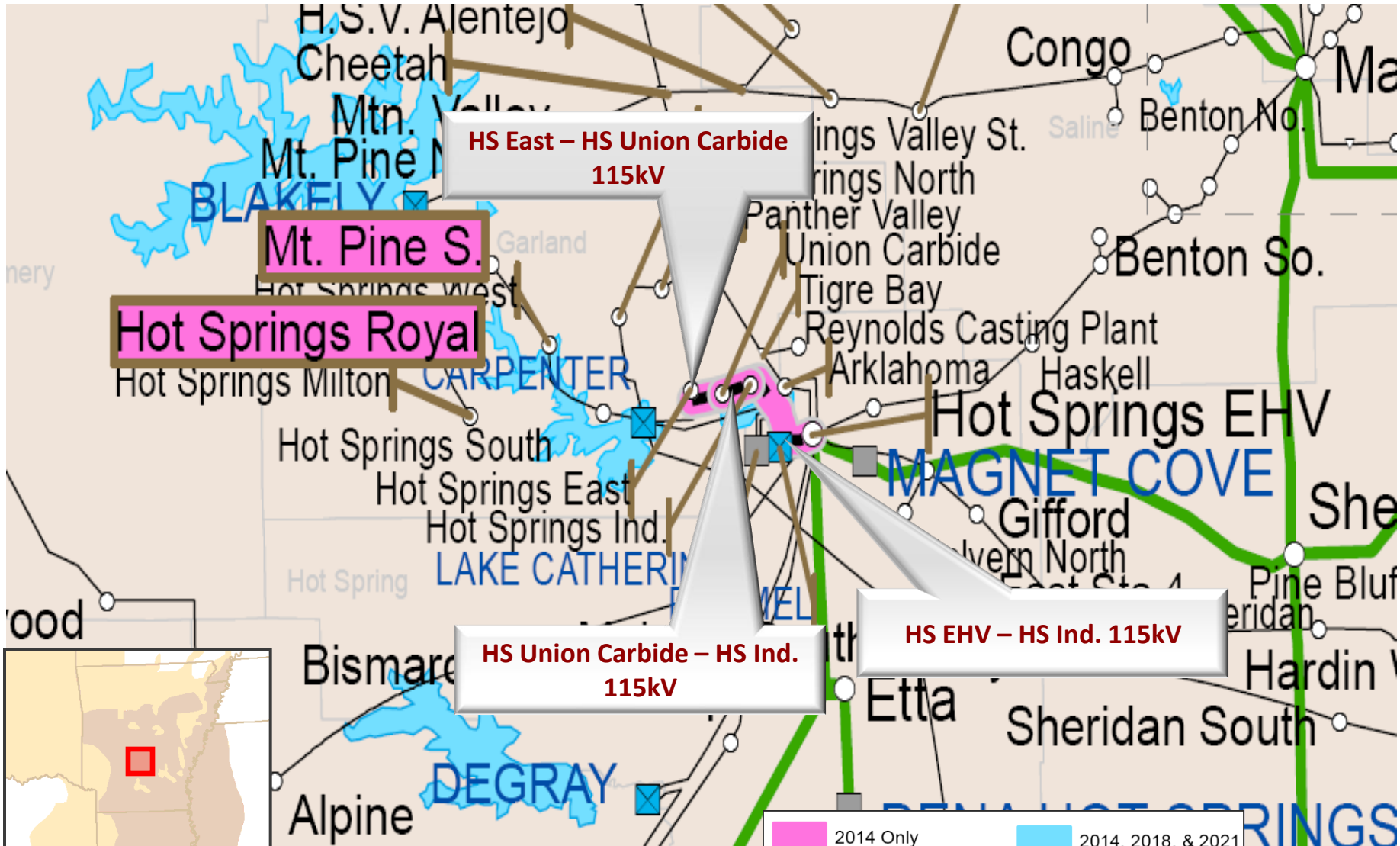
**Quitman – Heber Springs
South 161 kV**



 2014 Only	 2014, 2018, & 2021
 2014 & 2018	 2021 Only
 2018 Only	 Thermal Overload
 Sub Name Low Voltage	







Mt. Pine S.

