



**Southwest Power Pool, Inc. – Entergy  
 ENTERGY SPP RTO REGIONAL PLANNING PROCESS**

**August 11, 2010**

**Sheraton New Orleans Hotel - New Orleans, LA**

**• Agenda •**

3:15 – 5:00 pm

1. Administrative
  - A. Introductions..... All
  - B. Review Past Action Items ..... Tim McGinnis
  - C. Discuss/Approve Minutes of 5/27/2010 ESRPP Meeting ..... Tim McGinnis /All
  - D. SPP Antitrust Guidelines..... Tim McGinnis
2. Review of Initial Study Results ..... Eric Burkey and Paul Simoneaux
  - a. 2010 ESRPP Step 1 (High-Level Analysis) Studies
    - i. Arkansas IPPs (Hot Springs, Magnet Cove, and PUPP) to SPP South (AEP and OGE) for 3000MW
    - ii. From AEP to Entergy Arkansas for 700 MW
    - iii. From Entergy Arkansas to AEP for 700 MW
  - b. 2009 ESRPP Step 2 (Detailed Analysis) Studies
    - i. Turk-McNeil 345 kV
    - ii. Messick 500/230 kV Autotransformer
3. Next Steps ..... Tim McGinnis
  - a. Post Updated Step 1 Study Results by October 31, 2010
  - b. Stakeholder Comment Period: November 1 – 30, 2010
  - c. Next Meeting – Net Conference: around February 23<sup>rd</sup>, 2011 (Presentation and discussion of the final report)
4. Other Discussion ..... All
5. Adjournment



**Southwest Power Pool, Inc. – Entergy  
2010 SPP SPRING PLANNING WORKSHOP  
ENTERGY SPP RTO REGIONAL PLANNING PROCESS**

**May 27, 2010**

**Little Rock, AR**

**Embassy Suites**

**• Summary of Action Items •**

**8-9:45 a.m.**

- 1) The ICT will send out an email to the TWG and LTTIWG explorers asking for objections to the inclusion of Priority Projects in the base case model.
- 2) The Joint Planning Committee will discuss with Entergy the possibility of adding renewable transactions to Entergy's control area in the base model.
- 3) The Joint Planning Committee will investigate the possibility of implementing the Day-Ahead market and consolidated balancing authority in the studies.
- 4) The Joint Planning Committee will consider replacing the Messick 500/230kV project for a different one.



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**• Minutes •**

8-9:45 a.m.

**Agenda Item 1 – Administrative**

Jody Holland (SPP) called the meeting to order at 8:00 a.m. A list of attendees is attached at the end of these Minutes. Jody reviewed the agenda, Minutes from the 4/20/2010 meeting, and anti-trust guidelines. The minutes were approved with no objections.

**Agenda Item 2 – Review Past Action Items**

There were no action items from the April 20<sup>th</sup> ESRPP meeting.

**Agenda Item 3 – Process Overview**

Tim McGinnis (SPP) presented the 2010 ESRPP overview.

**Agenda Item 4 – 2010 ESRPP Study Scope**

Eric Burkey (SPP) presented the 2010 ESRPP Study Scope.

Lawrence Willick (LS Power) asked if there was an assumption made that there are no base case overloads. Eric Burkey (SPP) explained that the overloads in the base case would be addressed.

Bary Warren (EDE) asked why the Board Approved Priority Projects were not included in the base case model. Eric Burkey (SPP) said that the projects were excluded from the model since there was not a definitive date when the Highway-Byway cost allocation would be approved by FERC. Jody Holland (SPP) further clarified the issue by explaining that the NTC's will not be sent out until the Highway-Byway cost allocation methodology was approved and since there was no NTC's issued the projects were excluded. Bary Warren (EDE) said that since SPP BOD approved the projects and SPP

believes these are good projects they should be included. Bary went on to say that even if the Highway-Byway cost allocation does not get approved there are independent transmission owners who are will to build the projects. Jody Holland (SPP) asked if anyone had a problem with including them in the base case model. There were no objections to including them in the base case model.

Bary Warren (EDE) asked if the base case model included additional renewable imports into Entergy's control area. Eric Burkey (SPP) responded that the model has only confirmed transaction included and was unsure if there were any renewable imports into Entergy's control area. Bary Warren (EDE) then asked if there had been any thoughts on including addition renewable imports. Jody Holland (SPP) said that there had not been any discussions of additional renewable transactions into the base model. Sam Loudenslager (Arkansas Public Service Commission) stated that this might be a good time to start planning for renewable energy.

Bary Warren (EDE) asked if the SPP Day-Ahead market and consolidated balancing authority (CBA) would be taken into account when performing the studies. Jody Holland (SPP) responded that we had not thought of applying those scenarios to the model. Jody Holland (SPP) asked Bary Warren (EDE) if he was referring to the way the model was dispatched and if the transactions would be to SPP as one BA. Bary Warren (EDE) responded that is what he was referring to. Jody Holland (SPP) made an action item to investigate the possibilities of a CBA and Day-Ahead market. Sam Loudenslager (ARPSC) made a comment that MISO may be able to help with the Day-Ahead market simulation.

#### **Agenda Item 5 – Selected Studies for 2010 ESRPP Cycle**

Paul Simoneaux (Entergy) presented the selected studies for 2010 ESRPP cycle.

John Chiles (GDS) asked if the Mt. Olive – Hartburg 500kV study was one of the 5 selected ISTEP projects. Jody Holland (SPP) responded that it was one of the 5 projects selected for ISTEP. John Chiles (GDS) said that maybe we should consider changing out one of the projects in ESRPP and letting the ISTEP process study the Mt. Olive – Hartburg problem. Matt McGee (OGE) explained that the Messick 500/230kV project will address not only stability, but also inter-regional transfers. Terri Gallup (AEP) recommended that the project stays in.

Lawrence Willick (LS Power) asked if anyone knew to what extent the Arkansas IPPs were dispatched in the model. Jody Holland (SPP) responded that there is 3000MW of dispatchable capacity available from the Arkansas IPPs in the model.



**Agenda Item 6 – Other Discussion**

There was no other discussion.

**Agenda Item 7 – Adjournment**

Jody Holland (SPP) adjourned the meeting at 9:15 a.m.



Southwest Power Pool, Inc.

2010 SPP SPRING PLANNING WORKSHOP (ESRPP)

Entergy/SPP RTO Regional Planning Process (ESRPP)

May 27, 2010

Embassy Suites/Little Rock, AR

• ATTENDANCE LIST •

| Name              | System           |
|-------------------|------------------|
| Eric Burkey       | SPP              |
| James D Lucas     | SPP              |
| Paul Simoneaux    | Entergy          |
| Terri Gallup      | AEP              |
| Jody Holland      | SPP              |
| Lawrence Wilrick  | LSP              |
| Tim McGinnis      | SPP              |
| Kip Fox           | AEP              |
| Eddie Filat       | SPP              |
| Jason Fortik      | LES              |
| Brett Hooton      | SPP              |
| Katherine Prewitt | SPP              |
| Brandon Hentschel | SPP              |
| Bob Lux           | SPP              |
| English Code      | SPP              |
| Rachel Hulett     | SPP              |
| Walter Shumate    | Shumate & Assoc. |
| Keith Tynes       | SPP              |



Southwest Power Pool, Inc.

2010 SPP SPRING PLANNING WORKSHOP (ESRPP)

Entergy/SPP RTO Regional Planning Process (ESRPP)

May 27, 2010

Embassy Suites/Little Rock, AR

• ATTENDANCE LIST •

| Name            | System       |
|-----------------|--------------|
| RAJA SRIVASTAVA | RES-AMERICAS |
| MARK HAMILTON   | OG & E       |
| Brad Finkbeiner | SPP          |
| Tony Gott       | AECI         |
| Richard Grefke  | PKCT         |
| Jim McAvoy      | OMPA         |
| Rini Fitch      | AECI         |
| Hony B. Smith   |              |
| BARY WARREN     | EDE          |
| Jason Robinson  | SPP          |
| Ben Robinson    | SPP          |
| Tony McKinley   | BU           |
| Michael Hutson  | RES Americas |
| Kelsey Allen    | SPP          |
| Ryan Garrett    | SPP          |
| Walt Cecik      | MIO REC      |
| Tom Miller      | SPP          |
| JAVIER BANIREZ  | MBENGOA TXD  |



Southwest Power Pool, Inc.  
2010 SPP SPRING PLANNING WORKSHOP (ESRPP)  
Entergy/SPP RTO Regional Planning Process (ESRPP)  
May 27, 2010  
Embassy Suites/Little Rock, AR

• ATTENDANCE LIST •

| Name              | System            |
|-------------------|-------------------|
| John Chiles       | ETEC              |
| Charles Cates     | SPP               |
| Sam Landerlegger  | Ark PSC           |
| JANET E. WHEELER. | MO PSC.           |
| Paul Dietz        | <del>to</del> SPP |

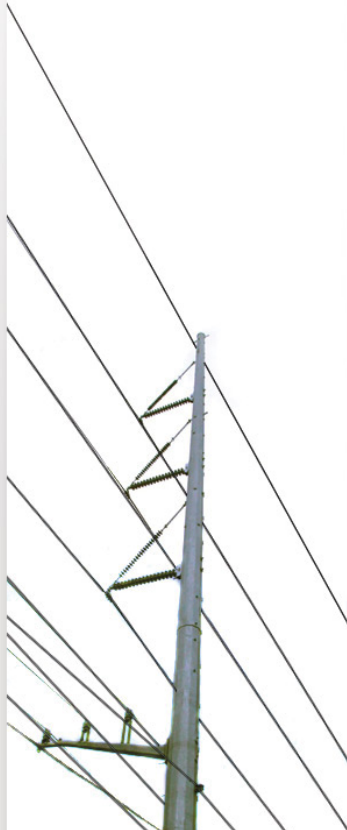
ON the Phone:

|              |                |
|--------------|----------------|
| Matt Mc Lee  | REP            |
| Jina Lee     | K-Gen          |
| Jason Atwood | Pagwood Energy |
| Robert Jones | GDS            |
| ed Rohlfson  | EES            |
| Syed Ahmad   | FERC           |





**Helping our members work together  
to keep the lights on...  
today & in the future**





# SPP Antitrust Guidelines

# Prohibited Discussions

- **Pricing information, especially margin (profit) and internal cost.**
- **Information and participants' expectations as to their future prices or internal costs.**
- **Participant's marketing strategies.**
- **How customers and geographical areas are to be divided among competitors.**
- **Exclusion of competitors from markets.**



# Prohibited Discussions *cont.*

- **Boycotting or group refusals to deal with competitors, vendors or suppliers.**
- **No decisions should be made nor any actions taken during SPP activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants.**

# Permitted Discussions

- **Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.**
- **Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.**

# Permitted Discussions *cont.*

- **Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.**
- **Matters relating to the internal governance, management and operation of SPP, such as nominations for vacant committee positions, budgeting and assessments.**
- **Procedural matters such as planning and scheduling meetings.**
- **Any other matters that do not clearly fall within these guidelines should be reviewed with SPP's General Counsel before being discussed.**



<http://www.spp.org>

General Inquiries: 501-614-3200

[questions@spp.org](mailto:questions@spp.org)



## Review of Initial Study Results

**Entergy SPP RTO Regional Planning Process  
Stakeholder Meeting**  
August 11, 2010



# Study Selection Criteria

- **2009 ESRPP Step 2 (Detailed Analysis) Studies**  
and/or
- **2010 ESRPP Step 1 (High-Level Analysis) Studies**
  1. **Increase transfer capability between a control area in SPP and a control area in Entergy (including Entergy), specifying a transfer amount**

