

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

August 24, 2010

Sheraton New Orleans Hotel - New Orleans, LA

• Agenda •

8:00 am – 12:00 pm

1. Administrative

- A. Introductions All
- B. Review Past Action Items Eddie Filat
- C. Discuss/Approve Minutes of 6/16/2011 ESRPP Meeting Eddie Filat /All
- D. SPP Antitrust Guidelines Eddie Filat

2. Review of Initial Study Results Eddie Filat and Paul Simoneaux

A. 2011 ESRPP Step 1 (High-Level Analysis) Studies

- i. From Entergy to EMDE for 500 MW
- ii. From Nebraska to Entergy for 3000 MW
- iii. From Entergy to Nebraska for 3000 MW

B. 2010 ESRPP Step 2 (Detailed Analysis) Studies

- i. Arkansas IPPs (Hot Springs, Magnet Cove, and PUPP) to SPP South (AEP and OGE) for 2408 MW
- ii. From AEP to Entergy Arkansas for 1117 MW

3. Next Steps Tim McGinnis

A. Stakeholder Comment Period

- B. Next Meeting: Net Conference in late February 2012 (Presentation and discussion of the final report)

4. Other Discussion All

5. Adjournment

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



Southwest Power Pool, Inc. – Entergy

ENTERGY SPP RTO REGIONAL PLANNING PROCESS MEETING

June 16, 2011

NET CONFERENCE

• M i n u t e s •

1:30 – 3:00 PM

Agenda Item 1 - Administrative

Eddie Filat called the meeting to order at 1:30 p.m. A list of attendees is attached at the end of these Minutes. Eddie reviewed the agenda.

Ben Roubique reviewed the anti-trust guidelines.

Agenda Item 2 - 2010 ESRPP Final Report

Eric Burkey reviewed the final 2010 ESRPP report. Claudiu Cadar asked why cost estimates were different for the Arkansas IPPs to SPP South transfer in the revised report. Eric Burkey explained that the estimates were re-calculated using a new cost estimating tool supplied by Entergy. Claudiu Cadar also asked if the projects supplied by GDS were considered when establishing a solution for the AEPW to Entergy Arkansas transfer study. Eric Burkey answered, yes. Eric also mentioned that all the projects supplied by GDS were evaluated. Claudiu Cadar later asked why the ISES-Osage project was removed from the 2009 ESRPP cycle and was then used as a solution for the 2010 ESRPP study. Eric Burkey said that the upgrade was used because it solved all the overload issues seen with the transfer.

Agenda Item 3 – Process Overview

Eddie Filat presented the 2011 ESRPP overview. Kip Fox asked if this information is available or will be provided. Eddie Filat stated that all information regarding this meeting is posted on Entergy's OASIS and the SPP's TWG website. Kip Fox asked if there will be any horizon projects from the CP in the base model. Ben Roubique replied that the ICT will consider this during the study process. Kip Fox also asked if there will be any special study (Tier 1) consideration in our process for Entergy switching to Midwest ISO. Ben Roubique mentioned that the 2011 ESRPP will not take Entergy's proposal to join Midwest ISO into consideration.

Agenda Item 4 – 2011 ESRPP Study Scope

Eddie Filat presented the 2011 ESRPP study scope. There were no questions or comments.

Agenda Item 5 – Nomination Studies for 2011 ESRPP Cycle

Eddie Filat presented the 2011 ESRPP nomination cycle. There were no questions or comments.

Agenda Item 6 – Other Discussion

Eric Burkey mentioned that the Step 1 projects from the 2010 cycle can be nominated for a Step 2 study for the 2011 cycle. The Step 2 studies from the 2010 cycle will not be considered toward the 2011 cycle.

Agenda Item 7 – Adjournment

Eddie Filat adjourned the meeting at 2:40 p.m.

Attendance List

	Company	Last Name	First Name
1	American Electric Power	Fox	Kip
2	American Electric Power	Gallup	Terri
3	American Electric Power	McGee	Matt
4	Southwest Power Pool	White	Wesley
5	Southwest Power Pool	Roubique	Ben
6	Southwest Power Pool	Lucas	Antoine
7	Entergy Texas	Olson	Carl
8	KGen Power	Lee	Tina
9	Occidental Energy Ventures	Harris	Brenda
10	PSM Consulting	Galarza	Ricardo
11	Southwest Power Pool	Filat	Eddie
12	Xcel Energy	Boyer	Roy
13	KCPL	Flucke	Jim
14	GDS	Cadar	Claudiu
15	Entergy Services, Inc.	Kamireddy	Srinath
16	Entergy Services, Inc.	Aluko	Olumide
17	Southwest Power Pool	Cook	English
18	Southwest Power Pool	Burkey	Eric

Review of Initial Study Results

Entergy SPP RTO Regional
Planning Process
Stakeholder Meeting

August 24, 2011



ESRPP

- **Main Objectives of ESRPP upgrades**
 - Improve inter-regional transfer capability
 - Relieve constraining flowgates
 - Facilitate optimization of SPP and Entergy approved expansion plans
- **Solution**
 - Robust transmission system capable of a more economic delivery of power across the seam between Entergy and SPP

Study Selection Criteria

- **Increase transfer capability between a control area in SPP and a control area in Entergy (including Entergy), specifying a transfer amount (POR/POD, MW)**
- **2011 ESRPP Step 1 (High-Level Analysis) Studies**
- **2010 ESRPP Step 1 Studies evaluated further as 2010 ESRPP Step 2 (Detailed Analysis) Studies**

Selected Studies

- **Composition of 2011 ESRPP Studies**
 - **Three (3) new high-level studies**
 - **From Entergy to EMDE for 500 MW**
 - **From Nebraska to Entergy for 3000 MW**
 - **From Entergy to Nebraska for 3000 MW**
 - **Two (2) detailed studies selected from the 2010 ESRPP Studies**
 - **Arkansas IPPs (Hot Springs, Magnet Cove, and PUPP) to SPP South (AEP and OGE) for 2408 MW**
 - **AEP to Entergy Arkansas for 1117 MW**

2011 ESRPP Selected Studies

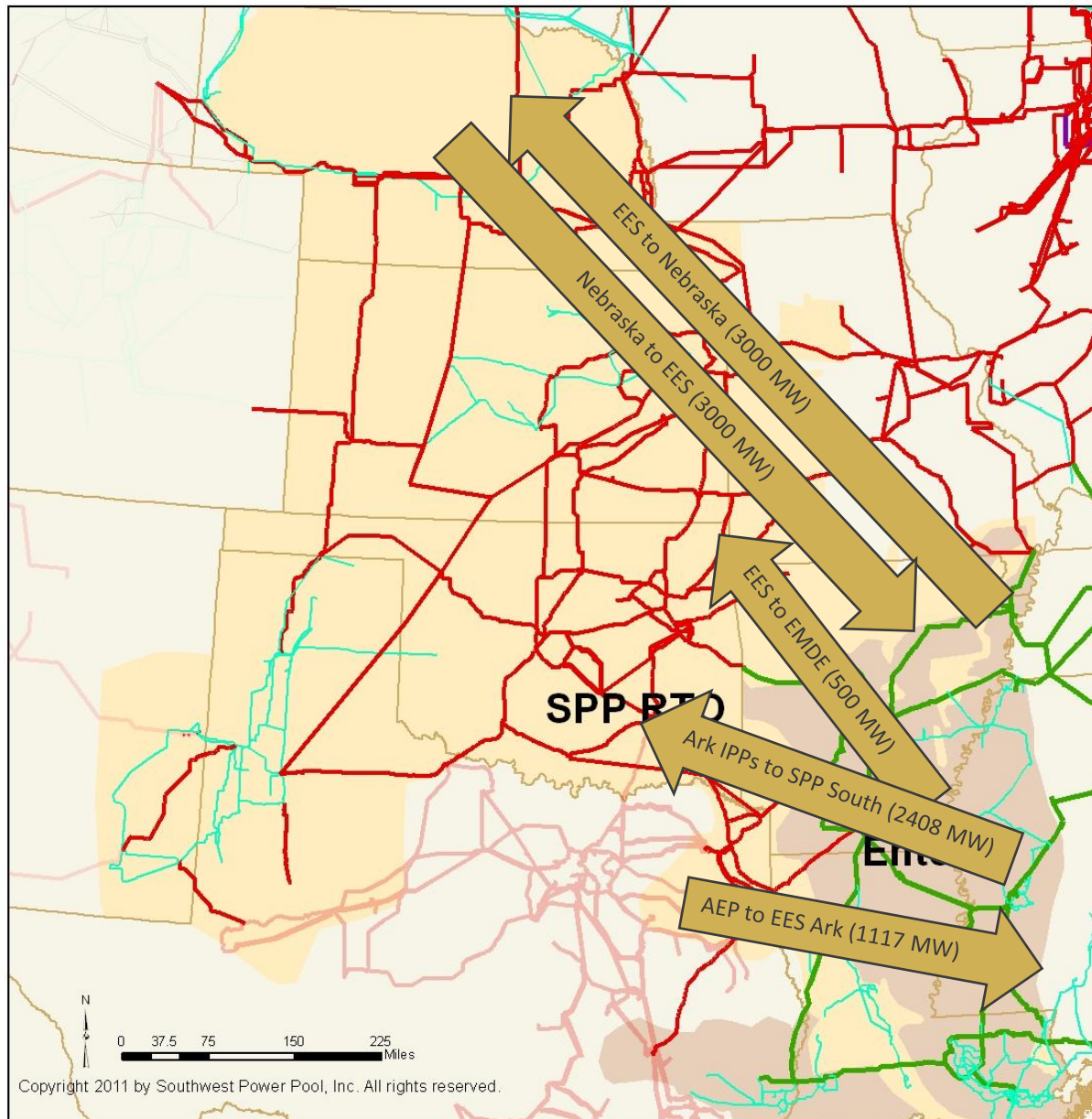


EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

All SPP Transmission Expansion Plans are subject to change.

