



Control Number: 34611



Item Number: 520

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**SOAH DOCKET NO. 473-08-3341  
PUC DOCKET NO. 34611**

**APPLICATION OF KELSON  
TRANSMISSION COMPANY, LLC  
FOR A CERTIFICATE OF  
CONVENIENCE AND NECESSITY  
FOR THE PROPOSED CANAL-TO-  
DEWEYVILLE 345 KV  
TRANSMISSION LINE WITHIN  
CHAMBERS, HARDIN, JASPER,  
JEFFERSON, LIBERTY, NEWTON  
AND ORANGE COUNTIES**

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**BEFORE THE**

**STATE OFFICE OF**

**ADMINISTRATIVE HEARINGS**

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**KELSON TRANSMISSION COMPANY, LLC'S RESPONSE TO ORDER NO. 42 AND  
MOTION TO TAKE OFFICIAL NOTICE AND TO ADMIT ADDITIONAL EXHIBITS**

Kelson Transmission Company, LLC ("Kelson Transmission") files this Response to Order No. 42 and Motion to Take Official Notice and To Admit Additional Exhibits, seeking admission into the evidentiary record of four additional documents and proposing deadlines for additional briefing on January 28th (initial briefs) and February 4th (reply briefs).

**I. BACKGROUND**

On December 30, 2008, Occidental Chemical Corporation ("OCC") and South Texas Electric Cooperative, Inc. ("STEC") filed initial briefs in this proceeding. Both parties introduced new factual evidence into the record either through attachments to their briefs or through textual references and quotations from those attachments. Specifically, OCC attached the "ERCOT Phase III Study Report" and "Entergy Texas, Inc.'s Updated 'Stay-in-SERC' Analysis," and STEC attached the "ERCOT Phase III Study Report" (collectively the "Late-Filed Exhibits"). On January 5, 2009 (six days after filing the initial briefs with the attached Late-Filed Exhibits), OCC, STEC, the Office of Public Utility Counsel ("OPC"), Texas

Industrial Energy Consumers ("TIEC), and Commission Staff (collectively the "Joint Parties")<sup>1</sup> filed a Joint Motion to Take Official Notice and to Admit Late-Filed Exhibits ("Joint Motion"). On January 14, 2009, the ALJs entered Order No. 42, granting the Joint Parties' Joint Motion and admitting the Late-Filed Exhibits into evidence.

In Order No. 42, the ALJs stated that "[i]n response to the admission of the ERCOT and ETI Reports, Kelson and Cottonwood are entitled to further develop the evidentiary record." The ALJs requested that Kelson Transmission notify the ALJs no later than January 21, 2009, if Kelson Transmission desired to submit further evidence in this proceeding. In response to Order No. 42, Kelson Transmission hereby submits additional exhibits in response to the Joint Parties' Late-Filed Exhibits.

## **II. KELSON TRANSMISSION'S ADDITIONAL EXHIBITS**

Kelson Transmission asks the ALJs to take official notice of, and to admit as exhibits in this proceeding, the following documents:

- 1) SPP-ETI QPR Study Report of the Southwest Power Pool (December 17, 2008) (the "SPP Report") (attached as Exhibit 1);<sup>2</sup>
- 2) Entergy's Draft Reliability and Economic Study for the 2008 Transmission Expansion Plan of the Acadiana Area Load Pocket (October 2008) (the "2008 Transmission Expansion Plan") (attached as Exhibit 2);<sup>3</sup>
- 3) Entergy Gulf States Proposed Transmission Reliability Projects (July 13, 2006) (the "2006 Proposed Projects Summary") (attached as Exhibit 3);<sup>4</sup>
- 4) Entergy Gulf States Proposed Transmission Reliability Projects (July 14, 2005) (the "2005 Proposed Projects Summary") (attached as Exhibit 4).<sup>5</sup>

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<sup>1</sup> Although Entergy Texas did not join in the Joint Motion, it did write a letter in support thereof. For purposes of this motion, Kelson Transmission includes Entergy Texas in any references to the "Joint Parties."

<sup>2</sup> *Application of Entergy Gulf States, Inc. for Transition to Competition Plan*, Docket No. 33687, "SPP-ETI QPR Study Report of the Southwest Power Pool" (December 17, 2008)

<sup>3</sup> Available at <http://oasis.e-terrasolutions.com/documents/EES/Acadiana.htm>.