Hot Springs Royal

HS East - HS Union Carbide
115kV

HS Union Carbide - HS Ind.
115kV

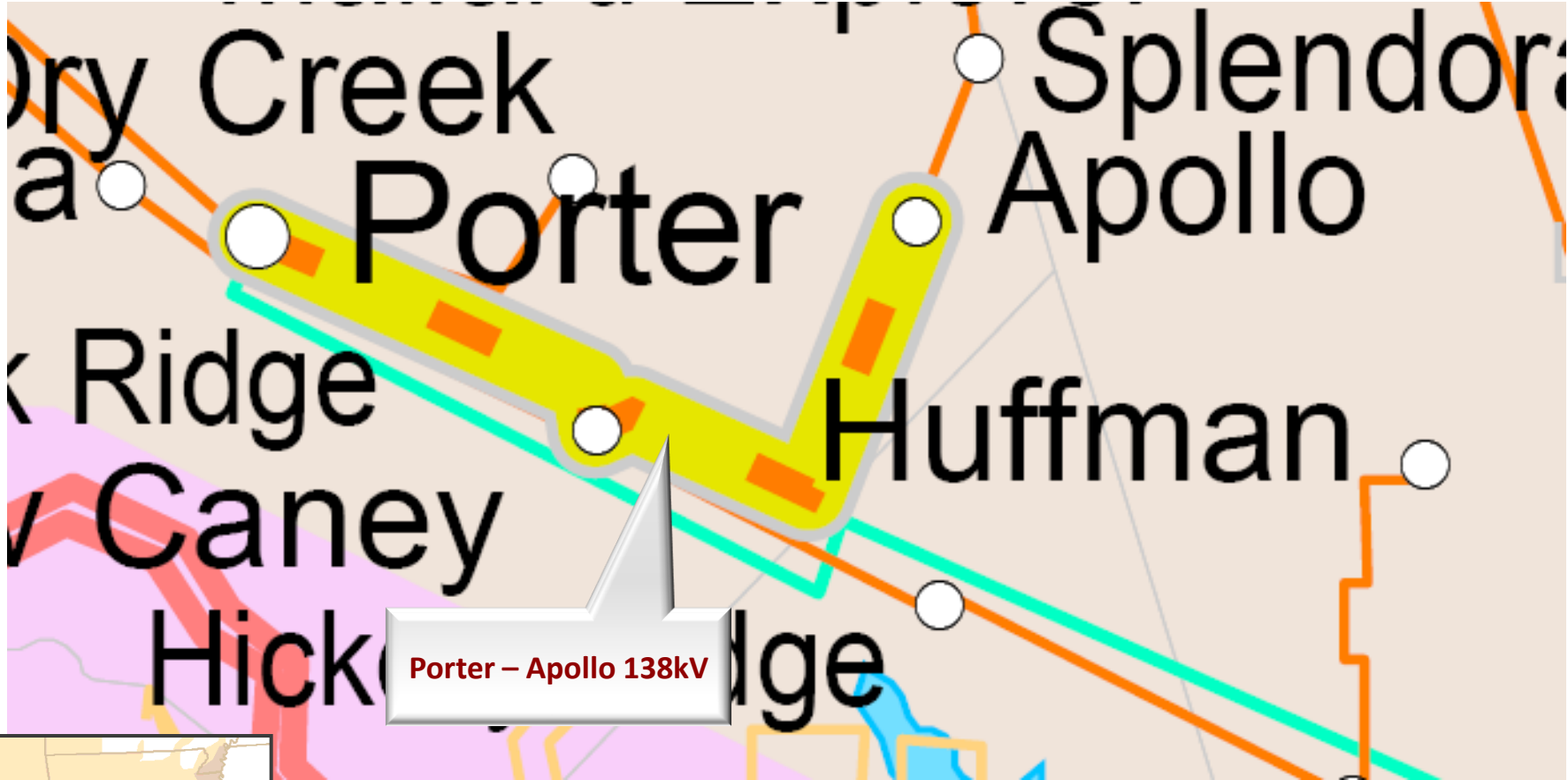
HS EHV - HS Ind. 115kV



 2014 Only	 2014, 2018, & 2021
 2014 & 2018	 2021 Only
 2018 Only	 Thermal Overload
 Sub Name	Low Voltage



Load Pocket Results





Porter - Apollo 138kV



	2018 Only		Thermal Overload
	Low Voltage		

QUESTIONS?

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