- 230 kV
- 345 kV
- 500 kV
- Southwest Power Pool
- Entergy ICT



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Step 1 (High-Level Analysis)

General Study Assumptions for 2011 ESRPP Step 1 (High-Level Analysis) Studies

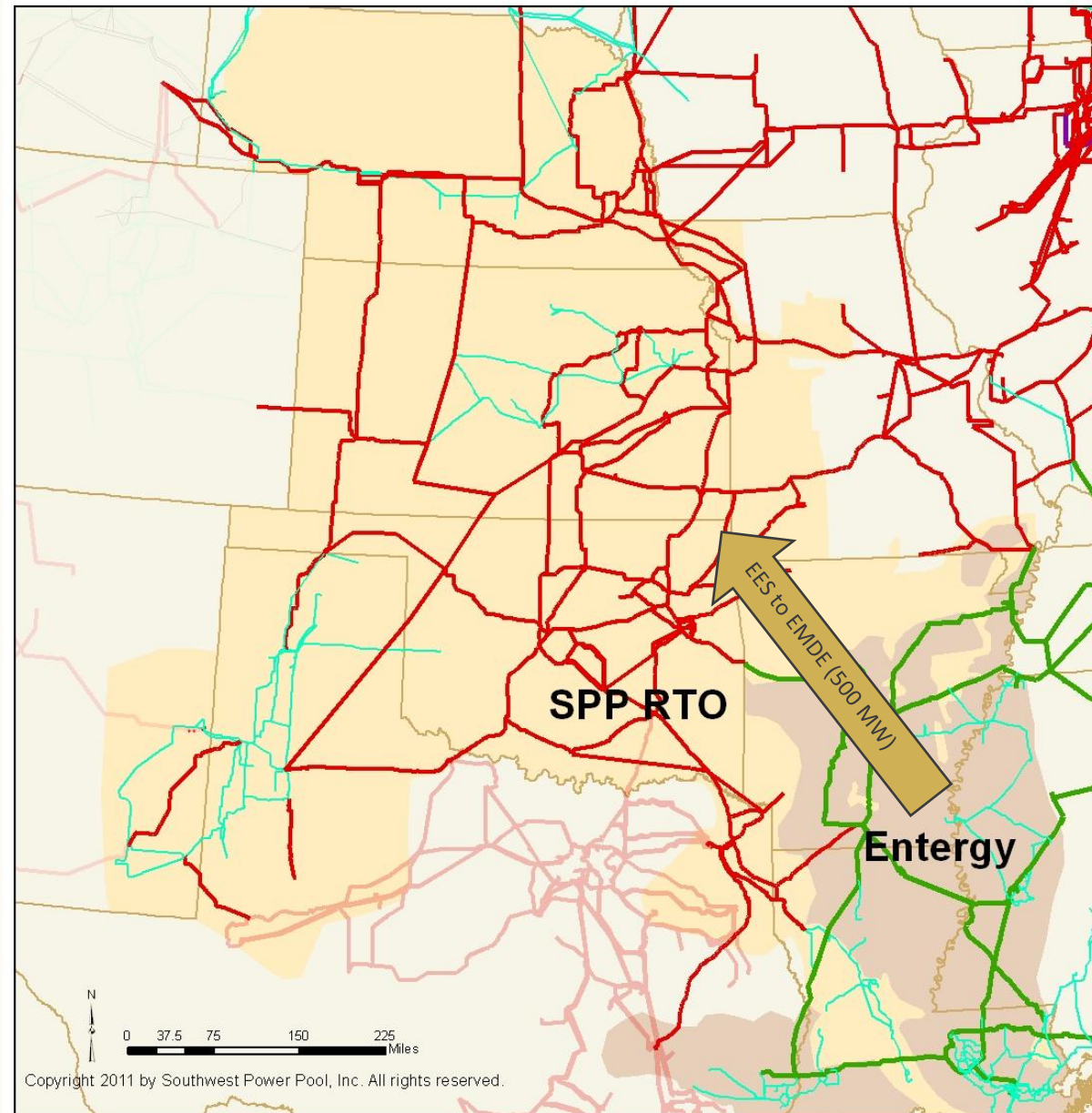
- **The high-level project proposals for 2011 cycle should increase transfer capability between a control area in SPP and a control area in Entergy (including Entergy), specifying a transfer amount. (POR/POD, MW).**
- **Planning-level cost estimates and construction timelines.**
- **MUST DC analysis of FCITC (First Contingency Incremental Transfer Capability).**
- **The resulting upgrades will focus on EHV expansion and other projects that are capable of relieving inter-regional limitations.**

Powerflow Models

- **Base Model**
 - **SPP’s 2011 Series STEP and Entergy’s 2011 Series Update 1**
 - **2017 Summer Peak Base Case Model**
 - **Includes Priority Projects in SPP**
 - **Entergy’s 11-13 Construction Plan Approved Projects**

- **Change Model**
 - **Add transfer and other study project requirements**
 - **Analyze transfer results**
 - **Develop and test upgrades to relieve constraints**

1. Entergy to EMDE for 500 MW

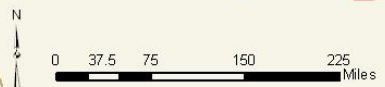


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Transfer Analysis

- **Transfer**
 - **Entergy to EMDE for 500 MW**
 - **Entergy**
 - **Scale all generation up 500 MW**
 - **EMDE**
 - **Scale all generation down 500 MW**

Inter-Regional Limitations

FCITC (MW)	Limiting Constraint			Contingency		
149	338130 5CALCR	161 338131 5MELBRN	161 1	C:338145 8ISES	500 338187 8DELL	500 1
197	338130 5CALCR	161 338131 5MELBRN	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
231	338130 5CALCR	161 505448 NORFORK5	161 1	C:338145 8ISES	500 338187 8DELL	500 1
234	338138 5MORFLD	161 338142 5ISES-1	161 1	C:338145 8ISES	500 338187 8DELL	500 1
248	338130 5CALCR	161 338131 5MELBRN	161 1	C:338151 5NEWPO	161 338173 5NEW-IN	161 1
270	338130 5CALCR	161 505448 NORFORK5	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
273	338138 5MORFLD	161 338142 5ISES-1	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
331	338130 5CALCR	161 505448 NORFORK5	161 1	C:338151 5NEWPO	161 338173 5NEW-IN	161 1
335	338138 5MORFLD	161 338142 5ISES-1	161 1	C:338151 5NEWPO	161 338173 5NEW-IN	161 1
396	500430 IPAPER 4	138 500530 MANSFLD4	138 1	C:500250 DOLHILL7	345 507760 SW SHV 7	345 1
469	338104 5HARR-E	161 338121 5SUMMIT	161 1	C:338108 5ST_JOE	161 338110 5HILLTOP	161 1
494	338104 5HARR-E	161 338121 5SUMMIT	161 1	C:338107 5EVRTON	161 338108 5ST_JOE	161 1