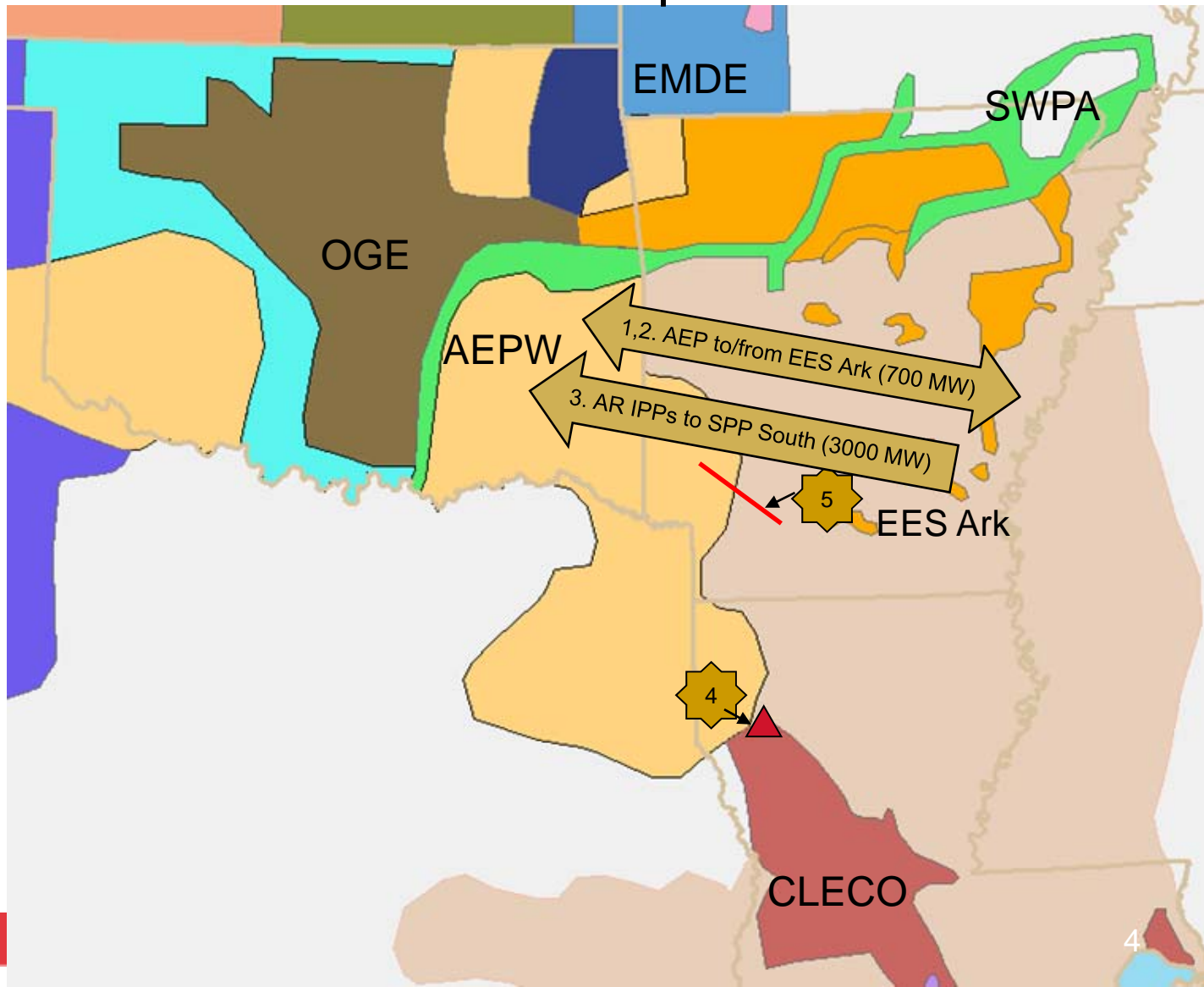
# Selected Studies

- **Composition of 2010 ESRPP Studies**
  - **3 new high-level studies**
    1. **Arkansas IPPs (Hot Springs, Magnet Cove, and PUPP) to SPP South (AEP and OG&E) for 3000 MW**
    2. **AEPW to Entergy Arkansas for 700 MW**
    3. **Entergy Arkansas to AEPW for 700 MW**
  - **2 Detailed studies selected from the 2009 ESRPP Studies**
    4. **Messick 500/230 kV Autotransformer**
    5. **Turk-McNeil 345 kV Line**

# Selected Studies Overview Map

**SPP Transfer Areas:**  
AEP West  
OG&E

**Entergy Transfer Areas:**  
Entergy Arkansas  
Arkansas IPPs





Step 1  
(High-level Analysis)

## General Study Assumptions for 2010 ESRPP Step 1 (High-Level Analysis) Studies

- **The high-level project proposals for 2010 cycle should increase transfer capability between a control area in SPP and a control area in Entergy (including Entergy), specifying a transfer amount. (POR/POD, MW)**
- **Planning-level cost estimates and construction timelines**
- **MUST DC analysis of FCITC.**

# Powerflow Models

- **Base Model**
  - **SPP's 2010 Series STEP and Entergy's 2010 Series update 1**
    1. **2016 Summer Peak Base Case Model**
    2. **Includes Priority Projects**
- **Change Model**
  - **Add transfer and other study project requirements**
  - **Analyze transfer results**
  - **Develop and test upgrades to relieve constraints**

# Powerflow Model Additions

- **Entergy Construction Plan Updates 2 and 3**
  - Holland Bottoms Phase 1 (Proposed to Approved)
  - Carter and Elton: Upgrade 69kV Cap banks (Proposed to Approved)
  - Ridgeland - Madison Reliability Project (Proposed to Approved)
  - College Station 138kV Switching Station (Proposed to Approved)
  - McAdams Area Upgrades (Proposed to Approved)
- **Topology Updates from Entergy Model Update 2**


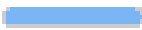



# Reliability Assessment on Models


















- **N-1 Contingency Analysis**
  - **Added projects to the model**



# Map Legend

**Limiting Constraints**

-  Project 3
-  Project 4
-  Project 5
-  Both 3 & 4
-  Both 3 & 5

|  |                              |   |              |
|--|------------------------------|---|--------------|
|   | 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 |
|  |                              |  | AC/DC Ties   |

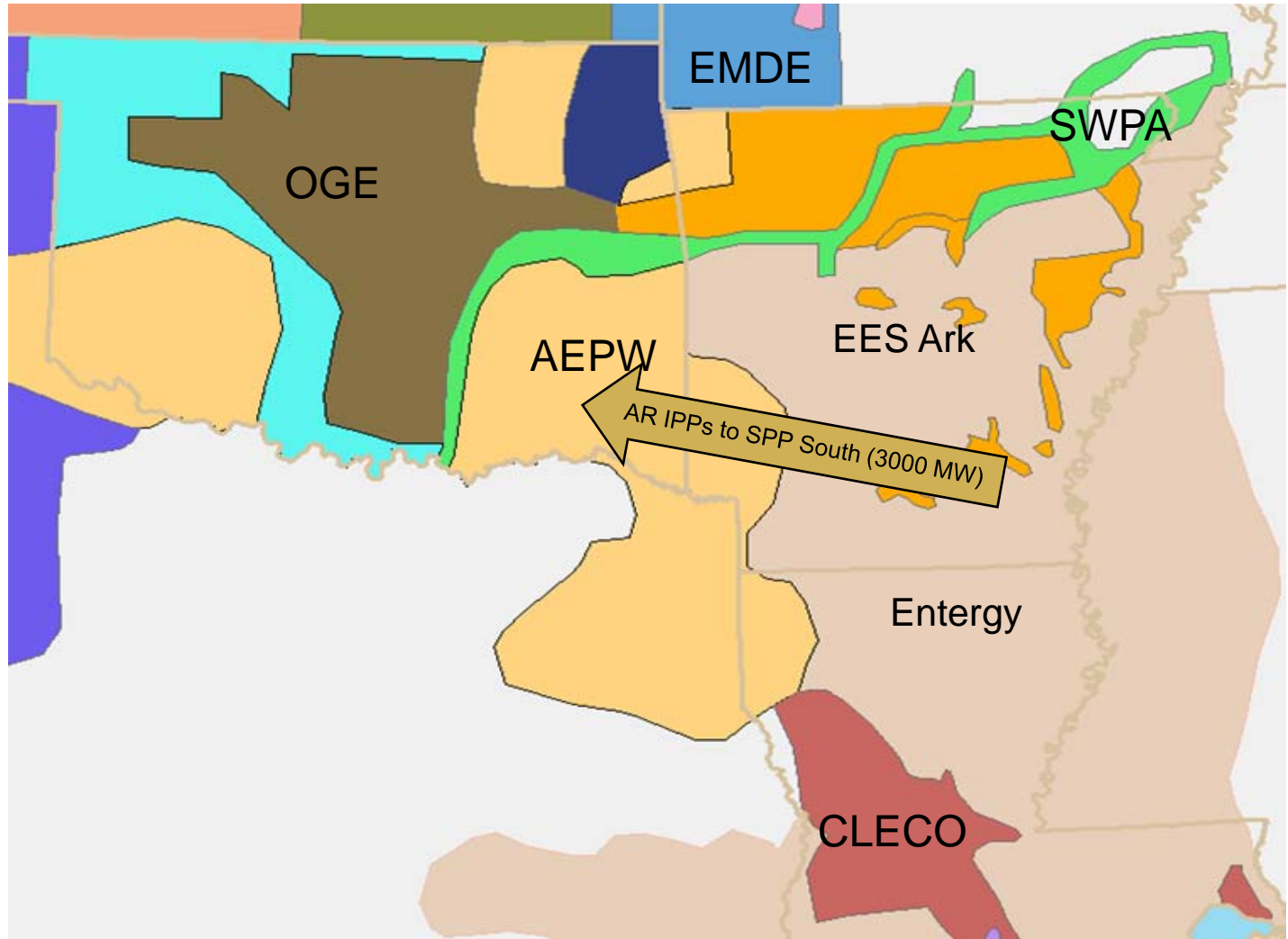
**CRITICAL ENERGY INFRASTRUCTURE INFORMATION - DO NOT RELEASE**

\* Not all transmission facilities represented here are geographically correct. Single lines may represent multiple circuits in geographically congested areas.

\* 115 kV - 161 kV lines outside of SPP footprint are represented with the 115 kV symbology.

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# (#1) Arkansas IPPs to SPP South for 3000MW