<sup>4</sup> Available at <http://oasis.e-terrasolutions.com/documents/EES/2005%20EGSI-LA%20Planning%20Summit%20Presentation.pdf>.

<sup>5</sup> Available at [http://oasis.e-terrasolutions.com/documents/EES/2006\\_Trans\\_Planning\\_Summit\\_EGSILA.pdf](http://oasis.e-terrasolutions.com/documents/EES/2006_Trans_Planning_Summit_EGSILA.pdf)

(collectively "Kelson Transmission's Additional Exhibits"). Each of Kelson Transmission's Additional Exhibits responds to the Joint Parties' Late-Filed Exhibits, and rebuts arguments based thereon.

The SPP Report was one of three reports recently filed in response to Commission orders in Docket No. 33687. The other two reports filed in that docket during the same time period were the Joint Parties' Late-Filed Exhibits, admitted into evidence by the ALJs pursuant to Order No. 42. Since all three reports were requested by the Commission in order to make a decision on Entergy Texas's transition to competition plan, it is likewise important that the ALJs consider all three reports in this proceeding. The SPP Report discusses the Kelson Transmission Project and its effect on Entergy Texas. For the same reasons set forth by the ALJs in Order No. 42 for admitting the Late-Filed Exhibits, the SPP Report should also be admitted. All of the Joint Parties have agreed to admission of the SPP Report.

The 2008 Transmission Expansion Plan, the 2006 Proposed Project Summary, and the 2005 Proposed Project Summary (collectively the "Entergy Transmission Project Summaries") are each being offered to rebut the Joint Parties' argument, based on the Joint Parties' Late-Filed Exhibits, that Entergy Texas will need to construct \$229 million in transmission related facilities as a direct result of the Cottonwood Facility disconnecting from SERC and interconnecting to ERCOT.<sup>6</sup> The Entergy Transmission Summaries show that these same transmission improvements have for years been identified by Entergy Texas as needed to sustain future reliability regardless of whether the Cottonwood Facility disconnects from Entergy Texas.

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<sup>6</sup> Docket No. 34611, Joint Motion to Take Official Notice and to Admit Late-Filed Exhibits at 4 (January 5, 2009).

Pursuant to PUC Procedural Rule 22.222(a) the ALJs may take official notice of “judicially cognizable facts not subject to reasonable dispute in that they are . . . capable of accurate and ready determination by resort to sources whose accuracy cannot be reasonably questioned.” Each of the Entergy Transmission Summaries are appropriate for official notice as each was authored by Entergy, and each is located on Entergy’s Open Access Same-time Information System (“OASIS”) website.<sup>7</sup> Pursuant to 18 C.F.R. § 37.5, Entergy “is required to provide for the operation of an OASIS” system.<sup>8</sup> The Federal Energy Regulatory Commission requires Entergy to maintain its OASIS website to provide “standardized information relevant to the availability of transmission capacity, prices, and other information . . . pertaining to the transmission system for which it is responsible.”<sup>9</sup> The information posted on Entergy’s OASIS website must be in sufficient detail to allow customers to view and download “information regarding the transmission system necessary to enable prudent business decision making.”<sup>10</sup> Because the Entergy Transmission Summaries are located on Entergy’s federally mandated OASIS system, there is no doubt as to the source nor the authenticity of the documents.

Additionally, the assumptions contained in the ERCOT Phase III Report and the SPP Report regarding the need for additional transmission facilities if the Cottonwood Facility disconnects from Entergy Texas, all originated from Entergy Texas. If the ERCOT Phase III Report, the Stay-in-SERC analysis, and the SPP Report are reliable documents, then the Entergy Transmission Summaries should likewise be reliable since they also came from Entergy Texas. Conversely, if the Entergy Transmission Summaries are not reliable, then it clearly calls into question the reliability of the assumptions underlying the Joint Parties’ arguments.

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<sup>7</sup> See *supra* notes 3-5 (providing web addresses for Entergy Transmission Summaries).

<sup>8</sup> 18 C.F.R. § 37.5 (2008).

<sup>9</sup> 18 C.F.R. § 37.5(b) (2008).

<sup>10</sup> 18 C.F.R. § 37.6(a)(2) (2008).