Entergy to EMDE for 500 MW-Overloads

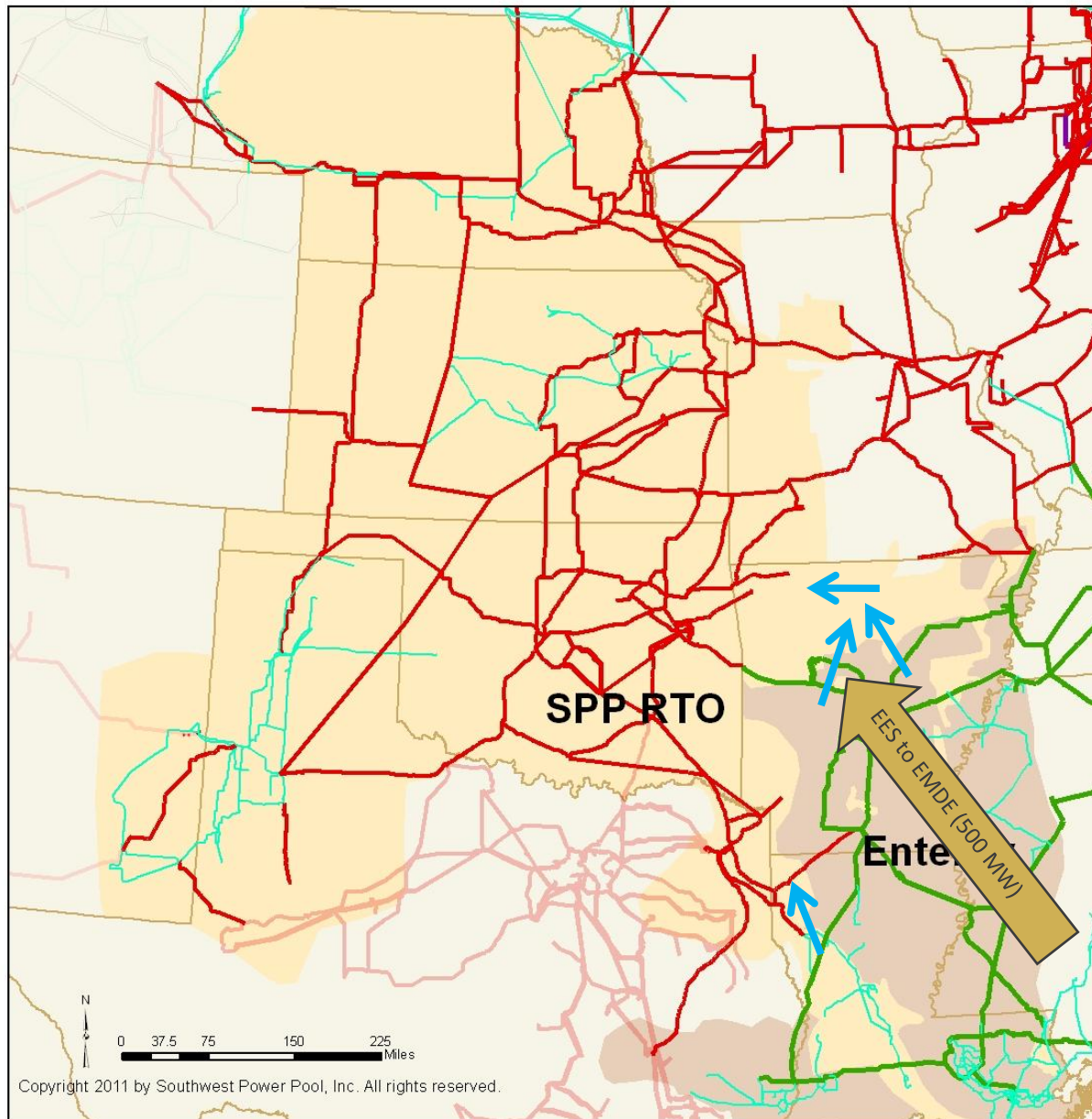


EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

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-  500 kV
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-  Entergy ICT



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2. Nebraska to Entergy for 3000 MW

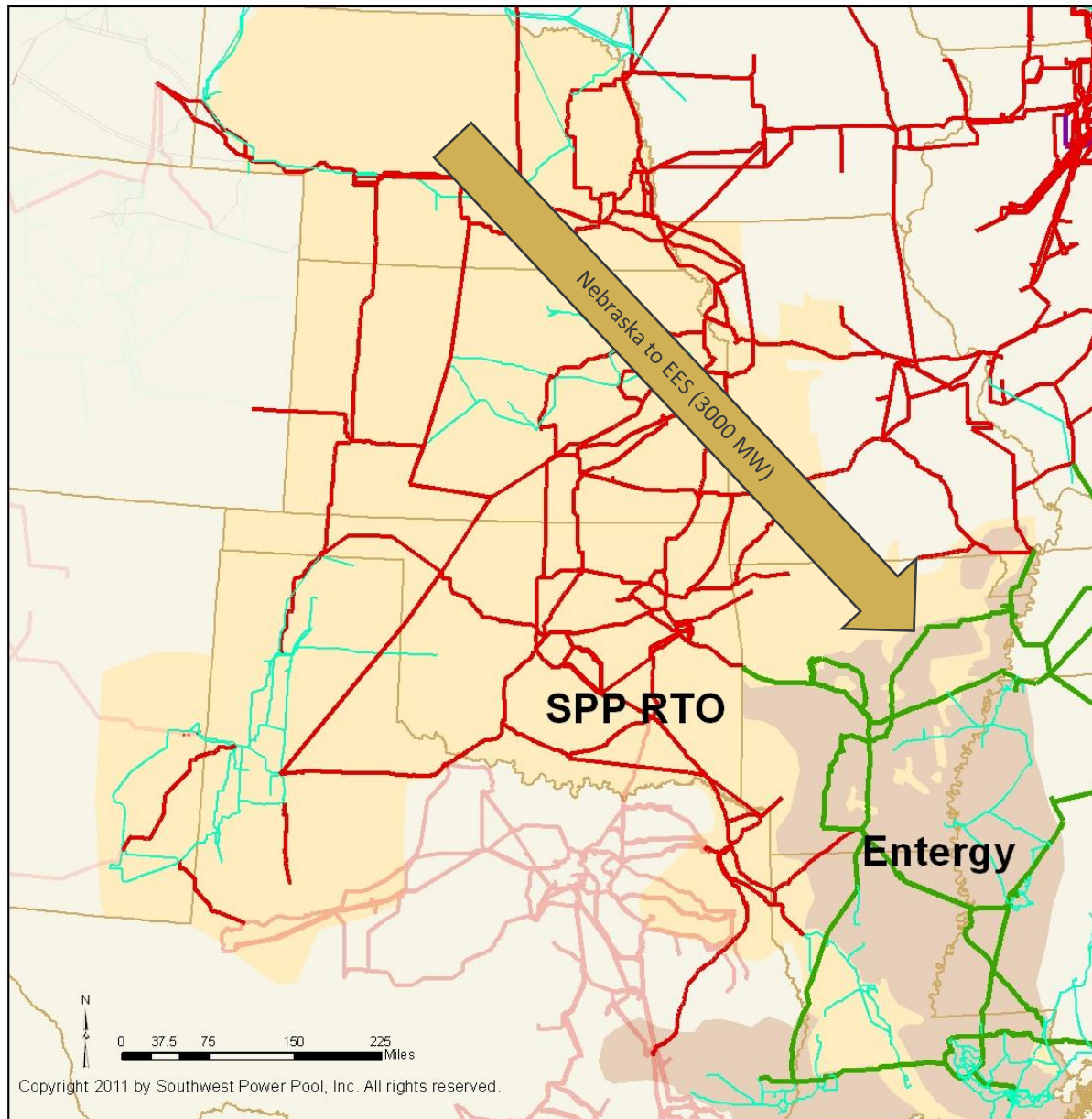


EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

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-  345 kV
-  500 kV
-  Southwest Power Pool
-  Entergy ICT

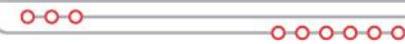


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Transfer Analysis

- **Initial transfer**
 - **Nebraska to Entergy for 3000MW**
 - **Nebraska**
 - **Scale all generation up 3000 MW**
 - **Entergy**
 - **Scale all generation down 3000 MW**
- **Since few inter-regional limitations were found, the transfer amount was increased to find limits beyond 3000 MW**
 - **4000 MW**