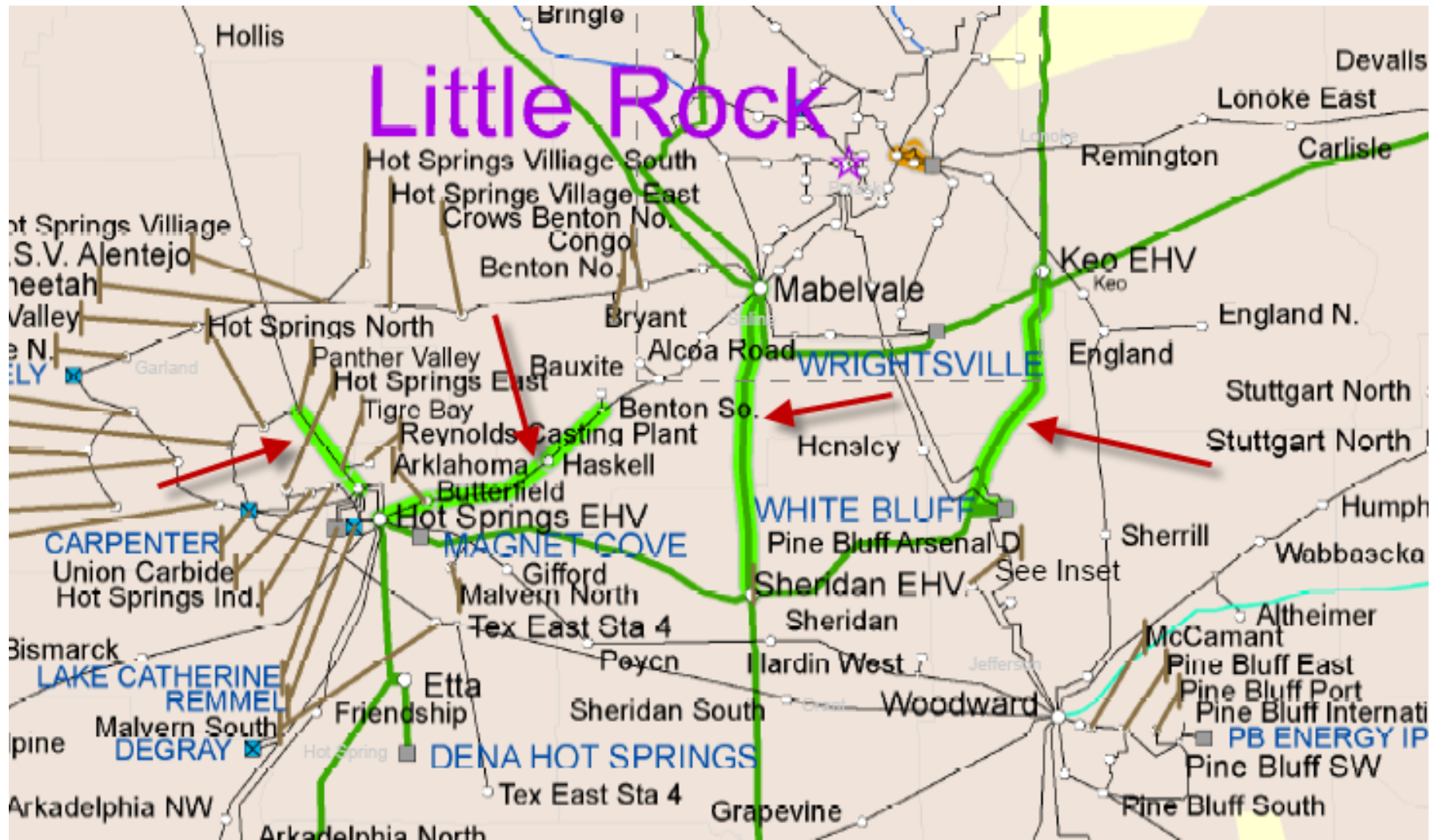
**SPP South :**  
AEP West  
OG&E

**Arkansas IPPs:**  
Hot Springs  
Magnet Cove  
PUPP

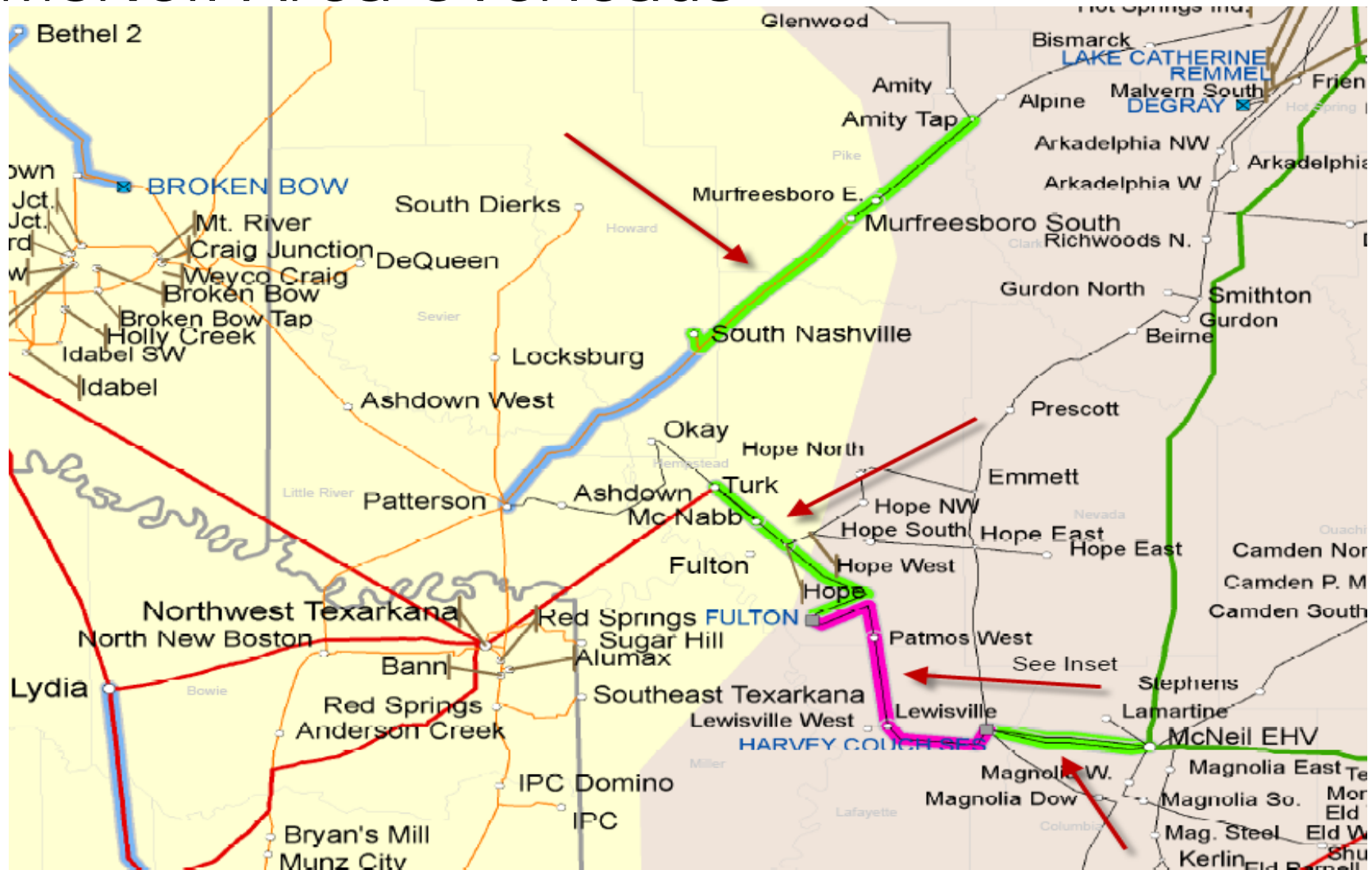
# Transfer Analysis

- **Transfer**
  - **Arkansas IPPs to AEPW for 3000MW**
    - 1. Arkansas IPPs**
      - A. Hot Springs 430MW
      - B. Magnet Cove 430MW
      - C. PUPP 2140MW
    - 2. AEPW**
      - A. Scale All 3000MW