Kelson Transmission has shown good cause for admitting its additional exhibits. The ALJs have already reopened the evidentiary record in order to admit the Joint Parties' Late-Filed Exhibits, and have found that Kelson Transmission is therefore entitled to further develop the record. Each of Kelson Transmission's Additional Exhibits is responsive to the Joint Parties' Late-Filed Exhibits and to arguments based thereon.

### **III. PROPOSED BRIEFING SCHEDULE**

Kelson Transmission proposes that initial briefs addressing both the Late-Filed Exhibits and Kelson Transmission's Additional Exhibits be due on January 28, 2009, and that reply briefs be due on February 4, 2009. Kelson Transmission has advised the other parties in this proceeding of its proposed briefing schedule, and all of the Joint Parties have agreed to the proposed schedule.

### **IV. CONCLUSION**

Kelson Transmission respectfully asks that the ALJs take official notice of, and admit into evidence, the following documents: 1) SPP-ETI QPR Study Report of the Southwest Power Pool; 2) Reliability and Economic Study for the 2008 Transmission Expansion Plan of the Acadiana Area Load Pocket; 3) 2006 Entergy Gulf States Proposed Transmission Reliability Projects; and 4) 2005 Entergy Gulf States Proposed Transmission Reliability Projects. Kelson Transmission also asks that the ALJs grant Kelson Transmission's proposed briefing schedule.

Respectfully submitted,

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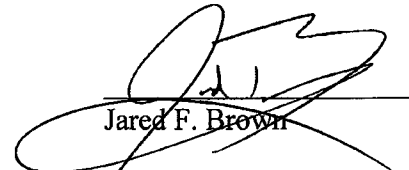
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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing document was served on all parties of record by facsimile transmission or United States First Class Mail on this 21 day of January, 2009.

  
Jared F. Brown

**DOCKET NO. 33687**

<b>ENTERGY GULF STATES, INC.'S</b>	<b>§</b>	<b>PUBLIC UTILITY COMMISSION</b>
<b>TRANSITION TO COMPETITION</b>	<b>§</b>	
<b>PLAN</b>	<b>§</b>	<b>OF TEXAS</b>

**SPP-ETI QPR STUDY REPORT OF THE SOUTHWEST POWER POOL**

COMES NOW the Southwest Power Pool, Inc. ("SPP"), and pursuant to the order issued in this docket on October 24, 2007, files its study of the possible integration of Entergy Texas Inc. ("ETI") into SPP and implementation of retail open access ("ROA") for ETI as part of SPP ("SPP-ETI QPR Study Report" or "Report"). The SPP-ETI QPR Study is broken down into four study tracks which are included in its Report:

1. Reliability Assessment Study;
2. Market Power Study;
3. Economic Assessment Study; and
4. Retail Open Access ("ROA") Study.

The results of these four study tracks were then used to perform a Benefit/Cost Analysis, which is also included in the Report.

Pursuant to Paragraph 4 of the Protective Order filed in this docket, SPP further provides notice that the topology map identified as Appendix 2 of the Report and the Market Power Study, attached to the Report as Appendix 3, contain confidential information, and as a result, are identified as Highly Sensitive Protected Materials pursuant to the Protective Order in this docket.

The topology map provided in Appendix 2 contains Critical Energy Infrastructure Information ("CEII") as defined by the Federal Regulatory Energy Commission ("FERC"). The map contains detailed information about the transmission systems in the SPP area. Pursuant to FERC regulations, this information may only be viewed by parties who have executed a nondisclosure agreement with SPP. The Protective Order certification is not sufficient for this purpose. SPP is, therefore, unable to file this map, or provide it to requesting parties until appropriate nondisclosure agreements have been executed. Parties wishing to receive a copy of



this map may contact Susan Polk at SPP at (501) 614-3260 to request a copy and execute the appropriate documentation. SPP asserts that this information is exempt from disclosure pursuant to §552.101 of the Public Information Act. This information has not been and will not be publicly disclosed by SPP. The information is relevant to the proceedings in this docket, but should not be disclosed further than such relevant uses require and should in no circumstances be disclosed outside the proceedings in this docket. Counsel for SPP has reviewed the information sufficiently to state in good faith that the information is exempt from public disclosure under the Public Information Act and merits the designation stated above.