Inter-Regional Limitations



FCITC (MW)	Limiting Constraint				Contingency			
1229	334026 4GRIMES	138	334028 7GRIMES	345 2	C:334026 4GRIMES	138	334028 7GRIMES	345 1
1229	334026 4GRIMES	138	334028 7GRIMES	345 1	C:334026 4GRIMES	138	334028 7GRIMES	345 2
1961	640302 OGALALA4	230	659134 SIDNEY 4	230 1	C:640252 KEYSTON3	345	659133 SIDNEY 3	345 1
2718	531451 MINGO 7	345	B\$1258 MINGO	1.00 1	C:531451 MINGO 7	345	531465 SETAB 7	345 1
2718	531429 MINGO 3	115	B\$1258 MINGO	1.00 1	C:531451 MINGO 7	345	531465 SETAB 7	345 1
3281	531451 MINGO 7	345	640325 REDWILO3	345 1	C:530583 POSTROCK7	345	640065 AXTELL 3	345 1
3728	531451 MINGO 7	345	640325 REDWILO3	345 1	C:640065 AXTELL 3	345	640374 SWEET W3	345 1
3832	345408 7OVERTON	345	B\$0250	1.00 1	C:345088 7MCCREDIE	345	345230 7MONTGMRY	345 1
3840	345409 5OVERTON	161	B\$0250	1.00 1	C:345088 7MCCREDIE	345	345230 7MONTGMRY	345 1
3891	531451 MINGO 7	345	640325 REDWILO3	345 1	C:640183 GENTLMN3	345	640374 SWEET W3	345 1

Nebraska to Entergy for 4000 MW-Overloads

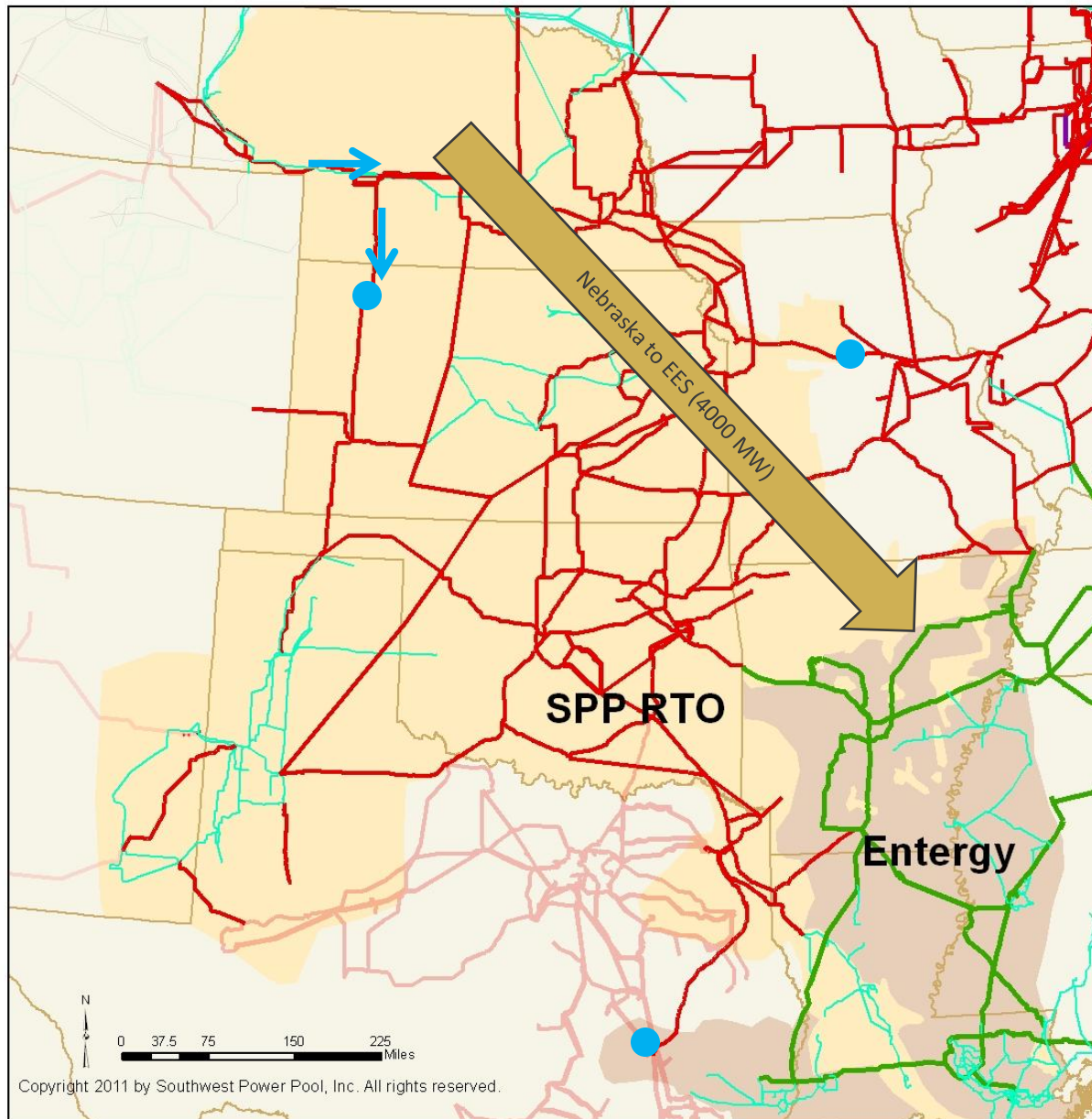


EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

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-  500 kV
-  Southwest Power Pool
-  Entergy ICT