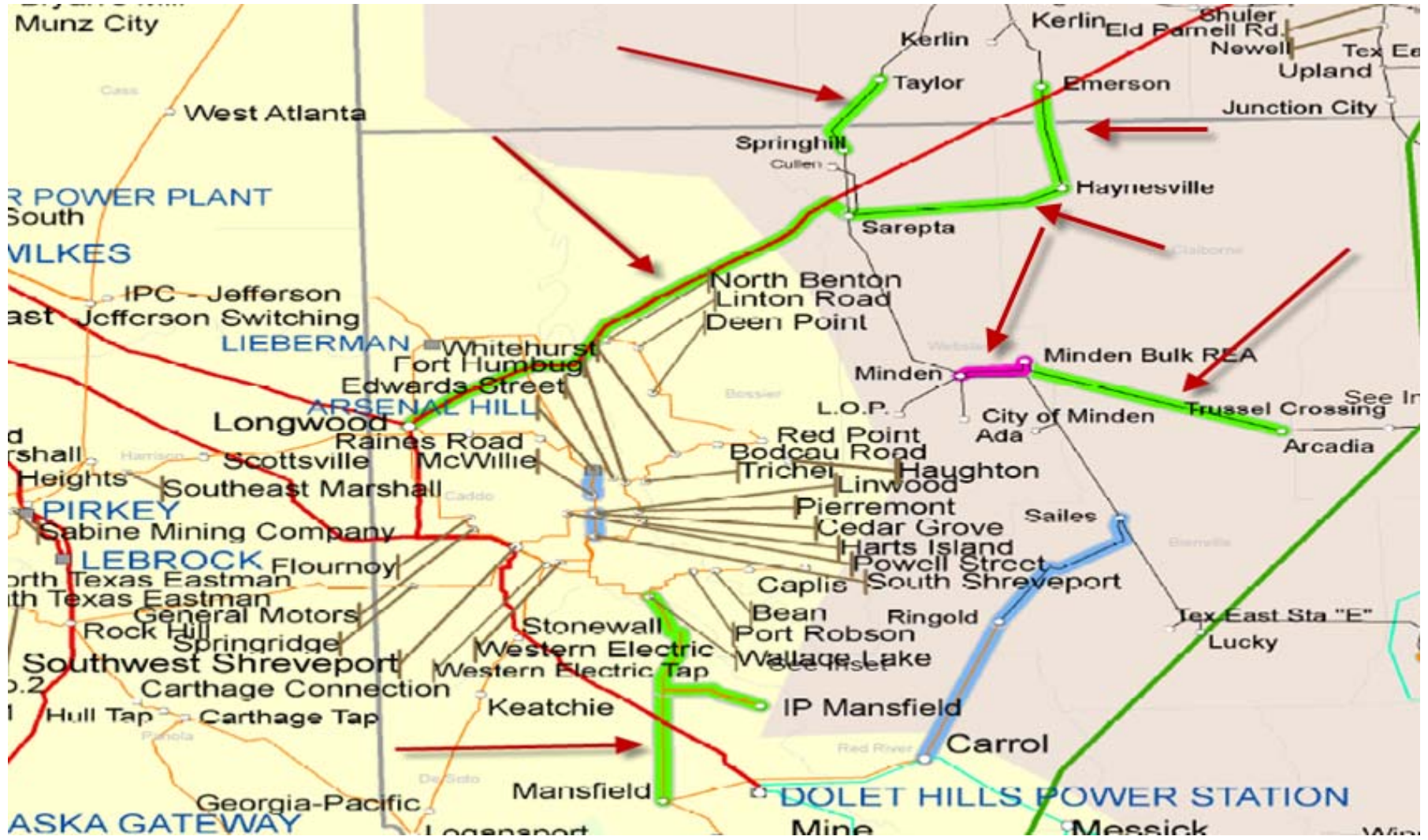
# Little Rock Area Overloads



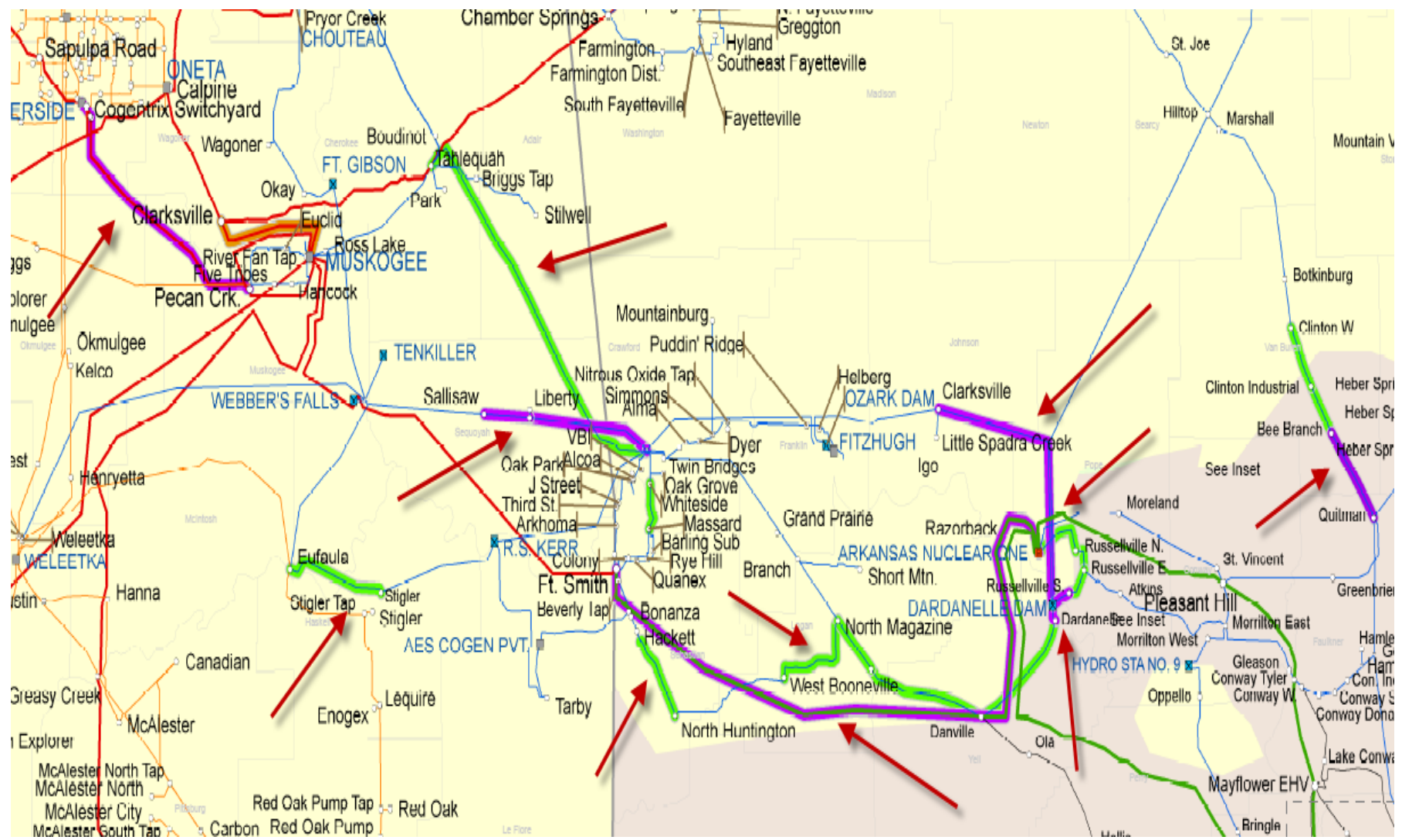
# McNeil Area Overloads



# Southwest of El Dorado Overloads



# Fort Smith Area Overloads



# FCITC Values

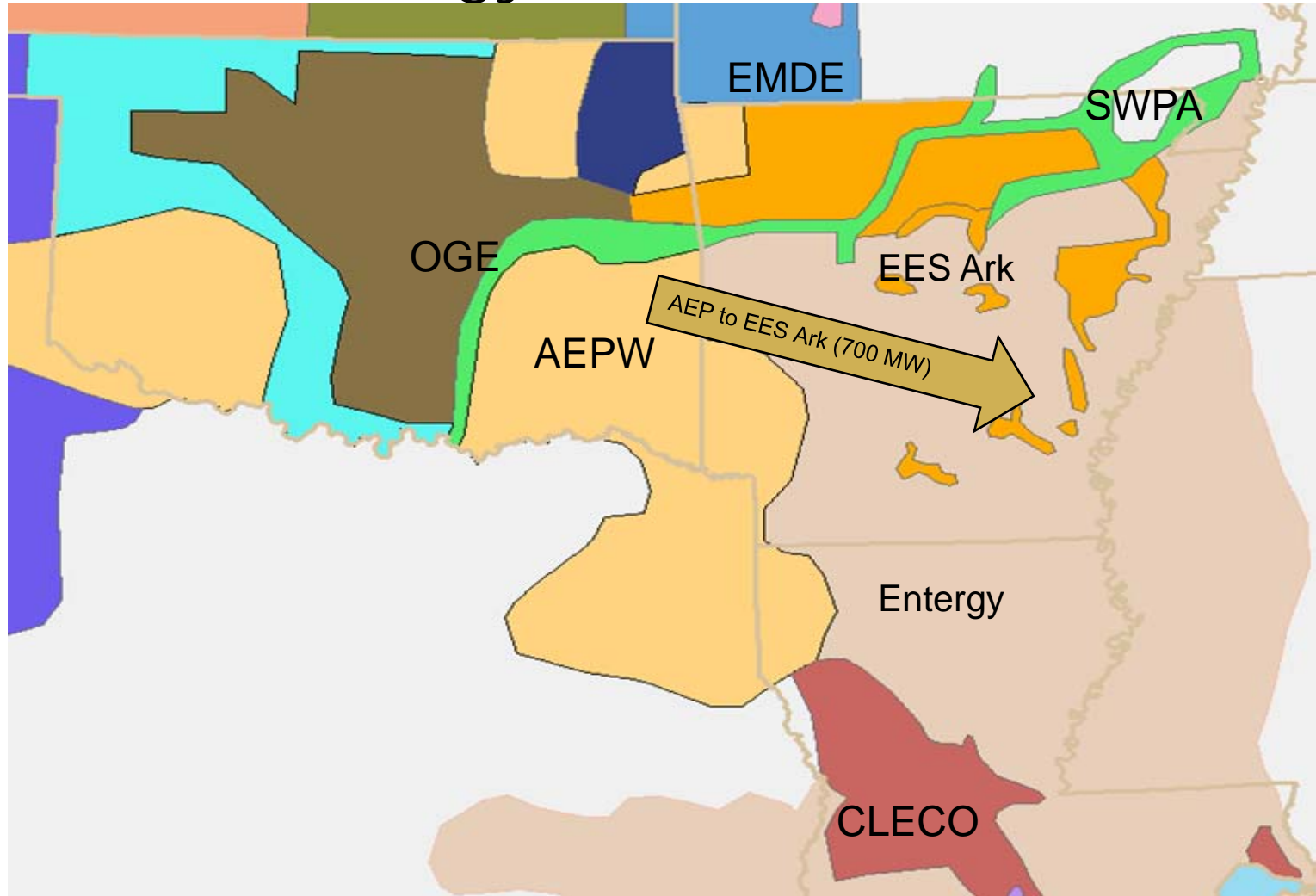
| FCITC  | Limiting Constraint |          |     |        |           |        | Contingency  |          |          |        |          |       |
|--------|---------------------|----------|-----|--------|-----------|--------|--------------|----------|----------|--------|----------|-------|
| 808.8  | 500430              | IPAPER 4 | 138 | 500530 | MANSFLD4  | 138 1  | C:500250     | DOLHILL7 | 345      | 507760 | SW SHV 7 | 345 1 |
| 908.2  | 337905              | SRUSL-E  | 161 | 337906 | SRUSL-N   | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 1384.7 | 505508              | DARDANE5 | 161 | 505514 | CLARKSV5  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 1471.6 | 500430              | IPAPER 4 | 138 | 507765 | WALLAKE4  | 138 1  | C:500250     | DOLHILL7 | 345      | 507760 | SW SHV 7 | 345 1 |
| 1568.0 | 337903              | SDARDAN  | 161 | 505508 | DARDANE5  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 1684.6 | 515300              | FTSMITH5 | 161 | B#0530 | FTSMITH3  | 1.00 3 | C:3Wnd: OPEN | B#0529   | FTSMITH1 | 1      |          |       |
| 1691.1 | 509782              | R.S.S.-7 | 345 | 515235 | PECANCK7  | 345 1  | C:509745     | CLARKSV7 | 345      | 515224 | MUSKOG7  | 345 1 |
| 1784.9 | 337904              | SRUSL-S  | 161 | 337905 | SRUSL-E   | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 1878.6 | 337904              | SRUSL-S  | 161 | 505508 | DARDANE5  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 1886.4 | 337643              | 8SHERID  | 500 | 337808 | 8MABEL    | 500 1  | C:337651     | 8WH BLF  | 500      | 337957 | 8KEO     | 500 1 |
| 1957.1 | 337800              | 3HASKEL  | 115 | 337801 | 3BENT-S*  | 115 1  | C:337643     | 8SHERID  | 500      | 337763 | 8MAGCOVE | 500 1 |
| 2003.9 | 337926              | 5QUITMN  | 161 | 338831 | 5BEE BR#  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2159.3 | 337909              | 8ANO 50  | 500 | 515305 | FTSMITH8  | 500 1  | C:337904     | SRUSL-S  | 161      | 337905 | SRUSL-E  | 161 1 |
| 2283.6 | 338831              | 5BEE BR# | 161 | 338833 | 5CLIN-IN# | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2393.9 | 300867              | 5LBRTYT  | 161 | 505522 | VAN BUR5  | 161 1  | C:515224     | MUSKOG7  | 345      | 515302 | FTSMITH7 | 345 1 |
| 2425.7 | 515339              | VBI 5    | 161 | 515347 | HWY59 5   | 161 1  | C:515224     | MUSKOG7  | 345      | 515302 | FTSMITH7 | 345 1 |
| 2567.4 | 337674              | 3AMITY*  | 115 | 338849 | 3MURF-E#  | 115 1  | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |
| 2605.2 | 338832              | 5CLIN-W# | 161 | 338833 | 5CLIN-IN# | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2654.9 | 337502              | 3COUCH   | 115 | 338874 | 3LEWIS#   | 115 1  | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |
| 2656.2 | 337902              | 5DANVI   | 161 | 337903 | 5DARDAN   | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2685.2 | 507190              | NMAGZIN5 | 161 | 507192 | WBOONVL5  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2716.5 | 337906              | SRUSL-N  | 161 | 337912 | 5ANO      | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2786.7 | 303302              | 3MNDENLG | 115 | 337361 | 3MINDEN   | 115 1  | C:337561     | 8ELDEHV  | 500      | 337562 | 7ELDEHV  | 345 1 |
| 2816.7 | 337902              | 5DANVI   | 161 | 507195 | MAGZREC5  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2833.5 | 504122              | MCNAB 3  | 115 | 507453 | HOPE 3    | 115 1  | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |
| 2837.1 | 507454              | TURK 4   | 138 | B#1101 | TURK 1    | 1.00 1 | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |
| 2871.6 | 503912              | FULTON 3 | 115 | 507453 | HOPE 3    | 115 1  | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |
| 2872.0 | 337686              | 3ARKLA   | 115 | 337695 | 3TIGRE *  | 115 1  | C:337643     | 8SHERID  | 500      | 337763 | 8MAGCOVE | 500 1 |
| 2902.9 | 337695              | 3TIGRE * | 115 | 337697 | 3PANTH*   | 115 1  | C:337643     | 8SHERID  | 500      | 337763 | 8MAGCOVE | 500 1 |
| 2943.6 | 507190              | NMAGZIN5 | 161 | 507195 | MAGZREC5  | 161 1  | C:337909     | 8ANO 50  | 500      | 515305 | FTSMITH8 | 500 1 |
| 2954.0 | 338874              | 3LEWIS#  | 115 | 338875 | 3PATMOS#  | 115 1  | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |
| 2985.6 | 337673              | 3MURF-S  | 115 | 338849 | 3MURF-E#  | 115 1  | C:337376     | 7SAREPT  | 345      | 508809 | LONGWD 7 | 345 1 |



# FCITC Values (Contd)

| FCITC  | Limiting Constraint |          |     |        |          |   |     | Contingency |          |          |     |        |          |   |     |   |
|--------|---------------------|----------|-----|--------|----------|---|-----|-------------|----------|----------|-----|--------|----------|---|-----|---|
| 3034.0 | 338875              | 3PATMOS# | 115 | 503912 | FULTON   | 3 | 115 | 1           | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD   | 7 | 345 | 1 |
| 3060.1 | 337651              | 8WH BLF  | 500 | 337957 | 8KEO     |   | 500 | 1           | C:337643 | 8SHERID  | 500 | 337808 | 8MABEL   |   | 500 | 1 |
| 3094.4 | 507189              | NHUNTNT5 | 161 | 507192 | WBOONVL5 |   | 161 | 1           | C:337909 | 8ANO 50  | 500 | 515305 | FTSMITH8 |   | 500 | 1 |
| 3099.7 | 337366              | 3HAYNVL  | 115 | 337526 | 3EMERSN  |   | 115 | 1           | C:337561 | 8ELDEHV  | 500 | 337562 | 7ELDEHV  |   | 345 | 1 |
| 3157.1 | 512655              | TAHLQH 5 | 161 | 515347 | HWY59 5  |   | 161 | 1           | C:515224 | MUSKOG7  | 345 | 515302 | FTSMITH7 |   | 345 | 1 |
| 3181.0 | 337376              | 7SAREPT  | 345 | 508809 | LONGWD 7 |   | 345 | 1           | C:500250 | DOLHILL7 | 345 | 507760 | SW SHV 7 |   | 345 | 1 |
| 3245.4 | 337740              | 3HSEHVE  | 115 | 337741 | 3BUTERF  |   | 115 | 1           | C:337643 | 8SHERID  | 500 | 337763 | 8MAGCOVE |   | 500 | 1 |
| 3299.8 | 337672              | 4MURFRE  | 138 | 507434 | SNASHVL4 |   | 138 | 1           | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7 |   | 345 | 1 |
| 3350.3 | 337365              | 3SPRINGH | 115 | 337500 | 3TAYLOR  |   | 115 | 1           | C:337561 | 8ELDEHV  | 500 | 337562 | 7ELDEHV  |   | 345 | 1 |
| 3355.1 | 505570              | EUFULA5  | 161 | 505588 | STIGLER5 |   | 161 | 1           | C:515224 | MUSKOG7  | 345 | 515302 | FTSMITH7 |   | 345 | 1 |
| 3370.7 | 515341              | WHITESD5 | 161 | 515343 | MASSARD5 |   | 161 | 1           | C:515224 | MUSKOG7  | 345 | 515302 | FTSMITH7 |   | 345 | 1 |
| 3411.9 | 337502              | 3COUCH   | 115 | 337516 | 3MCNEIL  |   | 115 | 1           | C:337561 | 8ELDEHV  | 500 | 337562 | 7ELDEHV  |   | 345 | 1 |
| 3417.1 | 337741              | 3BUTERF  | 115 | 337800 | 3HASKEL  |   | 115 | 1           | C:337643 | 8SHERID  | 500 | 337763 | 8MAGCOVE |   | 500 | 1 |
| 3467.6 | 337363              | 3SAREPT  | 115 | 337366 | 3HAYNVL  |   | 115 | 1           | C:337561 | 8ELDEHV  | 500 | 337562 | 7ELDEHV  |   | 345 | 1 |