Within the Market Power Study, SPP has identified certain generation-related information provided to SPP as Highly Sensitive Protected Materials by ETI. SPP will, therefore, file and provide this information only as Highly Sensitive Protected Materials. The information is relevant to the proceedings in this docket, but should not be disclosed further than such relevant uses require and should in no circumstances be disclosed outside the proceedings in this docket. SPP is also filing a public redacted version of this document.

WHEREFORE, PREMISES CONSIDERED, SPP is available to answer any questions the Commission or any interested party may have with respect to the SPP-ETI QPR Study Report.

Respectfully submitted,

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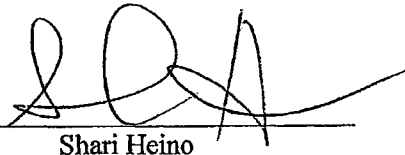
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ATTORNEYS FOR SOUTHWEST POWER POOL, INC.

#### CERTIFICATE OF SERVICE

I hereby certify that, on December 17, 2008, a copy of this document will be served on all parties of record in this proceeding in accordance with P.U.C. PROC. R.22.74.



Shari Heino



**REQUIREMENTS TO INTEGRATE ENTERGY TEXAS, INC. INTO  
THE SOUTHWEST POWER POOL**

**SPP – ETI QPR STUDY REPORT**

**DECEMBER 17, 2008**

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## **SPP-ETI QPR Study Report**

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### **1. EXECUTIVE SUMMARY**

#### **1.1. Overview**

This report documents the Study that was undertaken by Southwest Power Pool, Inc. ("SPP") with input from Entergy, SPP Stakeholders, Entergy Stakeholders, ERCOT, and the Public Utility Commission of Texas ("Commission") Staff to determine the transmission system improvements that would be required to reliably and efficiently integrate Entergy Texas Inc., ("ETI") into the Southwest Power Pool ("SPP") system and the production cost savings attributable to ETI resulting from such integration ("SPP-ETI QPR Study"). The SPP-ETI QPR Study results indicate that SPP is a viable QPR option for ETI. In all but one scenario<sup>1</sup> of all of the scenarios analyzed, net benefits to ETI resulting from ETI's Integration into SPP are positive. Details regarding the calculation of the costs and benefits included in the ETI net benefits calculations are provided in the following Sections and in additional detail within the body the SPP-ETI QPR Study Report.

Per the Commission's October 24, 2007 Order in Docket No. 33687, the SPP-ETI QPR Study parallels the Phase II Study Report – ERCOT Requirements to Integrate Entergy Gulf States – Texas into ERCOT ("Phase II Study") filed with the Commission on December 15, 2006 in this Docket. Per the Commission's May 23, 2008 Order, ERCOT is updating their Phase II Study contemporaneously with the development of the SPP-ETI QPR Study. The SPP-ETI QPR Study was performed consistent with the methodology and assumptions used in the Phase II Study, thus allowing, to the extent possible, for an "apples to apples" results comparison<sup>2</sup> between the integration of ETI into ERCOT described in the Phase II Study versus the integration of ETI into SPP. In addition to assessing the transmission system improvements required for the integration of ETI into SPP, Potomac Economics, LTD, at the request of SPP, performed a

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<sup>1</sup> In this scenario, net benefits to ETI may be positive depending on economic transmission project cost allocation assumptions.

<sup>2</sup> While SPP coordinated with ERCOT to ensure that the data inputs, assumptions and modeling techniques were as consistent as possible, inherent differences between the two systems necessitated some differing inputs and results.

## **SPP - ETI QPR Study Report**

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Market Power Study to assess any potential market power within the integrated ETI/SPP system. SPP also assessed the potential ETI production cost savings associated with the Integration of ETI into SPP under two gas price forecast assumptions, a 2012 base assumption of \$11.00/MMBTU and a 2012 sensitivity gas price forecast assumption of \$7.00/MMBTU, consistent with the assumptions used in the Phase II Study. SPP then developed estimated costs for the Implementation of Retail Open Access ("ROA") for ETI following integration into SPP. Finally, SPP performed an ETI Benefits to Costs Analysis relating to Integration of ETI into SPP by comparing the potential production cost savings, for both gas price scenarios, to the capital costs of the transmission system improvements and ROA implementation.