3. Entergy to Nebraska for 3000 MW

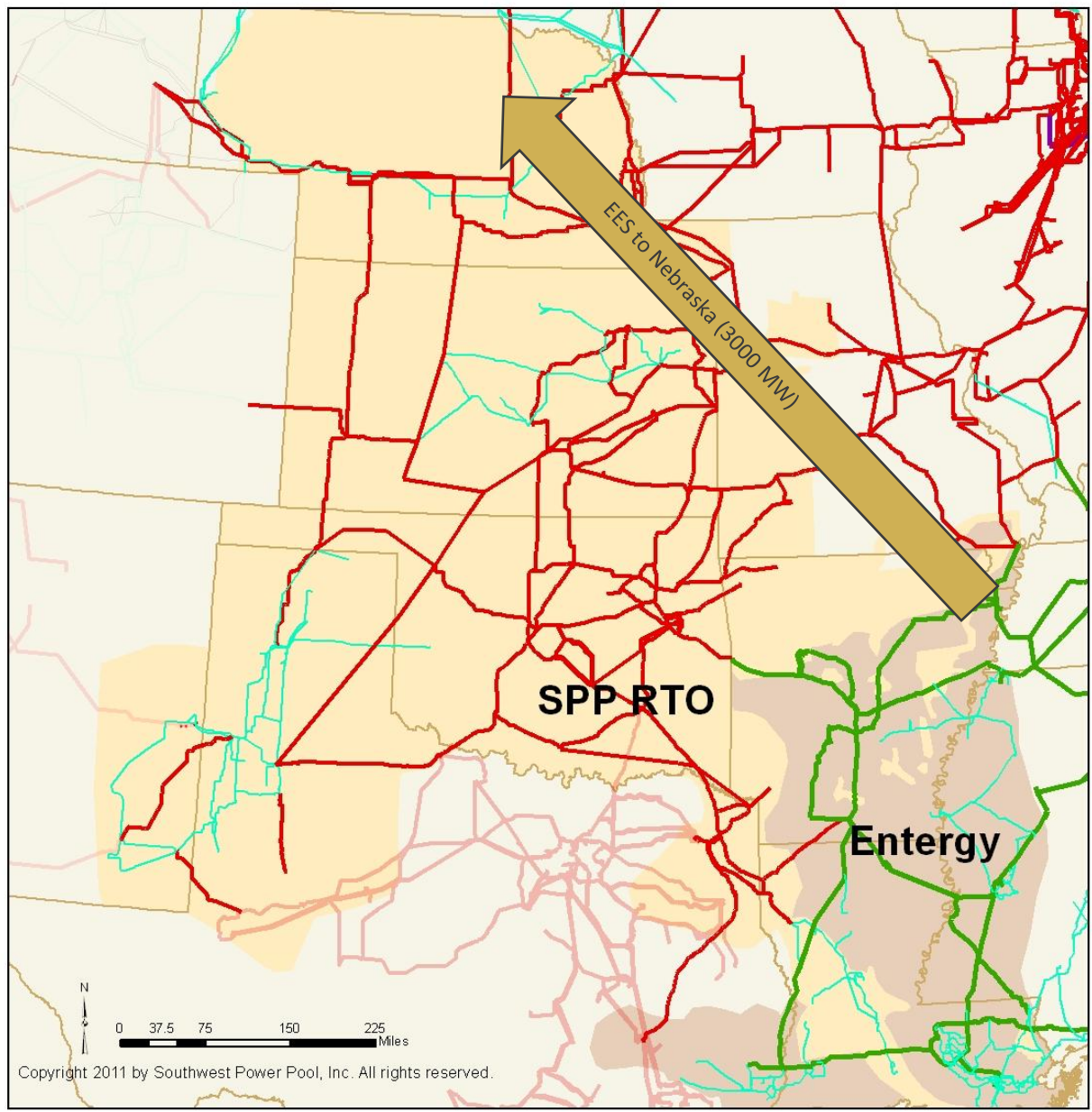


EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

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-  345 kV
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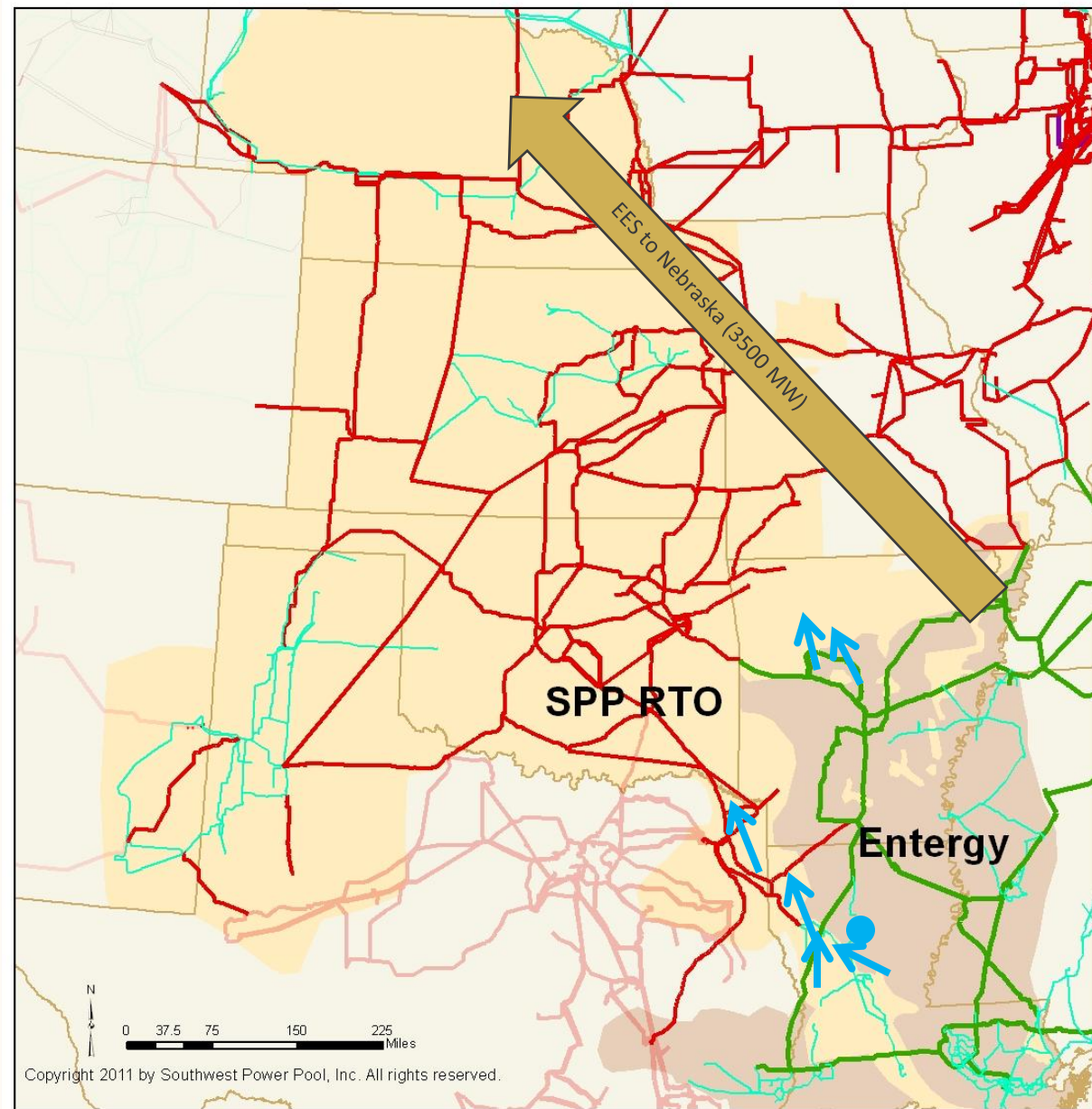
Transfer Analysis

- **Transfer**
 - **Entergy to Nebraska for 3000MW**
 - **Entergy**
 - **Scale all generation up 3000 MW**
 - **Nebraska**
 - **Scale all generation down 3000 MW**
 - **3500 MW**
- **Since few inter-regional limitations were found, the transfer amount was increased to find limits beyond 3000 MW**

Inter-Regional Limitations

FCITC (MW)	Limiting Constraint			Contingency		
431	500430 IPAPER 4	138 500530 MANSFLD4	138 1	C:500250 DOLHILL7	345 507760 SW SHV 7	345 1
836	500430 IPAPER 4	138 507765 WALLAKE4	138 1	C:500250 DOLHILL7	345 507760 SW SHV 7	345 1
940	337905 5RUSL-E	161 337906 5RUSL-N	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
1706	337904 5RUSL-S	161 505508 DARDANE5	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
1994	337904 5RUSL-S	161 337905 5RUSL-E	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
2355	337341 6WINFLD	230 337343 3WINFLD	115 1	C:337304 6MONTGY	230 500170 CLARN 6	230 1
2697	337304 6MONTGY	230 500170 CLARN 6	230 1	C:337341 6WINFLD	230 337343 3WINFLD	115 1
2697	337304 6MONTGY	230 500170 CLARN 6	230 1	C:337304 6MONTGY	230 337341 6WINFLD	230 1
2772	505508 DARDANE5	161 505514 CLARKSV5	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
2980	337304 6MONTGY	230 337341 6WINFLD	230 1	C:337304 6MONTGY	230 500170 CLARN 6	230 1
3102	500140 CARROLL6	230 500150 CARROLL4	138 1	C:500250 DOLHILL7	345 507760 SW SHV 7	345 1
3109	337343 3WINFLD	115 500445 JELDWEN 3	115 1	C:334325 8HARTBRG	500 337368 8MTOLIV	500 1
3123	337344 3DODSON	115 500445 JELDWEN 3	115 1	C:334325 8HARTBRG	500 337368 8MTOLIV	500 1
3153	337304 6MONTGY	230 500170 CLARN 6	230 1	C:500280 ELEESV 6	230 500770 RODEMR 6	230 1
3214	508298 LYDIA 7	345 508359 WELSH 7	345 1	C:508072 NWTXARK7	345 508359 WELSH 7	345 1
3322	500320 FISHER 4	138 500860 VP TAP 4	138 1	C:500200 COLFAX 6	230 500770 RODEMR 6	230 1
3402	337906 5RUSL-N	161 337912 5ANO	161 1	C:337909 8ANO	500 515305 FTSMITH8	500 1
3494	500320 FISHER 4	138 500860 VP TAP 4	138 1	C:337304 6MONTGY	230 500200 COLFAX 6	230 1

Entergy to Nebraska for 3500 MW-Overloads



EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

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-  345 kV
-  500 kV
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-  Entergy ICT

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2011 ESRPP Step 1 Study Initial Results

- **Please review initial FCITC Results**
 - **Provide comments and project recommendations (along with powerflow model IDEVs if possible)**

Step 2

(Detailed Analysis)



General Study Assumptions for 2011 ESRPP Step 2 (Detailed Analysis) Studies

- A 2010 Cycle project can be evaluated in more detail.
- A full AC contingency analysis (N-1) will be performed on the base and change models.
- Detailed cost estimates and timelines for the projects will be provided.

Study Progress and Initial Results

- **AC Analysis**
 - AC analysis was performed on 3 cases:
 - 2017 case
 - 2017 case with the transfer
 - 2017 case with the transfer and proposed projects.
 - N-1 scan of SPP and Entergy systems
- **Voltage Criteria**
 - SPP: The voltage level shall recover to within +10% and -10% of the nominal voltage
 - Entergy: The voltage level shall recover to within +5% and -8% of the nominal voltage
- **Thermal Criteria**
 - 100% loading and above for SPP and Entergy using rate B