# (#2) From AEP to Entergy Arkansas for 700 MW



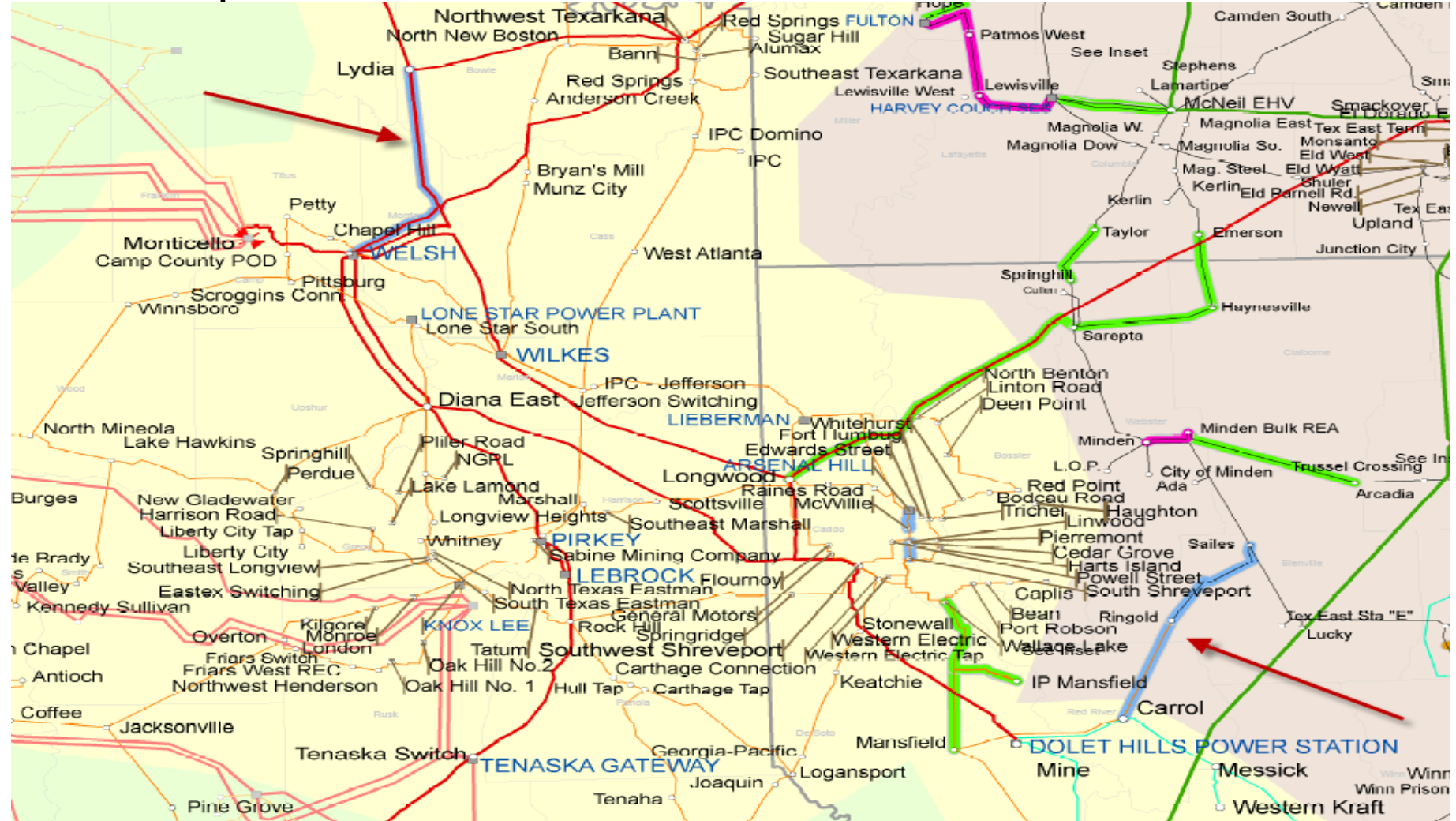
# Transfer Analysis

- **Transfer**
  - **AEPW to Entergy Arkansas for 2000MW**
    1. **AEPW**
      - A. **Scale All 2000MW**
    2. **Entergy Arkansas**
      - A. **Scale All 2000MW**