### **1.2. Methodology**

In order to evaluate the benefits to ETI of integrating into SPP, SPP created a transmission model for 2012 representing ETI's current state of operation ("Status-Quo Case"). The Status Quo Case includes transmission projects currently budgeted in the ETI Transmission Construction Plan, transmission projects identified in the SPP Transmission Expansion Plan ("STEP") and certain Entergy proposed transmission projects for 2012, the costs of which are not included in the Benefit to Cost Analysis as these projects would be required independent of the ETI integration into SPP.

Next, SPP developed a case ("ETI/SPP Integration Case") that included all of the transmission projects in the Status-Quo Case plus the minimum set of transmission projects ("Reliability Projects") required to reliably serve the load in SPP based on SPP planning criteria ("SPP Criteria"). In addition to the Reliability Projects, SPP also included one project that was justified on an economic basis<sup>3</sup> and one project<sup>4</sup> to assure that sufficient Available Transmission Capability ("ATC") into ETI would be available to alleviate any market power concerns, both of which were classified as "Economic Projects". SPP included a new Weber-Richard 500 kV line in the ETI/SPP Integration Case as a base assumption because of uncertainty regarding the ETI ATC value, as raised by Entergy, if this line was not included. SPP also evaluated the ETI

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<sup>3</sup> The Mt. Olive to Hartburg 500 kV line series compensation at a cost of \$10 Million, which increased the thermal rating from 1050 MW to 1450 MW.

<sup>4</sup> A new Weber to Richard 500 kV line at a cost of \$229 Million.

## **SPP - ETI QPR Study Report**

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benefits under the assumption that the Weber-Richard 500 kV line was not required for ATC purposes.

Additionally, because of the potential for Cottonwood to exit the Eastern Interconnection ("EIC") and integrate directly into ERCOT, SPP also evaluated the ETI integration into SPP assuming that Cottonwood was not part of the EIC. In order to perform this analysis, SPP created a separate set of cases: a second Status-Quo Case with Cottonwood as part of ERCOT and a second ETI/SPP Integration Case with Cottonwood as part of ERCOT. For the second Status Quo Case, in addition to all of the transmission projects included under the Cottonwood in EIC Status Quo Case, the new Weber-Richard 500 kV line was also included as this line is required for reliability purposes if Cottonwood exits the EIC. For the second ETI/SPP Integration Case, the same transmission projects that were included in the Cottonwood in EIC ETI/SPP Integration Case were also included.

### **1.3. Benefit/Cost Analysis Results**

The Benefit/Cost Analysis compares the benefits to ETI associated with integration into SPP to the associated costs to ETI, as calculated in accordance with the study tracks defined under Section 2 of this Report, through calculation of an ETI Benefit-to-Cost Ratio ("BC Ratio"). The ETI BC Ratio is calculated, for all scenarios, as:  $([ETI \text{ production cost savings} / 0.18^{5}] / [\text{Reliability Project capital costs} + \text{Economic Project capital costs} + \text{ROA implementation capital costs}])$ . A BC Ratio of less than 1.0 indicates a net negative benefit and a BC Ratio of greater than 1.0 indicates a net positive benefit. A BC Ratio equal to 1.0 indicates a break-even situation. Based on this calculation, the ETI BC Ratios for each scenario are summarized in Table I.

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<sup>5</sup> Consistent with the Phase II Study, in order to directly compare the production cost savings to the cost of the Reliability Projects, Economic Projects and ROA implementation for Benefit/Cost Analysis purposes, the production cost savings is divided by the assumed annual carrying charge rate. SPP uses an 18% carrying charge rate assumption in its Balanced Portfolio analysis process as compared to the 16.67% assumption used in the Phase II Study.



## SPP - ETI QPR Study Report

For the Cottonwood in EIC assumption, SPP calculated a range of potential ETI 2012 annual net benefits reflecting the assumption regarding inclusion or exclusion of the new Weber-Richard 500 kV line. For the \$11.00 gas price assumption, ETI net benefits range from a low of \$97.8 Million if the line is included to a high of \$201.5 Million if the line is excluded. For the \$7.00 gas price assumption, ETI net benefits range from a low of (\$105.9) Million if the line is included to a high of \$57.9 Million if the line is excluded, thus indicating a potential net negative benefit to ETI under the \$7.00 gas price assuming the new Weber-Richard line is included. However, for all BC Ratio calculations, SPP used conservative assumptions by including the entire cost of the Economic Projects under the cost side of the equation. Based upon current cost allocation methodologies within Entergy and SPP regarding cost responsibility for Economic Projects, some of the Economic Project costs could be borne by parties other than ETI, which could result in increased net benefits to ETI under the Cottonwood in EIC assumption assuming inclusion of the Weber-Richard 500 kV line, which could ultimately equate to an ETI net positive benefit under the \$7.00 gas price assumption.