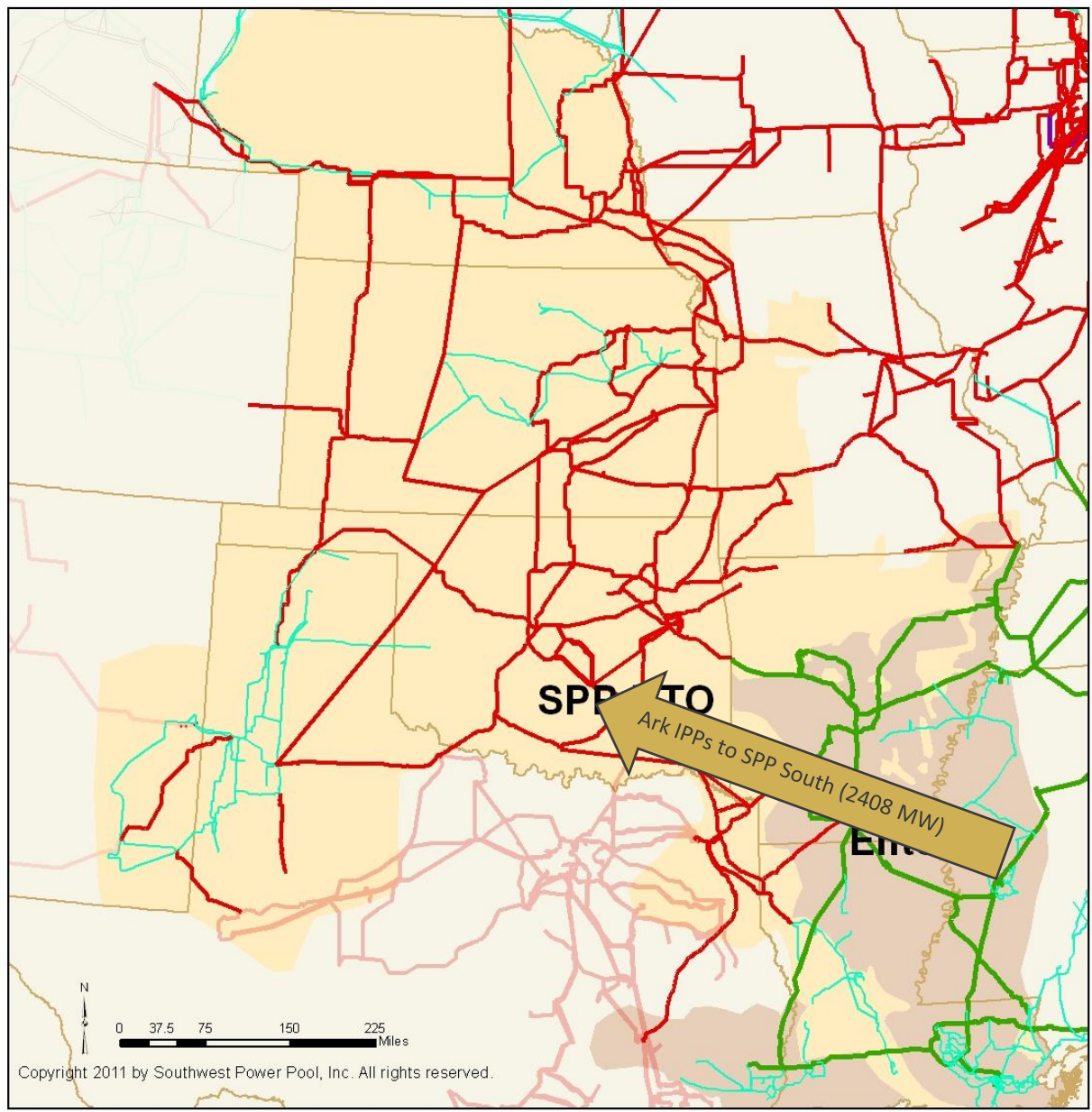
4. Ark IPPs to SPP South for 2408 MW



EHV Transmission
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Transfer Analysis

- **Transfer**
 - **Arkansas IPPs to SPP South for 2408 MW**
 - **Arkansas IPPs**
 - **Hot Springs up 425.5 MW**
 - **Magnet Cove up 530.1 MW**
 - **PUPP up 1452.4 MW**
 - **SPP South**
 - **AEP down 1466.5 MW**
 - **OGE down 563.9 MW**
 - **WFEC down 377.6 MW**

Transfer Analysis

- Proposed Projects from the Step 1 Study

Description	Line Rating	Upgrade Description
Etta – Pittsburg 500kV Line	(2900 MVA)	Build new transmission line 160 miles
Pittsburg Substation	(2900 MVA)	Two new 500/345kV transformers and new 500 kV switchyard @ Pittsburg
ANO – Fort Smith 500kV Line Circuit 2	(1299 MVA)	Build new transmission line 93.60 miles
500/345kV Autotransformer @ Fort Smith	(493 MVA)	New 500/345kV transformer @ Fort Smith
Pecan Creek – RSS 345kV Uprate	(1195 MVA)	Replace wave trap

Study Progress and Initial Results

- **AC Scan Results**
- **Difference between the base case and the change case with the proposed projects**
 - **26 Voltage Violations**
 - 22 bus voltages worsen by more than 1%
 - 4 bus voltages improved by more than 1% but still remain in violation and 1 bus is no longer in violation
 - **23 Thermal Violations**
 - 16 lines worsen by more than 3%
 - 7 lines improved by more than 3% but still remain in violation and 1 line is no longer in violation.
 - **An overview of the results are in Appendix A**

5. AEP to Entergy Ark for 1117 MW

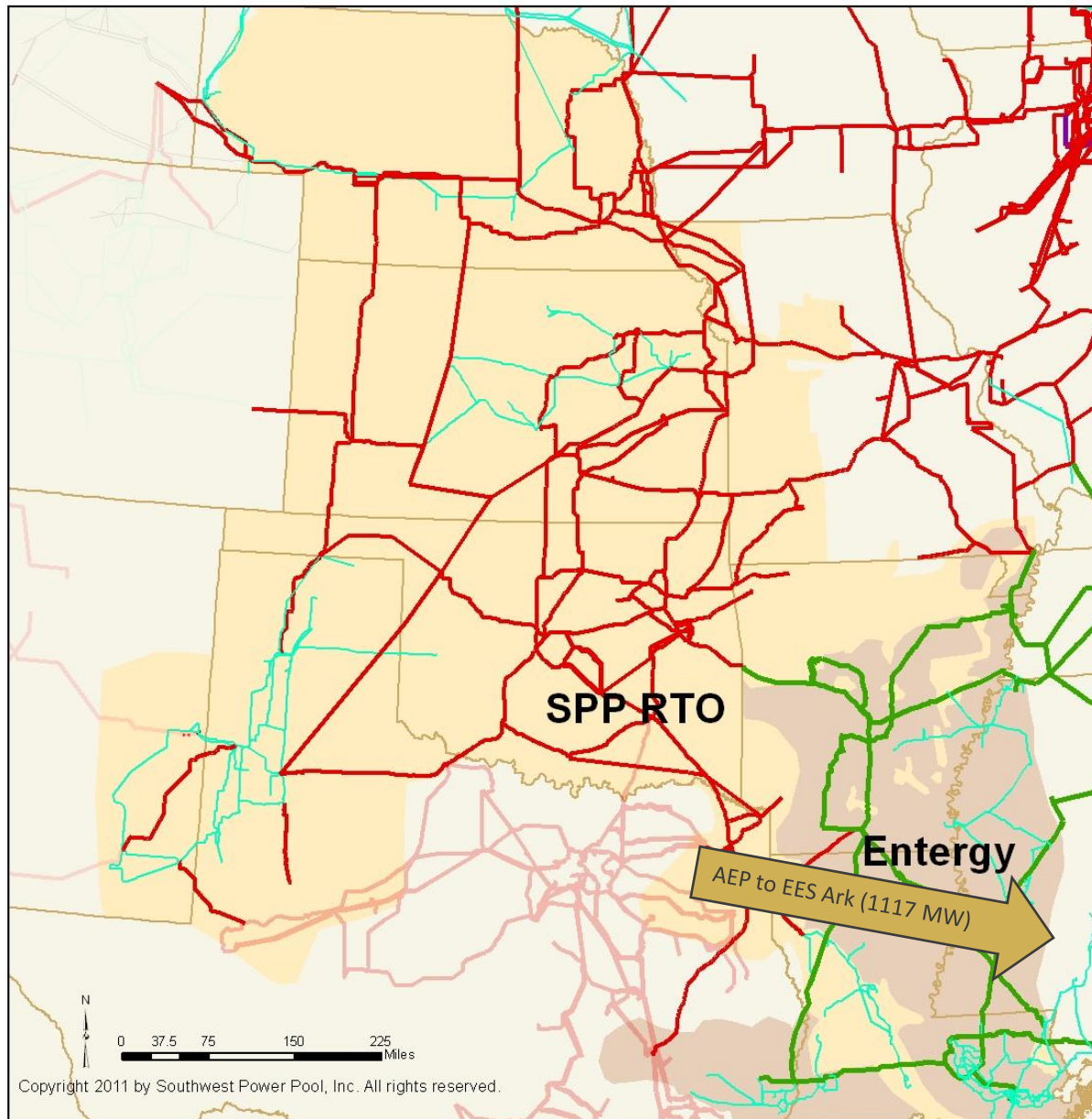


EHV Transmission
(Including expansion projects with commitments to construct)