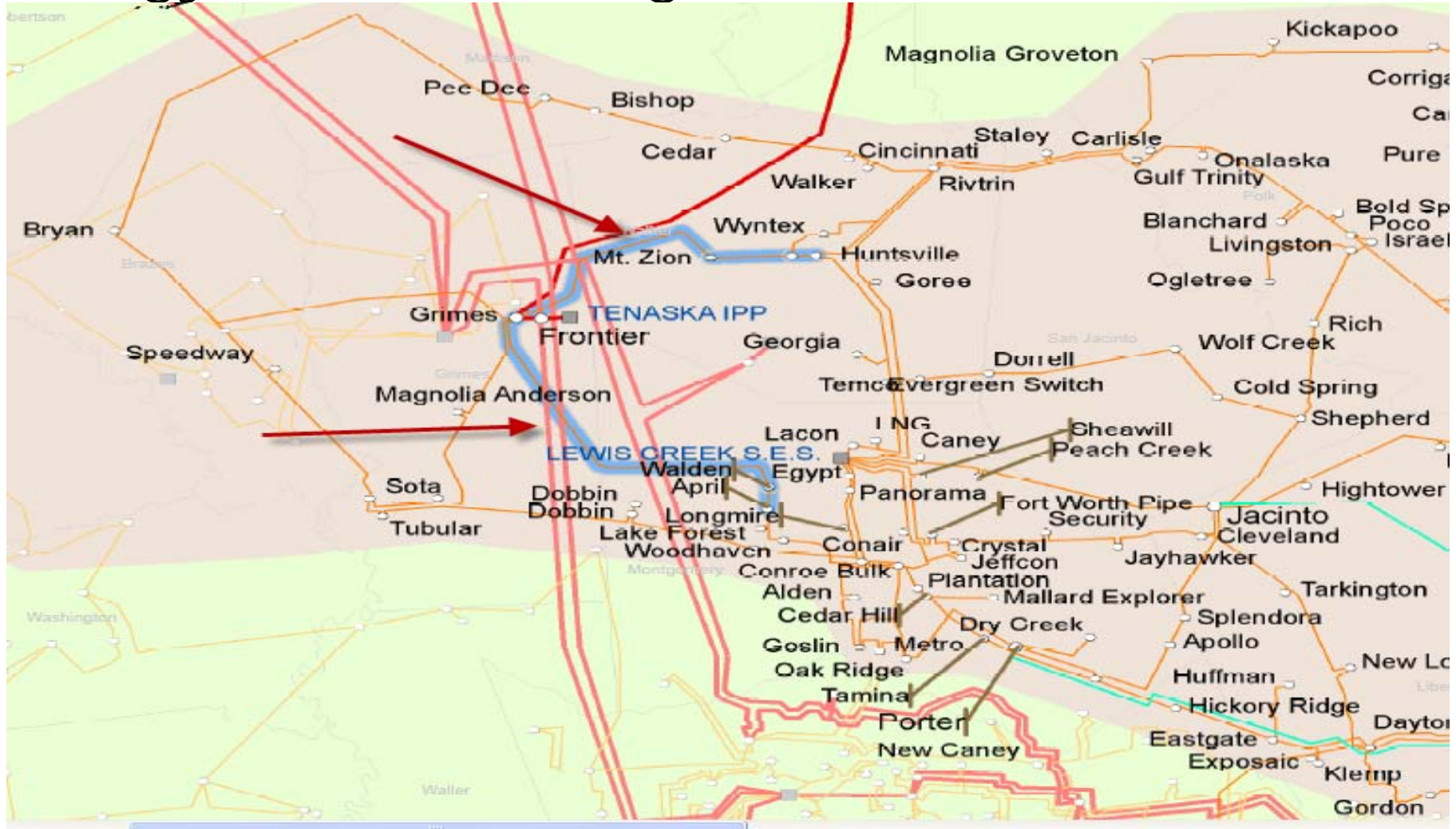
# North of Turk Plant



# Shreveport Area



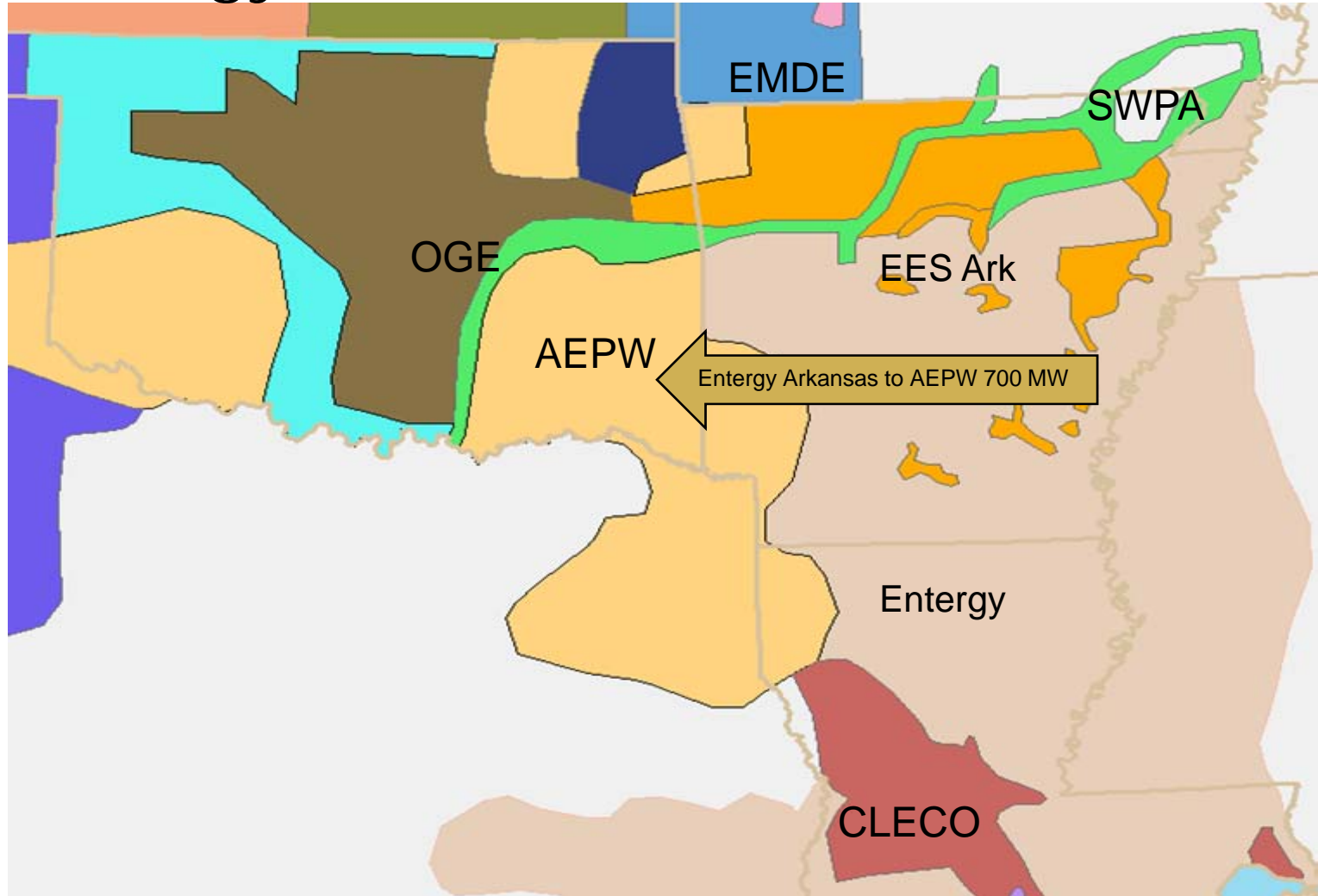
# Entergy's Western Region



# FCITC Values

| FCITC  | Limiting Constraint |            |     |        |            | Contingency |   |          |          |     |        |             |     |   |
|--------|---------------------|------------|-----|--------|------------|-------------|---|----------|----------|-----|--------|-------------|-----|---|
| 632.0  | 505614              | BRKN BW4   | 138 | 510928 | BETHEL 4   | 138         | 1 | C:510907 | PITTSB-7 | 345 | 510911 | VALIANT7    | 345 | 1 |
| 633.5  | 334026              | 4GRIMES    | 138 | 334060 | 4MT.ZION   | 138         | 1 | C:334026 | 4GRIMES  | 138 | 334039 | 4BENTWATER  | 138 | 1 |
| 721.9  | 334026              | 4GRIMES    | 138 | 334028 | 7GRIMES    | 345         | 1 | C:334026 | 4GRIMES  | 138 | 334028 | 7GRIMES     | 345 | 2 |
| 783.2  | 507711              | ARSHILL4   | 138 | 507742 | MCWILLI4   | 138         | 1 | C:507711 | ARSHILL4 | 138 | 507731 | FTHUMB4     | 138 | 1 |
| 878.8  | 510927              | NASHOBA4   | 138 | 510928 | BETHEL 4   | 138         | 1 | C:510907 | PITTSB-7 | 345 | 510911 | VALIANT7    | 345 | 1 |
| 882.6  | 334099              | 4WCONROESS | 138 | 334104 | 4CONROE    | 138         | 1 | C:334072 | 4LEWIS   | 138 | 334086 | 4CANEYCREEK | 138 | 1 |
| 930.9  | 507738              | LINWOOD4   | 138 | 507771 | CEDARGR4   | 138         | 1 | C:507711 | ARSHILL4 | 138 | 507731 | FTHUMB4     | 138 | 1 |
| 931.3  | 507755              | S SHV 4    | 138 | 507771 | CEDARGR4   | 138         | 1 | C:507711 | ARSHILL4 | 138 | 507731 | FTHUMB4     | 138 | 1 |
| 940.8  | 510919              | CLAYTON4   | 138 | 510927 | NASHOBA4   | 138         | 1 | C:510907 | PITTSB-7 | 345 | 510911 | VALIANT7    | 345 | 1 |
| 1006.2 | 334058              | L558T485   | 138 | 334060 | 4MT.ZION   | 138         | 1 | C:334026 | 4GRIMES  | 138 | 334039 | 4BENTWATER  | 138 | 1 |
| 1175.6 | 510919              | CLAYTON4   | 138 | 510926 | SARDIS 4   | 138         | 1 | C:510907 | PITTSB-7 | 345 | 510911 | VALIANT7    | 345 | 1 |
| 1302.6 | 510926              | SARDIS 4   | 138 | 510944 | ENOWILT4   | 138         | 1 | C:510907 | PITTSB-7 | 345 | 510911 | VALIANT7    | 345 | 1 |
| 1302.9 | 510897              | LONEOAK4   | 138 | 510944 | ENOWILT4   | 138         | 1 | C:510907 | PITTSB-7 | 345 | 510911 | VALIANT7    | 345 | 1 |
| 1310.0 | 508298              | LYDIA 7    | 345 | 508359 | WELSH 7    | 345         | 1 | C:508072 | NWTXARK7 | 345 | 508359 | WELSH 7     | 345 | 1 |
| 1324.2 | 303302              | 3MNNDENLG  | 115 | 337361 | 3MINDEN    | 115         | 1 | C:337376 | 7SAREPT  | 345 | 337562 | 7ELDEHV     | 345 | 1 |
| 1361.6 | 334026              | 4GRIMES    | 138 | 334039 | 4BENTWATER | 138         | 1 | C:334026 | 4GRIMES  | 138 | 334060 | 4MT.ZION    | 138 | 1 |
| 1390.6 | 338875              | 3PATMOS#   | 115 | 503912 | FULTON 3   | 115         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1435.0 | 334040              | 4WALDEN    | 138 | 334041 | 4APRILTX   | 138         | 1 | C:334026 | 4GRIMES  | 138 | 334060 | 4MT.ZION    | 138 | 1 |
| 1450.5 | 338874              | 3LEWIS#    | 115 | 338875 | 3PATMOS#   | 115         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1455.4 | 500760              | RAPIDES6   | 230 | 500770 | RODEMR 6   | 230         | 1 | C:500770 | RODEMR 6 | 230 | 500790 | SHERWD 6    | 230 | 1 |
| 1488.5 | 337352              | 3RINGLD    | 115 | 337353 | 4RINGLD    | 138         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1497.1 | 334057              | 4HUNTSVL   | 138 | 334058 | L558T485   | 138         | 1 | C:334026 | 4GRIMES  | 138 | 334039 | 4BENTWATER  | 138 | 1 |
| 1615.3 | 337351              | 3SAILES    | 115 | 337352 | 3RINGLD    | 115         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1689.1 | 337353              | 4RINGLD    | 138 | 500150 | CARROLL4   | 138         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1697.4 | 337502              | 3COUCH     | 115 | 338874 | 3LEWIS#    | 115         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1769.2 | 507431              | PATTERS4   | 138 | 507434 | SNASHVL4   | 138         | 1 | C:337376 | 7SAREPT  | 345 | 508809 | LONGWD 7    | 345 | 1 |
| 1798.6 | 334039              | 4BENTWATER | 138 | 334040 | 4WALDEN    | 138         | 1 | C:334026 | 4GRIMES  | 138 | 334060 | 4MT.ZION    | 138 | 1 |
| 1817.6 | 510907              | PITTSB-7   | 345 | 510911 | VALIANT7   | 345         | 1 | C:515136 | SUNNYSD7 | 345 | 521157 | HUGO PP7    | 345 | 1 |

### (#3) From Entergy Arkansas to AEPW for 700 MW

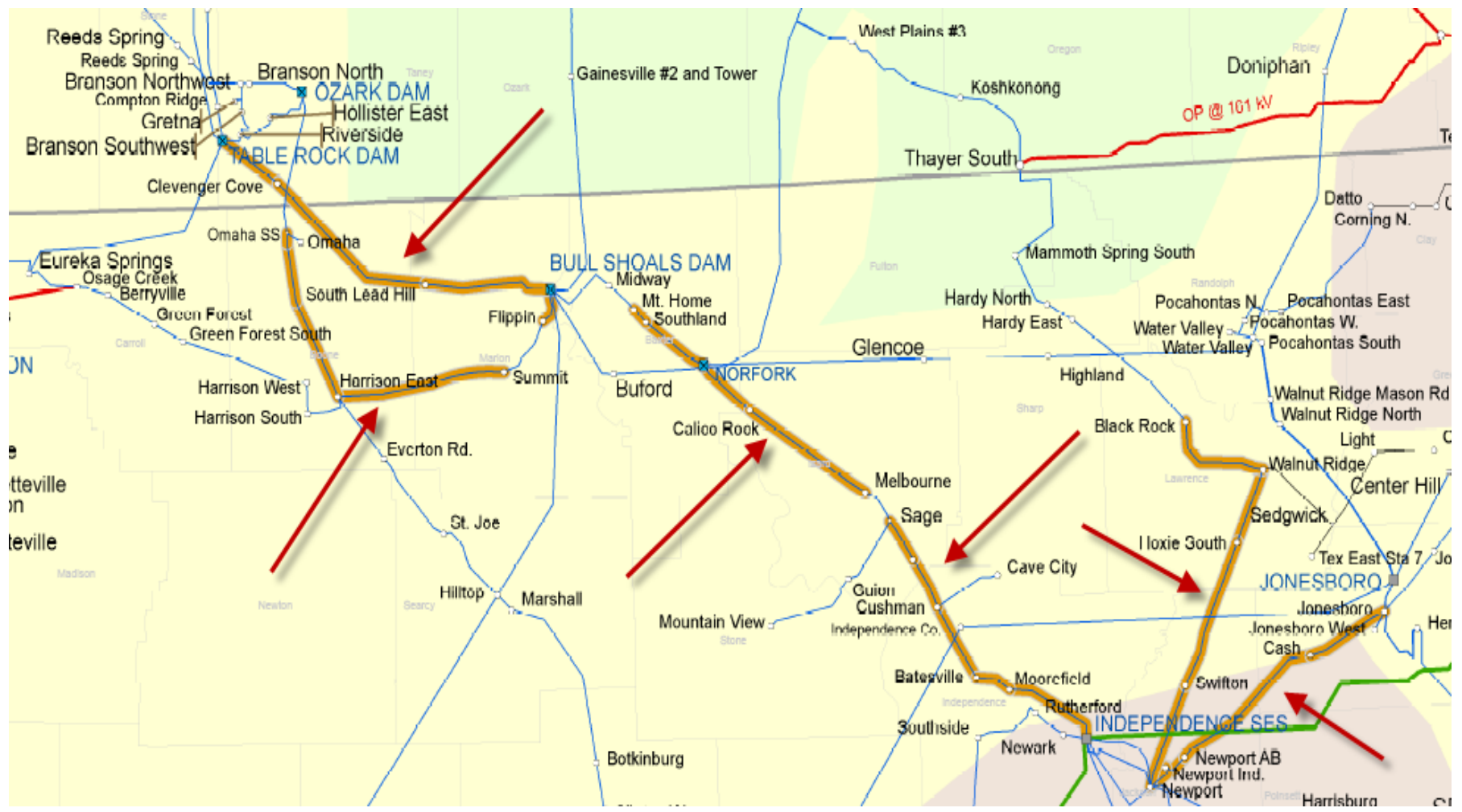




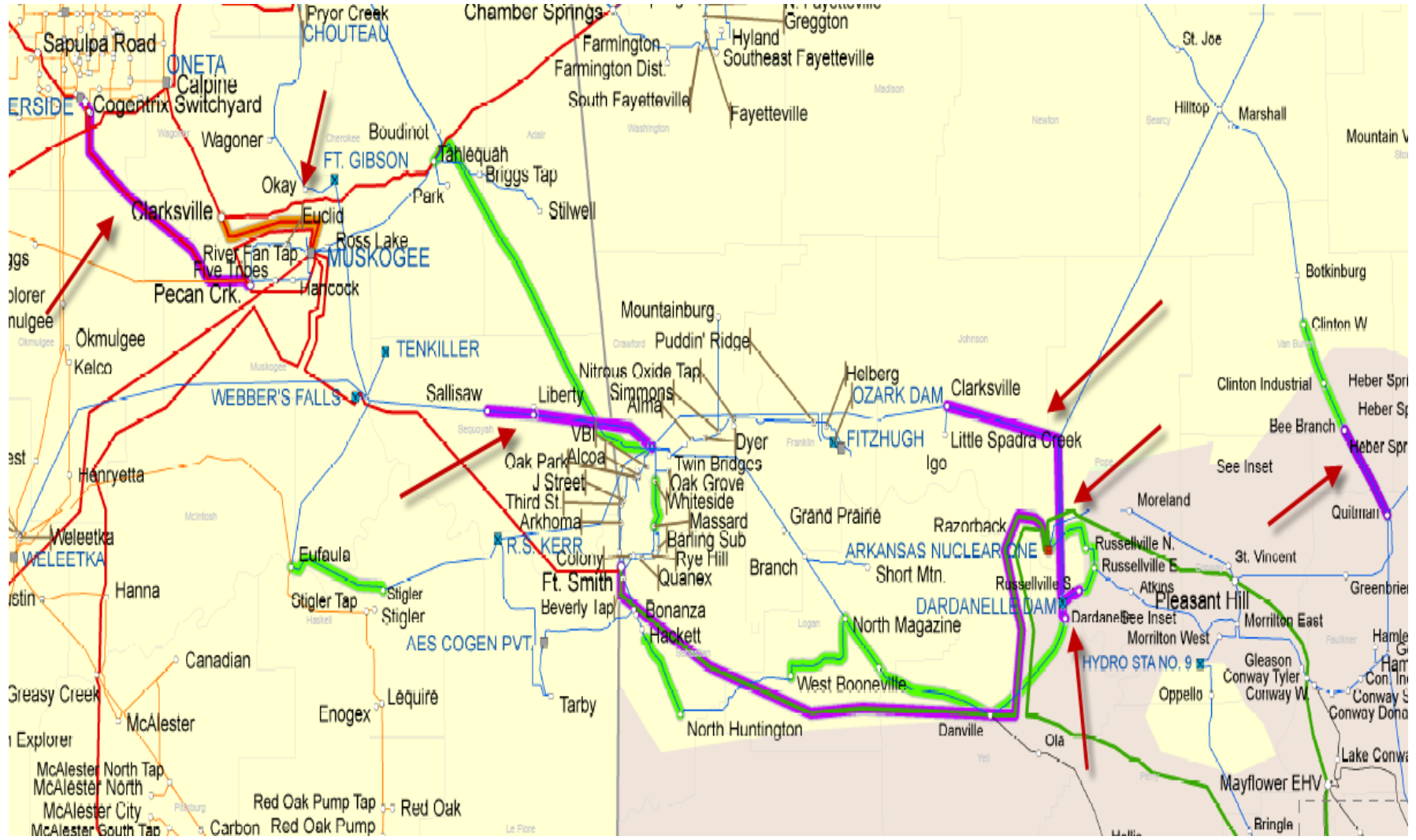
# Transfer Analysis

- **Transfer**
  - **Entergy Arkansas to AEPW for 2000MW**
    1. **Entergy Arkansas**
      - A. **Scale All 2000MW**
    2. **AEPW**
      - A. **Scale All 2000MW**