Under both the \$11.00 gas price and \$7.00 gas price assumption for the case where Cottonwood moves into ERCOT, 2012 annual net benefits to ETI remain positive, ranging from \$36 Million for the \$7.00 gas price assumption to \$61.4 Million for the \$11.00 gas price assumption.

**Table I – ETI Benefit/Cost Analysis Summary**

Scenario	Production Cost Savings \$MM	Equivalent Capital Cost \$MM	Reliability Project Costs \$MM	Economic Project Costs \$MM	ROA Costs \$MM	Net Benefit \$MM	BC Ratio
<b>1</b>	80.4	446.6	105	239	4.8	97.8	1.28
<b>2</b>	43.7	242.9	105	239	4.8	(105.9)	0.70
<b>1A</b>	57.8	321.3	105	10	4.8	201.5	2.68
<b>2A</b>	32.0	177.7	105	10	4.8	57.9	1.48
<b>3</b>	32.6	181.2	105	10	4.8	61.4	1.51
<b>4</b>	28.0	155.8	105	10	4.8	36.0	1.30

Scenario 1 - Cottonwood in EIC - \$11.00 Gas – With Weber-Richard 500 kV line

Scenario 2 - Cottonwood in EIC - \$7.00 Gas – With Weber-Richard 500 kV line

Scenario 1A - Cottonwood in EIC - \$11.00 Gas – Without Weber-Richard 500 kV line

Scenario 2A - Cottonwood in EIC - \$7.00 Gas – Without Weber-Richard 500 kV line

3 - Cottonwood out - \$11.00 Gas

4 - Cottonwood out - \$7.00 Gas

## **SPP - ETI QPR Study Report**

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Scenario 3 - Cottonwood in ERCOT - \$11.00 Gas

Scenario 4 - Cottonwood in ERCOT - \$7.00 Gas

The results presented above, which include costs of both Reliability Projects and Economic Projects, indicate, in all except the \$7.00 gas price assumption with Cottonwood in EIC, that net benefits to ETI are positive. Additionally, based upon historical average on-peak wholesale electricity prices for the October 2007 through October 2008 period<sup>6</sup> for SPP and ERCOT, the ETI integration into SPP is the better choice. During this period, SPP's average on-peak wholesale price was approximately \$39/MWh as compared to ERCOT's average on-peak wholesale price of approximately \$61/MWh, indicating increased opportunity for retail rate reductions in ETI through integration into SPP versus integration into ERCOT, assuming savings at the wholesale level are passed through to retail.

### **1.4. Transmission Project Costs**

The total cost associated with the Reliability Projects to meet SPP Criteria for the Cottonwood in EIC assumption is estimated at \$105 Million and the total cost of the Economic Projects is estimated at \$239 Million, under the assumption that a new Weber-Richard 500 kV line is required for ETI ATC purposes to alleviate potential market power concerns, resulting in a total transmission project cost of \$344 Million included as a cost in the Benefit/Cost Analysis. The total transmission project cost for the Cottonwood in EIC assumption is estimated at \$115 Million assuming that a new Weber-Richard 500 kV line is not needed to maintain adequate ETI ATC levels to alleviate market power concerns.

The total cost of Reliability Projects to meet SPP Criteria for the Cottonwood in ERCOT assumptions remains at \$105 Million. However, under the Cottonwood in ERCOT assumption, the new Weber-Richard 500 kV line would be required for reliability purposes in both the Status-Quo Case and the ETI/SPP Integration Case and therefore, the \$229 Million cost is not included as a cost in the Benefit/Cost Analysis as this project would be required irrespective of

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<sup>6</sup> See October 2008 Monthly State of the Market Report at:

<http://www.spp.org/publications/200810%20-%20SPP%20Monthly%20State%20of%20the%20Market%20Report%20-%20October%202008.pdf>

## SPP - ETI QPR Study Report

ETI integration into SPP. Therefore, the total cost of the Economic Projects for the Cottonwood in ERCOT assumptions is \$10 Million, resulting in a total transmission project cost of \$115 Million that is included as a cost in the Benefit/Cost Analysis. A breakdown of the Reliability Projects and Economic Projects, along with key transmission analysis assumptions, is shown in Table II. A detailed list of the Reliability Projects and Economic Projects is included in Section 4.