June 2011

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-  230 kV
-  345 kV
-  500 kV
-  Southwest Power Pool
-  Entergy ICT



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Transfer Analysis

- **Transfer**
 - **AEP to Entergy Arkansas for 1117 MW**
 - **AEP**
 - **Scale All Generation Up 1117 MW**
 - **Entergy Arkansas**
 - **Scale All Generation Down 1117 MW**

Transfer Analysis

- Proposed Projects from the Step 1 Study

Description	Line Rating	Upgrade Description
Messick Substation	(855 MVA)	New 500/345kV transformer, new 500/230kV transformer, new 500/345kV switching station, and new 500/230kV switching station
Dolet Hills-Messick 345kV Line	(1195 MVA)	Build new transmission line 26.40 miles
Quarry Substation	(525 MVA)	Build new 345kV bus with breakers and switches and new 345/138kV transformer
Quarry – Rivtrin 345kV Line	(1326 MVA)	Build new transmission line 8.25 miles

Study Progress and Initial Results

- **AC Scan Results**
- **Difference between the base case and the change case with the proposed projects**
 - **2 Voltage Violations**
 - No bus voltages worsen by more than 1%
 - 2 bus voltages improved by more than 1% but still remain in violation and 1 bus is no longer in violation
 - **18 Thermal Violations**
 - 7 lines worsen by more than 3%
 - 11 lines improved by more than 3% but still remain in violation and 3 lines are no longer in violation
 - **An overview of the results are in Appendix B**

2011 ESRPP Step 2 Study Initial Results

- The complete list of violations are posted on SPP's TrueShare website:

<http://www.oatioasis.com/EES/EESDocs/EntergySPPRTORegionalPlanningProcess.htm>

- Please review the results and provide comments:

Email: ESRPP@SPP.org



Email: ESRPP@SPP.org

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Appendix A

AC Scan Results

Arkansas IPPs to SPP South for 2408 MW

Study Progress and Initial Results

- AC Results: Increase in Voltage Violations

Bus	Bus Area	Limit puV	% Diff from Base Case	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects	
				CTG Label	puV	CTG Label	puV	CTG Label	puV
522953 CR-MIDKIFF 4138.00	526 SPS	0.90	1.78%	SINGLE 6607	0.343	SINGLE 6607	0.34	SINGLE 6614	0.337
522960 CR-PEMBROOK4138.00	526 SPS	0.90	1.77%	SINGLE 6607	0.345	SINGLE 6607	0.342	SINGLE 6614	0.339
522992 CR-GARNDALE4138.00	526 SPS	0.90	1.75%	SINGLE 6607	0.349	SINGLE 6607	0.346	SINGLE 6614	0.343
337523 3MAG-ST 115.00	351 EES	0.92	1.74%	SINGLE 1411	0.933	SINGLE 1411	0.904	SINGLE 1411	0.917
337524 3KERLIN* 115.00	351 EES	0.92	1.74%	SINGLE 1411	0.935	SINGLE 1411	0.906	SINGLE 1411	0.919
522979 CR-E_MIDLND4138.00	526 SPS	0.90	1.74%	SINGLE 6607	0.351	SINGLE 6607	0.348	SINGLE 6614	0.345
522973 CR-S_MIDLND4138.00	526 SPS	0.90	1.72%	SINGLE 6607	0.355	SINGLE 6607	0.352	SINGLE 6614	0.349
522966 CR-STILES 4138.00	526 SPS	0.90	1.70%	SINGLE 6607	0.358	SINGLE 6607	0.356	SINGLE 6614	0.352
522962 CR-GREENWOD4138.00	526 SPS	0.90	1.65%	SINGLE 6607	0.37	SINGLE 6607	0.367	SINGLE 6614	0.364
337522 3MAG-E 115.00	351 EES	0.92	1.64%	SINGLE 1411	0.928	SINGLE 1411	0.899	SINGLE 1411	0.913
337525 3KERLIN 115.00	351 EES	0.92	1.63%	SINGLE 1411	0.934	SINGLE 1411	0.906	SINGLE 1411	0.919

Study Progress and Initial Results

- AC Results: Increase in Voltage Violations (cont.)

Bus	Bus Area	Limit puV	% Diff from Base Case	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects		
				CTG Label	puV	CTG Label	puV	CTG Label	puV	
522986 CR-STLAWREN4	138.00	526 SPS	0.90	1.57%	SINGLE 6607	0.389	SINGLE 6607	0.386	SINGLE 6614	0.383
522963 CR-1956	4138.00	526 SPS	0.90	1.46%	SINGLE 6607	0.347	SINGLE 6607	0.345	SINGLE 6614	0.342
337578 3MONT-S	115.00	351 EES	0.92	1.34%	SINGLE 1464	0.908	SINGLE 1464	0.895	SINGLE 1464	0.896
337577 3WILMAR	115.00	351 EES	0.92	1.33%	SINGLE 1464	0.916	SINGLE 1464	0.904	SINGLE 1464	0.904
337576 3WARR-E	115.00	351 EES	0.92	1.31%	SINGLE 1464	0.925	SINGLE 1464	0.913	SINGLE 1464	0.913
338813 5MIDWAY#	161.00	351 EES	0.92	1.31%	SINGLE 2980	0.93	SINGLE 2980	0.906	SINGLE 2982	0.918
522947 CR-TRIANGLE4	138.00	526 SPS	0.90	1.31%	SINGLE 6607	0.388	SINGLE 6607	0.386	SINGLE 6614	0.383
500550 MANY 4	138.00	502 CLEC	0.90	1.23%	SINGLE 3153	0.908	SINGLE 3153	0.889	SINGLE 3155	0.897
337575 3WARR-W	115.00	351 EES	0.92	1.21%	SINGLE 1464	0.922	SINGLE 1464	0.91	SINGLE 1464	0.911
337574 3CARMEL*	115.00	351 EES	0.92	1.20%	SINGLE 1464	0.927	SINGLE 1464	0.915	SINGLE 1464	0.916
522934 CR-GRADY	4138.00	526 SPS	0.90	1.13%	SINGLE 6607	0.447	SINGLE 6607	0.445	SINGLE 6614	0.442

Study Progress and Initial Results

- AC Results: Decrease in Voltage Violations

Bus	Bus Area	Limit puV	% Diff from Base Case	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects		
				CTG Label	puV	CTG Label	puV	CTG Label	puV	
337984 3HELN-C	115.00	351 EES	0.92	-2.20%	SINGLE 1754	0.89	SINGLE 1754	0.89	SINGLE 1754	0.91
337983 3HELN-W*	115.00	351 EES	0.92	-2.09%	SINGLE 1754	0.892	SINGLE 1754	0.891	SINGLE 1754	0.911
337982 3BARTON	115.00	351 EES	0.92	-2.08%	SINGLE 1754	0.896	SINGLE 1754	0.896	SINGLE 1754	0.915
337981 3MARVEL	115.00	351 EES	0.92	-2.07%	SINGLE 1754	0.899	SINGLE 1754	0.898	SINGLE 1754	0.918
337980 3ELAINE	115.00	351 EES	0.92	-2.05%	SINGLE 1754	0.907	SINGLE 1754	0.907	SINGLE 1754	0.926

Study Progress and Initial Results

- AC Results: Increase in Thermal Violations

Branch	%	Diff	Rate B	2011_ESRPP_Final		2011_ESRPP_Final		2011_ESRPP_Final	
				(Base Case)	(MW)	W/ Transfer	(MW)	W/ Proposed Projects	(MW)
	Case		(MW)	% Overload	(MW)	% Overload	(MW)	% Overload	(MW)
500430 IPAPER 4 138.00									
507765 WALLAKE4 138.00 1	28.33%		209	-13.88%	180	29.67%	271	10.53%	231
338130 5CALCR 161.00									
338131 5MELBRN 161.00 1	20.00%		148	1.35%	150	35.14%	200	21.62%	180
337716 3HS-W 115.00									
337717 3HS-S 115.00 1	14.68%		120	-9.17%	109	15.00%	138	4.17%	125
505588 STIGLER5 161.00									
300877 2STIGLER 69.000 1	14.00%		50	0.00%	50	14.00%	57	14.00%	57
337705 3CHEETA* 115.00									
337706 3HS-FTNLAKE 115.00 1	11.70%		201	-6.47%	188	14.43%	230	4.48%	210
334099 4CONROE2 138.00									
334103 4PLANTAT 138.00 1	10.88%		243	-1.65%	239	16.46%	283	9.05%	265
337818 3LR-S 115.00									
337821 3LR-ROK 115.00 1	5.88%		298	-3.02%	289	4.36%	311	2.68%	306
337731 3HS-E* 115.00									
337733 3HS-UC 115.00 1	5.33%		176	-3.98%	169	6.25%	187	1.14%	178

Study Progress and Initial Results

- AC Results: Increase in Thermal Violations (cont.)