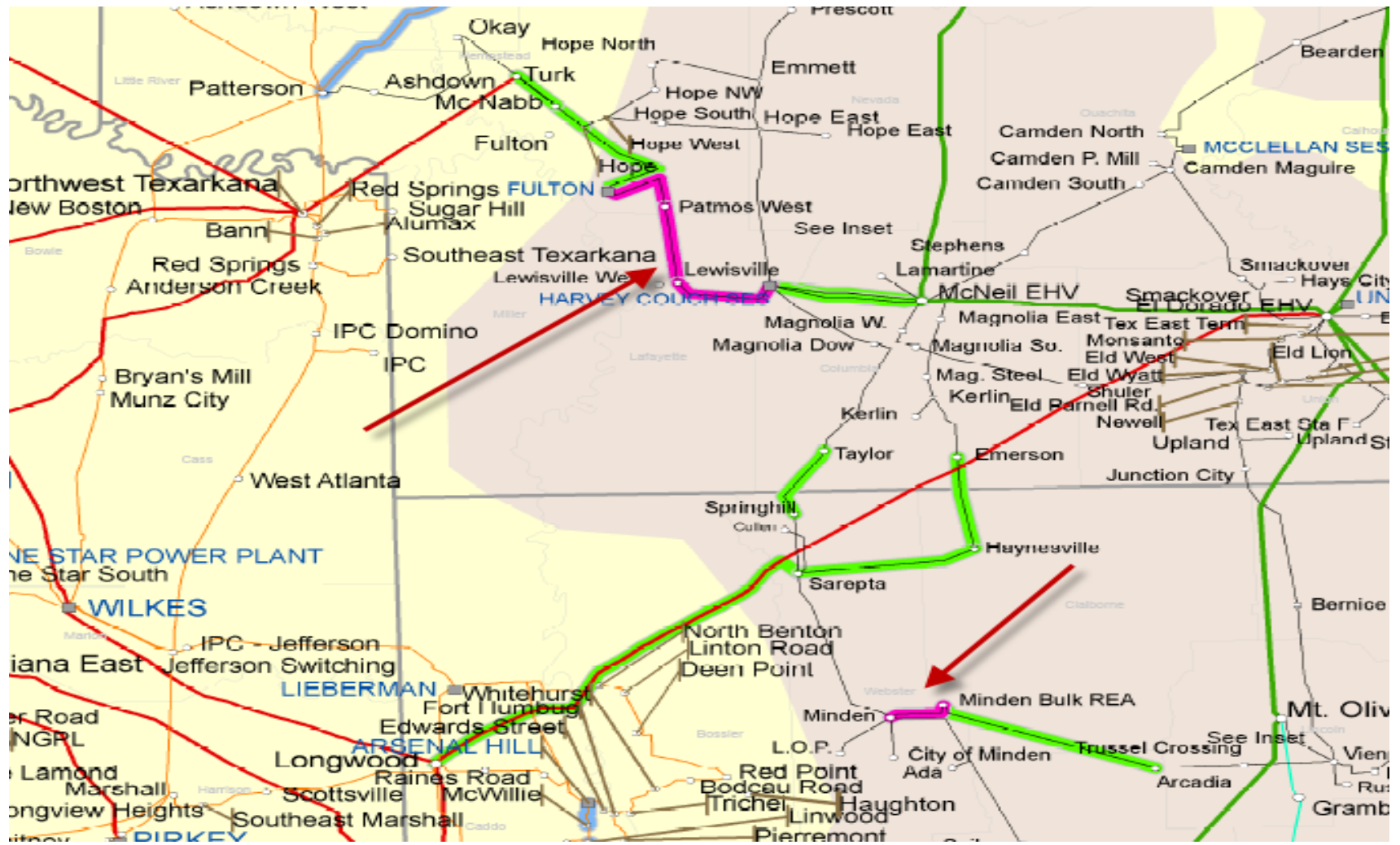
# North of Entergy's Independence Coal Plant



# Fort Smith Area Overloads



# McNeil Area Overloads



# FCITC Values

| FCITC  | Limiting Constraint |             |      |        |          |        | Contingency |          |        |          |        |          |       |
|--------|---------------------|-------------|------|--------|----------|--------|-------------|----------|--------|----------|--------|----------|-------|
| 166.6  | 338138              | 5MORFLD     | 161  | 338142 | 5ISES-1  | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 317.2  | 338213              | 5WALNUT     | 161  | 338705 | 5HOXIES# | 161 1  | C:338151    | 5NEWPO   |        | 161      | 338173 | 5NEW-IN  | 161 1 |
| 404.3  | 509782              | R.S.S.-7    | 345  | 515235 | PECANCK7 | 345 1  | C:509745    | CLARKSV7 |        | 345      | 515224 | MUSKOG7  | 345 1 |
| 487.7  | 338137              | 5BATEVL     | 161  | 338138 | 5MORFLD  | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 774.8  | 337952              | 3LYNCH-E    | 115  | 338483 | 3NLR-DX  | 115 1  | C:337949    | 3LYNCH-W |        | 115      | 337955 | 3T.E.#5  | 115 1 |
| 781.8  | 337905              | 5RUSL-E     | 161  | 337906 | 5RUSL-N  | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 841.5  | 338104              | 5HARR-E     | 161  | 338121 | 5SUMMIT  | 161 1  | C:338108    | 5ST_JOE  |        | 161      | 338110 | 5HILLTOP | 161 1 |
| 939.2  | 509745              | CLARKSV7    | 345  | 515224 | MUSKOG7  | 345 1  | C:509782    | R.S.S.-7 |        | 345      | 515235 | PECANCK7 | 345 1 |
| 1055.6 | 509790              | CATOOSA4    | 138  | B#0373 | CATAUTO2 | 1.00 2 | C:3Wnd:     | OPEN     | B#0372 | CATAUTO1 |        | 1        |       |
| 1055.6 | B#0373              | CATAUTO2    | 1.00 | 512638 | CATSAGR5 | 161 2  | C:3Wnd:     | OPEN     | B#0372 | CATAUTO1 |        | 1        |       |
| 1067.5 | 300718              | 5CLEVCOV    | 161  | 505472 | TABLE R5 | 161 1  | C:338121    | 5SUMMIT  |        | 161      | 338122 | 5FLIPN   | 161 1 |
| 1112.3 | 338151              | 5NEWPO      | 161  | 338173 | 5NEW-IN  | 161 1  | C:338145    | 8ISES    |        | 500      | 338187 | 8DELL    | 500 1 |
| 1150.9 | 505508              | DARDANE5    | 161  | 505514 | CLARKSV5 | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1215.6 | 337903              | 5DARDAN     | 161  | 505508 | DARDANE5 | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1271.5 | 338123              | 5BULLSH*    | 161  | 505460 | BULL SH5 | 161 1  | C:338108    | 5ST_JOE  |        | 161      | 338110 | 5HILLTOP | 161 1 |
| 1294.7 | 338151              | 5NEWPO      | 161  | 338153 | 5SWIFTN  | 161 1  | C:338138    | 5MORFLD  |        | 161      | 338142 | 5ISES-1  | 161 1 |
| 1301.1 | 337949              | 3LYNCH-W    | 115  | 337955 | 3T.E.#5  | 115 1  | C:337952    | 3LYNCH-E |        | 115      | 338483 | 3NLR-DX  | 115 1 |
| 1309.0 | 338135              | 5CUSHMN     | 161  | 338137 | 5BATEVL  | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1321.4 | 338172              | 5NEW-AB     | 161  | 338173 | 5NEW-IN  | 161 1  | C:338145    | 8ISES    |        | 500      | 338187 | 8DELL    | 500 1 |
| 1330.1 | 338120              | 5LEAD HL    | 161  | 505460 | BULL SH5 | 161 1  | C:338123    | 5BULLSH* |        | 161      | 505460 | BULL SH5 | 161 1 |
| 1350.6 | 338130              | 5CALCR      | 161  | 338131 | 5MELBRN  | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1379.3 | 337955              | 3T.E.#5     | 115  | 338483 | 3NLR-DX  | 115 1  | C:337952    | 3LYNCH-E |        | 115      | 338483 | 3NLR-DX  | 115 1 |
| 1393.0 | 338122              | 5FLIPN      | 161  | 338123 | 5BULLSH* | 161 1  | C:338108    | 5ST_JOE  |        | 161      | 338110 | 5HILLTOP | 161 1 |
| 1424.2 | 515305              | FTSMITH8    | 500  | B#0530 | FTSMITH3 | 1.00 3 | C:3Wnd:     | OPEN     | B#0529 | FTSMITH1 |        | 1        |       |
| 1429.9 | 515300              | FTSMITH5    | 161  | B#0530 | FTSMITH3 | 1.00 3 | C:3Wnd:     | OPEN     | B#0529 | FTSMITH1 |        | 1        |       |
| 1444.0 | 338814              | 5SOLAND#    | 161  | 505448 | NORFORK5 | 161 1  | C:504440    | BUFORD   | 5      | 161      | 505448 | NORFORK5 | 161 1 |
| 1481.2 | 337904              | 5RUSL-S     | 161  | 337905 | 5RUSL-E  | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1486.1 | 300718              | 5CLEVCOV    | 161  | 338120 | 5LEAD HL | 161 1  | C:338123    | 5BULLSH* |        | 161      | 505460 | BULL SH5 | 161 1 |
| 1558.9 | 337904              | 5RUSL-S     | 161  | 505508 | DARDANE5 | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1566.6 | 337926              | 5QUITMN     | 161  | 338831 | 5BEE BR# | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |
| 1617.1 | 338125              | 5MT HOM     | 161  | 338814 | 5SOLAND# | 161 1  | C:504440    | BUFORD   | 5      | 161      | 505448 | NORFORK5 | 161 1 |
| 1621.7 | 338129              | 5MTPLEASANT | 161  | 338132 | 5SAGE*   | 161 1  | C:337909    | 8ANO     | 50     | 500      | 515305 | FTSMITH8 | 500 1 |

# FCITC Values (Contd.)

| FCITC  | Limiting Constraint |                      |      |   | Contingency                  |                     |       |  |
|--------|---------------------|----------------------|------|---|------------------------------|---------------------|-------|--|
| 1625.6 | 515305 FTSMITH8     | 500 B&0531 FTSMITH4  | 1.00 | 4 | C:3Wnd: OPEN B&0529 FTSMITH1 | 1                   |       |  |
| 1629.8 | 515301 FTSMITHW5    | 161 B&0531 FTSMITH4  | 1.00 | 4 | C:3Wnd: OPEN B&0529 FTSMITH1 | 1                   |       |  |
| 1642.6 | 338213 5WALNUT      | 161 338708 5BLKRK#   | 161  | 1 | C:338138 5MORFLD             | 161 338142 5ISES-1  | 161 1 |  |
| 1653.7 | 338153 5SWIFTN      | 161 338705 5HOXIES#  | 161  | 1 | C:338138 5MORFLD             | 161 338142 5ISES-1  | 161 1 |  |
| 1658.0 | 338171 5CASH        | 161 338172 5NEW-AB   | 161  | 1 | C:338145 8ISES               | 500 338187 8DELL    | 500 1 |  |
| 1712.0 | 338153 5SWIFTN      | 161 338705 5HOXIES#  | 161  | 1 | C:338137 5BATEVL             | 161 338138 5MORFLD  | 161 1 |  |
| 1761.9 | 338170 5JONES       | 161 505418 JONESBO5  | 161  | 1 | C:505400 N MADRD5            | 161 505410 KENNETT5 | 161 1 |  |
| 1773.5 | 515339 VBI 5        | 161 515347 HWY59 5   | 161  | 1 | C:515224 MUSKOG7             | 345 515302 FTSMITH7 | 345 1 |  |
| 1785.2 | 338831 5BEE BR#     | 161 338833 5CLIN-IN# | 161  | 1 | C:337909 8ANO 50             | 500 515305 FTSMITH8 | 500 1 |  |
| 1818.3 | 337909 8ANO 50      | 500 515305 FTSMITH8  | 500  | 1 | C:337904 5RUSL-S             | 161 337905 5RUSL-E  | 161 1 |  |
| 1879.6 | 300867 5LBRTYT      | 161 505522 VAN BUR5  | 161  | 1 | C:515224 MUSKOG7             | 345 515302 FTSMITH7 | 345 1 |  |
| 1901.9 | 338104 5HARR-E      | 161 338105 5OMAHA *  | 161  | 1 | C:338104 5HARR-E             | 161 338681 5HARR-S# | 161 1 |  |
| 1941.9 | 338170 5JONES       | 161 338171 5CASH     | 161  | 1 | C:338145 8ISES               | 500 338187 8DELL    | 500 1 |  |
| 1968.8 | 515305 FTSMITH8     | 500 B&0529 FTSMITH1  | 1.00 | 1 | C:3Wnd: OPEN B&0530 FTSMITH3 | 3                   |       |  |
| 1971.0 | 515302 FTSMITH7     | 345 B&0529 FTSMITH1  | 1.00 | 1 | C:3Wnd: OPEN B&0530 FTSMITH3 | 3                   |       |  |
| 1983.3 | 515305 FTSMITH8     | 500 B&0529 FTSMITH1  | 1.00 | 1 | C:3Wnd: OPEN B&0531 FTSMITH4 | 4                   |       |  |
| 1985.0 | 300867 5LBRTYT      | 161 505550 SALISAW5  | 161  | 1 | C:515224 MUSKOG7             | 345 515302 FTSMITH7 | 345 1 |  |
| 1985.6 | 515302 FTSMITH7     | 345 B&0529 FTSMITH1  | 1.00 | 1 | C:3Wnd: OPEN B&0531 FTSMITH4 | 4                   |       |  |