**Table II – Summary of Assumptions and Transmission Projects**  
**Transmission Projects**

Projects to meet SPP Criteria where costs are included in Benefit/Cost Analysis – ETI/SPP Integration Case.	<ul style="list-style-type: none"><li>• New Orange County Substation work (\$50 M)</li><li>• Local 138 kV and 69 kV upgrades(\$55 M)</li></ul>
Economic Projects where costs are offset by production cost savings and are included in the Benefit/Cost Analysis	<ul style="list-style-type: none"><li>• New Weber-Richard 500 kV line (\$229 M)<ul style="list-style-type: none"><li>◦ Only under Cottonwood in EIC assumption. Cost excluded under Cottonwood in ERCOT assumption.</li></ul></li><li>• Mt. Olive-Hartsburg Series Compensation (\$10 M)</li></ul>
Projects identified to alleviate potential market power concerns with ancillary economic benefits that are classified as Economic Projects	<ul style="list-style-type: none"><li>• New Weber-Richard 500 kV line (\$229 M) [Note: this is part of the Status-Quo Case for the Cottonwood in ERCOT analysis]</li></ul>
Budgeted and Planned Projects – Costs not included in Benefit/Cost Analysis – Both Status Quo Case and ETI/SPP Integration Case	<ul style="list-style-type: none"><li>• ETI Proposed Projects for 2012</li><li>• Local Reliability projects for Western Region</li><li>• Transmission Reliability projects from the 2007 approved STEP plan</li><li>• ETI Transmission Construction Plan</li></ul>

### 1.5. Market Power Study

As discussed in detail in Section 5, the results of the Market Power Study did not identify any market power issues associated with the ETI integration into SPP in 2012 when the Weber-Richard 500 kV line is included in the analysis, which provides for an ETI ATC of 1224 MW for

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the Cottonwood in EIC assumption and an ETI ATC of 1355 MW for the Cottonwood in ERCOT assumption. If the Weber-Richard 500 kV line is not included for the case where Cottonwood remains in EIC, the ETI ATC drops to 899 MW and some redispatch of the Entergy system would be required at times to maintain this 899 MW ATC level. As a result, SPP included a sensitivity analysis which excluded the Weber-Richard 500 kV line from the ETI/SPP Integrated Case (Cottonwood in EIC). Assuming the 899 MW of ETI ATC can be maintained without the Weber-Richard line, its removal will have little to no impact on the Market Power Study results. The Market Power Study included projects from the Status-Quo Cases and the identified Reliability Projects and Economic Projects as inputs into the analysis. Results of the Market Power Study indicated that no additional transmission projects were required.

### **1.6. Annual Production Cost Results - 2012**

The total reduction in ETI production costs resulting from the integration into SPP, assuming Cottonwood remains in EIC and an \$11.00 gas price, is estimated at \$80.4 Million. For the Cottonwood in ERCOT and \$11.00 gas assumptions, the total reduction in ETI production costs resulting from the integration into SPP is estimated at \$32.6 Million. The total reduction in ETI production costs resulting from the integration into SPP, assuming Cottonwood remains in EIC and a \$7.00 gas price, is estimated at \$43.7 Million. For the Cottonwood in ERCOT and \$7.00 gas assumptions, the total reduction in ETI production costs resulting from the integration into SPP is estimated at \$28.0 Million. A detailed discussion of the assumptions and methodology used to estimate the ETI production cost savings is included in Section 6.