Branch	%	Diff from Base Case	Rate B (MW)	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects	
				% Overload	(MW)	% Overload	(MW)	% Overload	(MW)
300083 5GIBSON 161.00 301291 2GIBSON 69.000 1		5.17%	56	3.57%	58	10.71%	62	8.93%	61
337733 3HS-UC 115.00 337734 3HS-IND 115.00 1		5.08%	176	0.57%	177	11.36%	196	5.68%	186
337685 3HSEHVW 115.00 337734 3HS-IND 115.00 1		5.00%	176	2.27%	180	12.50%	198	7.39%	189
300063 5CALIF 161.00 300550 2CALIF 69.000 1		4.84%	56	10.71%	62	17.86%	66	16.07%	65
334118 4SPLENDR 138.00 334208 4JACINTO 138.00 1		4.27%	206	2.43%	211	9.71%	226	6.80%	220
336800 3B.WLSN 115.00 336960 3SE-VKS 115.00 1		3.70%	161	0.62%	162	4.35%	168	4.35%	168
300123 5WPLAIN 161.00 301123 2WSTPL3 69.000 1		3.33%	56	7.14%	60	10.71%	62	10.71%	62
337823 3LR-W 115.00 337839 3LR-PALM 115.00 1		3.23%	159	-2.52%	155	1.26%	161	0.63%	160

Study Progress and Initial Results

- AC Results: Decrease in Thermal Violations

Branch	Case	% Diff from Base	Rate B (MW)	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects	
				% Overload	(MW)	% Overload	(MW)	% Overload	(MW)
508841 WILKES 7	345.00								
509409 WILKE3-1	22.000 1	-24.38%	216	67.13%	361	30.09%	281	26.39%	273
508548 KNOXLEE4	138.00								
509398 KNOXL5-1	21.000 1	-21.33%	216	73.61%	375	36.57%	295	36.57%	295
300129 5WASHBRN	161.00								
300763 2WASHBRN	69.000 1	-6.06%	56	17.86%	66	8.93%	61	10.71%	62
335455 4CHAMPNE	138.00								
500720 PLAISAN4	138.00 1	-4.52%	191	4.19%	199	-5.24%	181	-0.52%	190
500190 COCODR 6	230.00								
500230 COUGH 4	138.00 1	-3.99%	425	6.12%	451	Did Not Solve	Did Not Solve	1.88%	433
300508 5STURGN	161.00								
300505 2STURGN	69.000 1	-3.85%	25	4.00%	26	0.00%	25	0.00%	25
300145 4FISHER	138.00								
300931 2FISHER	69.000 1	-3.39%	56	5.36%	59	3.57%	58	1.79%	57
505488 CARTHAG5	161.00								
3WNDTR CRG X1	WND 2 1	-3.23%	84	10.71%	93	5.95%	89	7.14%	90

Appendix B

AC Scan Results

AEP to Entergy Arkansas for 1117 MW

Study Progress and Initial Results

- AC Results: Decrease in Voltage Violations

Bus	Bus Area	Limit puV	% Diff from Base Case	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects		
				CTG Label	puV	CTG Label	puV	CTG Label	puV	
				543059 MALTABN5	161.00	541 KCPL	0.90	2.186%	SINGLE 5774	0.869
543063 SWAVRLY5	161.00	541 KCPL	0.90	2.184%	SINGLE 5774	0.87	SINGLE 5774	0.869	SINGLE 5778	0.889
337368 8MTOLIV	500.00	351 EES	1.05	2.519%	SINGLE 1342	1.072	SINGLE 1342	1.072	SINGLE 1342	1.045

Study Progress and Initial Results

- AC Results: Increase in Thermal Violations

Branch	%	Diff from Base Case	Rate B (MW)	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects	
				% Overload	(MW)	% Overload	(MW)	% Overload	(MW)
300129 5WASHBRN 161.00 300763 2WASHBRN 69.000 1		4.55%	56	17.86%	66	23.21%	69	23.21%	69
508840 WILKES 4 138.00 509408 WILKE2-1 21.000 1		3.88%	216	43.06%	309	48.61%	321	48.61%	321
508840 WILKES 4 138.00 509408 WILKE2-1 21.000 2		3.88%	216	43.06%	309	48.61%	321	48.61%	321
337592 3BAGBY 115.00 337595 3MACON* 115.00 1		3.70%	106	1.89%	108	5.66%	112	5.66%	112
300090 5KINGDM 161.00 300517 2KINGDM 69.000 2		3.33%	25	20.00%	30	24.00%	31	24.00%	31
300090 5KINGDM 161.00 300517 2KINGDM 69.000 3		3.33%	25	20.00%	30	24.00%	31	24.00%	31
509742 DENVR-C4 138.00 509793 DENVER-1 13.800 1		3.03%	33	0.00%	33	3.03%	34	3.03%	34

Study Progress and Initial Results

- AC Results: Decrease in Thermal Violations

Branch	% Diff from Base Case	Rate B (MW)	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects	
			% Overload	(MW)	% Overload	(MW)	% Overload	(MW)
338142 5ISES-1 161.00 338143 1ISES U1 26.000 1	-24.41%	530	59.25%	844	20.38%	638	20.38%	638
338152 5ISES-2 161.00 338143 1ISES U1 26.000 2	-24.41%	530	59.25%	844	20.38%	638	20.38%	638
338169 5TRUMAN 161.00 338707 5TRUM-W# 161.00 1	-8.44%	148	4.05%	154	-4.73%	141	-4.73%	141
334102 4CEDHILL 138.00 334103 4PLANTAT 138.00 1	-7.14%	243	3.70%	252	-7.00%	226	-3.70%	234
334099 4CONROE2 138.00 334104 4CONROE1 138.00 1	-5.11%	287	9.06%	313	1.05%	290	3.48%	297
338484 3NLR-LV 115.00 338485 3NLR-WG 115.00 1	-3.80%	159	15.72%	184	11.32%	177	11.32%	177
508548 KNOXLEE4 138.00 509398 KNOXL5-1 21.000 1	-3.73%	216	73.61%	375	67.13%	361	67.13%	361

Study Progress and Initial Results

- AC Results: Decrease in Thermal Violations (cont.)

Branch	% Diff from Base Case	Rate B (MW)	2011_ESRPP_Final (Base Case)		2011_ESRPP_Final W/ Transfer		2011_ESRPP_Final W/ Transfer W/ Proposed Projects	
			% Overload	(MW)	% Overload	(MW)	% Overload	(MW)
508548 KNOXLEE4 138.00 509398 KNOXL5-1 21.000 2	-3.73%	216	73.61%	375	67.13%	361	67.13%	361
337695 3TIGRE * 115.00 337697 3PANTH* 115.00 1	-3.43%	201	1.49%	204	-2.49%	196	-1.99%	197
505434 IDALIA 5 161.00 301243 2IDALIA 69.000 1	-3.39%	56	5.36%	59	1.79%	57	1.79%	57
500190 COCODR 6 230.00 500230 COUGH 4 138.00 1	-3.35%	425	12.47%	478	16.94%	497	8.71%	462
300083 5GIBSON 161.00 301291 2GIBSON 69.000 1	-3.23%	56	10.71%	62	7.14%	60	7.14%	60
337153 3BANKSW 115.00 337156 3HAMBRK* 115.00 1	-3.20%	111	12.61%	125	9.01%	121	9.01%	121
337717 3HS-S 115.00 337718 3CARPE 115.00 1	-3.09%	132	22.73%	162	18.18%	156	18.94%	157

ESRPP Next Steps

Entergy SPP RTO Regional
Planning Process
Stakeholder Meeting

August 24, 2011



ESRPP Next Steps

- **Stakeholder Comment Period**
 - **Step 1 (High-Level Analysis) Studies**
 - **Please recommend upgrades to reach desired transfer capability**
 - **Step 2 (Detailed Analysis) Studies**
 - **Please review the results and provide comments**

ESRPP Meetings

- **Next Meeting**
 - **1Q 2012 (Late February 2012)**
 - **Presentation and discussion of the final report**
 - **Final Report published after this meeting**
- **2012 ESRPP Cycle (2Q 2012)**
 - **Scope Review**
 - **Nomination Requests and Email Vote**
 - **Present Selected Step 1 and 2 Studies**

Communications

- Sign up for TWG or ICT SPC email exploders
 - ESRPP Meeting Minutes
 - ESRPP Nomination Requests and Email Vote
 - ESRPP Reports
- SPP distribution list for stakeholders to send comments to SPP and Entergy personnel:

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