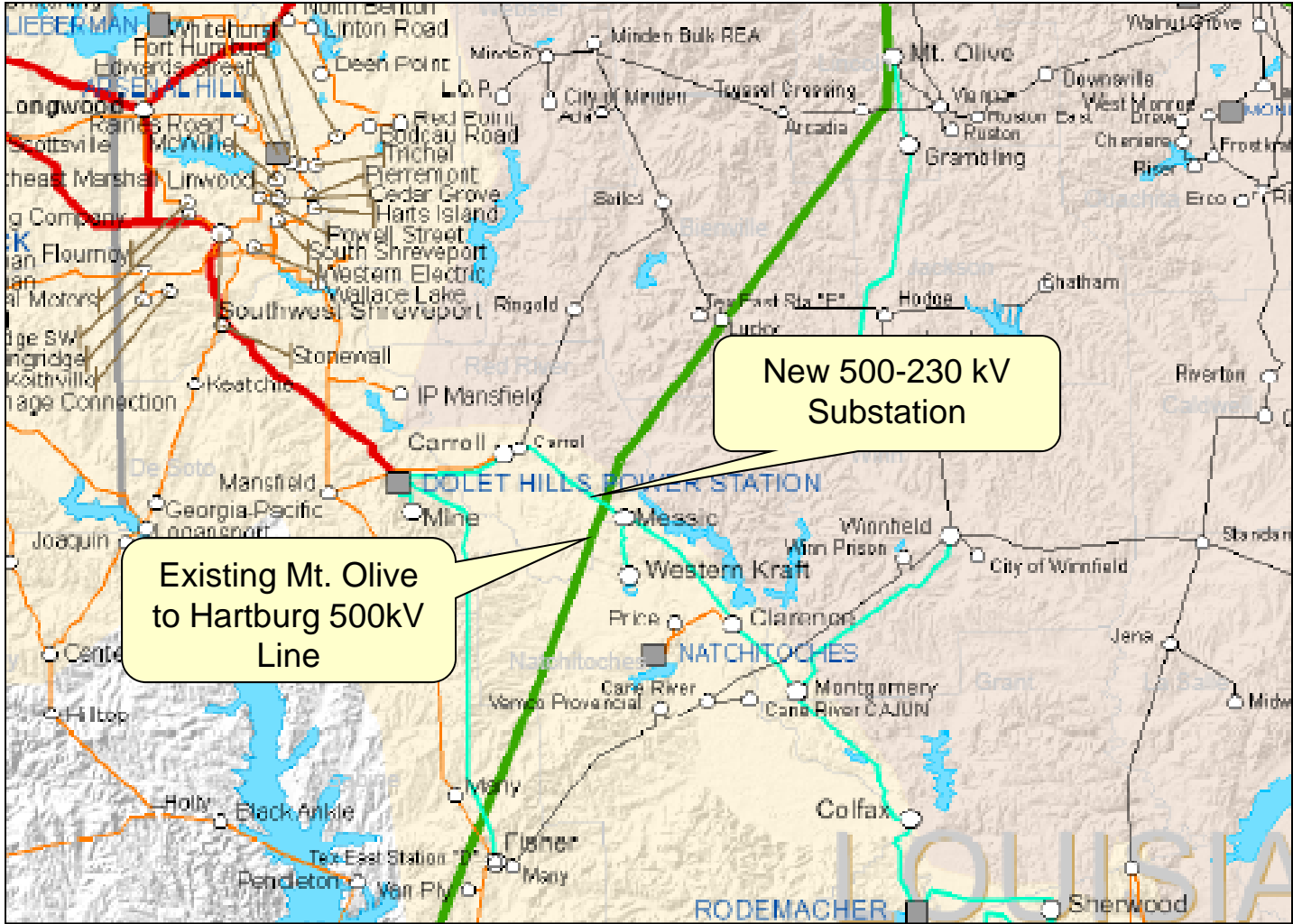
Step 2  
(Detailed Analysis)

## General Study Assumptions for 2010 ESRPP Step 2 (Detailed Analysis) Studies

- **A 2009 Cycle project can be evaluated in more detail.**
- **Detailed cost estimates and timelines for the projects will be provided.**
- **A full AC contingency analysis (N-1) will be performed on the base and change models.**



# (#4) Messick 500/230kV Autotransformer Map



## (#4) Messick 500/230kV Autotransformer Project Description

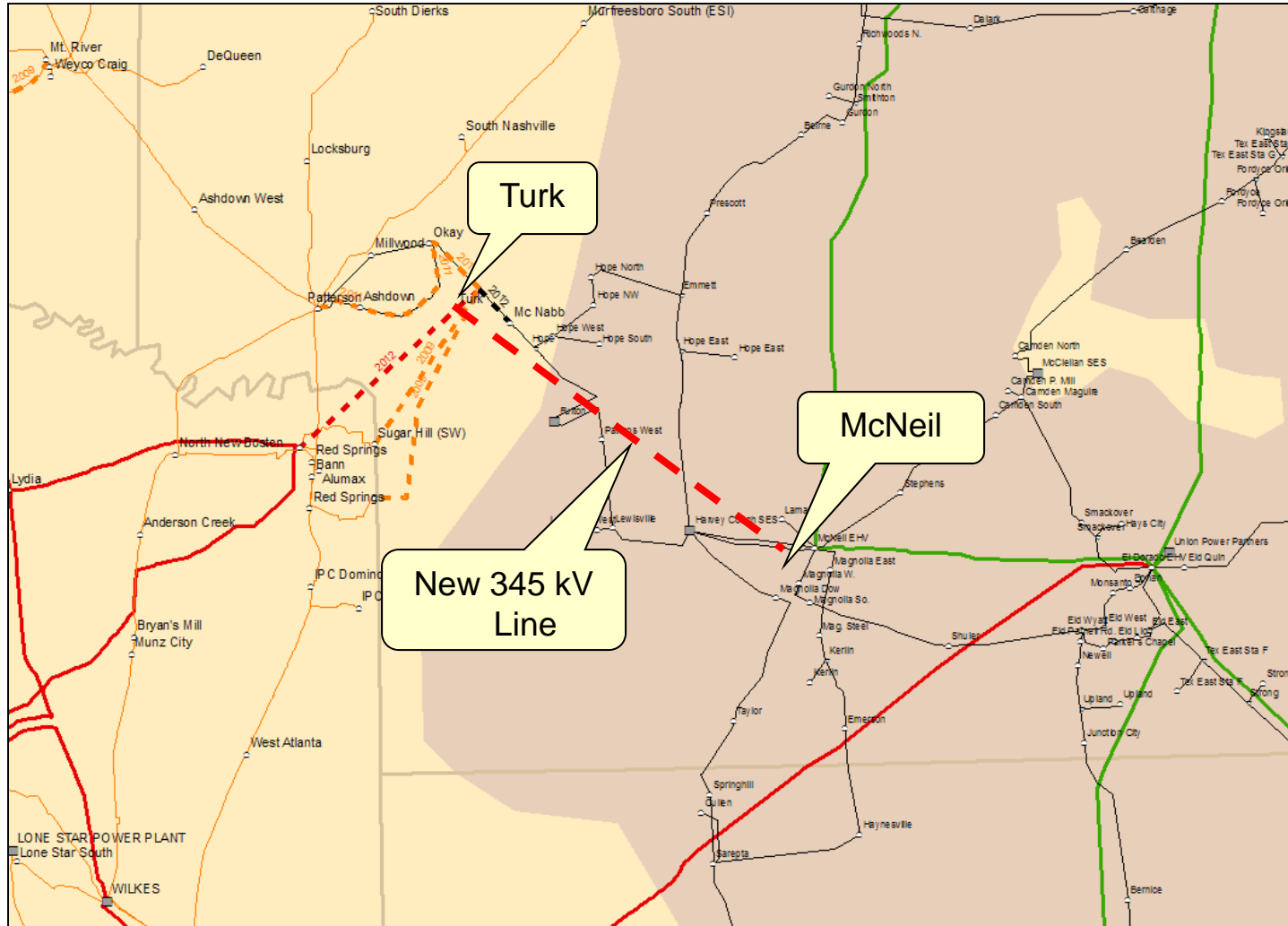
- **Transmission Line**
  - **Tap Mt Olive to Hartburg 500kV Transmission Line**
  - **Tap Messick to Carroll 230KV Transmission Line**
- **Substation Work**
  - **500/230 kV Substation**
  - **Located at the crossing of the Mt Olive to Hartburg 500kV Transmission Line and the Messick to Carroll 230 kV Transmission Line**
  - **500kV, 3 Breaker Ring Bus (Expandable to a 4 Breaker Ring)**
  - **230kV, 3 Breaker Ring Bus (Expandable to a 4 Breaker Ring)**
  - **500-230kV , 800 MVA Autotransformer**
- **Cost Estimate In Progress**



# (#4) Messick 500/230kV Autotransformer Study Progress and Initial Results

- **AC Analysis**
  - **In Progress**
- **Short Circuit**
  - **In Progress**
- **Voltage Stability**
  - **In Progress**

# (#5) Turk - McNeil 345 kV





## (#5) Turk – McNeil 345 kV Project Description

- **Transmission Line**
  - **Turk to McNeil 345kV Transmission Line**
    - **Approximately 50 miles**
    - **954 Rail, 3 Bundle, 1950 MVA, 100oC Rating**
- **Substation Work**
  - **McNeil Substation**
    - **500-230kV , 600 MVA Autotransformer**
    - **New 345kV Switchyard**
  - **Turk Substation**
    - **345kV Terminal Equipment**
- **Cost Estimate In Progress**

## (#5) Turk – McNeil 345 kV Study Progress and Initial Results

- **AC Analysis**
  - **In Progress**
- **Short Circuit**
  - **In Progress**



# SPP

*Southwest  
Power Pool*



# *Entergy*



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Next Steps

**Entergy SPP RTO Regional Planning Process  
Stakeholder Meeting**  
August 11, 2010



## Next Steps

- **Continue Analysis**
- **Post Updated Step 1 and Step 2 Study Results by Oct 31, 2010**
- **Stakeholder Comment Period: November 2010**
  - **Step 1 (High-Level Analysis) Studies**
  - **Recommend upgrades to reach desired transfer capability**

# ESRPP Meetings

- **Next Meeting**
  - 1Q 2011 (Around Feb 23<sup>rd</sup>, 2011)
  - Presentation and discussion of the final report
- **2011 ESRPP Cycle**
  - Nomination Requests and Email Vote
  - Present Selected Step 1 and 2 Studies at First Meeting

# Communications

- **Sign up for TWG or LTTIWG email exploders**
- **SPP distribution list for stakeholders to send comments to SPP and Entergy personnel**
  - **[ESRPP@spp.org](mailto:ESRPP@spp.org)**



**SPP**

*Southwest  
Power Pool*



*Entergy*



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