### **1.7. Retail Open Access ("ROA") Implementation**

SPP analyzed the functions required to implement ROA in SPP for ETI. This process began with the creation of a list of functional areas to be evaluated for system changes and labor impacts. SPP worked with ERCOT staff to confirm its assumptions and address cost estimates. After identifying the necessary functions, impacts, system changes, and additional staffing requirements needed to manage the ROA function, SPP developed low and high range estimates for implementation. Based on the set of assumptions included in Section 7, the capital cost implementation range is estimated to be from \$2.3 Million to \$4.7 Million and on-

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going maintenance costs are estimated to be in the range of \$415,000 to \$1.2 Million. Only capital costs were included in the Benefit/Cost Analysis.

### **1.8. Summary**

The SPP-ETI QPR Study results indicate that SPP is a viable QPR option for ETI. In all scenarios except the ETI/SPP Integration Case, Cottonwood in EIC, \$7.00 gas price and inclusion of the new Weber-Richard 500 kV line scenario, net benefits to ETI resulting from ETI's Integration into SPP are positive. The negative net benefits for this scenario are driven by two assumptions: (1) that the new Weber-Richard line is needed to alleviate market power concerns; and (2) that the full cost of the Weber-Richard line is allocated to ETI, consistent with the allocation of costs associated with Reliability Projects. If 46% or more of the \$229 Million cost of the Weber-Richard line were allocated to parties other than ETI, the case would produce net positive benefits to ETI. Additionally, if it is determined that the new Weber-Richard line is not needed to alleviate market power concerns, this case would produce positive net benefits to ETI.

Details regarding the calculation of the costs and benefits included in the ETI net benefits calculations are provided within the body the SPP-ETI QPR Study Report.

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### **2. INTRODUCTION**

Per the October 24, 2007 Order of the Commission in this Docket, SPP has been requested by ETI to perform an analysis similar to the ERCOT Phase II EGSI-TX Integration Report prepared by ERCOT to provide a Benefit/Cost Analysis for the integration of ETI into SPP to enable retail competition in ETI.

The SPP-ETI QPR Study is broken down into four study tracks: (1) Reliability Assessment Study; (2) Market Power Study; (3) Economic Assessment Study; and (4) Retail Open Access ("ROA") Study. Each study track report provides an overview of the assessment and discusses the processes, tools, assumptions, details, and results achieved. The results of each study track were then used into the Benefit/Cost Analysis discussed in Section 8.

Throughout the process, SPP worked closely with ETI personnel and interested stakeholders to identify, evaluate, and review the input assumptions and results of each study track. SPP and ETI collaborated throughout the study process to verify the accuracy of the input data and review the analysis results to ensure the results were reasonable. This iterative process enabled SPP to complete the SPP-ETI QPR Study in a systematic and reasonable manner.

Stakeholder meetings were held in February, April, June, September, and December of 2008 in Austin, Texas in order to facilitate optimal stakeholder participation specifically for ERCOT staff and Commission Staff. Invitees included SPP Staff, SPP Stakeholders, Entergy, Entergy Stakeholders, ERCOT Staff, all parties to Docket 33687, and Commission Staff. Materials and minutes from all Stakeholder meetings are posted at [www.spp.org](http://www.spp.org).

### **3. REQUIREMENTS**

The primary requirement for the SPP-ETI QPR Study was to ensure that the integration of ETI into SPP could be accomplished in conformity with the SPP Criteria and NERC Transmission Planning ("TPL") standards in order to serve the combined SPP-ETI load reliably. Additionally, SPP was to propose appropriate market power mitigation measures, if necessary, to meet the requirements for achieving ROA in the ETI region, assess the potential savings of economic upgrades to serve the combined load, assess the net benefits or costs to support ROA in the

## **SPP – ETI QPR Study Report**

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ETI region and assess the implementation and ongoing costs necessary to support ROA in the ETI region.

In developing the results, SPP incorporated the following assumptions:

1. The SPP-ETI QPR Study used the most up-to-date information available with respect to input parameters such as the transmission topology, planned upgrades, and fuel prices, with the expectation that certain input information used will differ from the Phase II Study due to the availability of more up-to-date information. Additionally, input assumptions for the SPP-ETI QPR Study were consistent with the assumptions used in the ongoing Cost Benefit Task Force – Cost Benefit Study for Future Market Design.<sup>7</sup>
2. ETI, and any entering Retail Electric Providers, will participate in the SPP markets the same as all other Market Participants.
3. ETI would unbundle into separate affiliated entities for each of its electric market activities (wires, generation, and retail). For ease of reference, however, any reference to ETI can be considered a reference to ETI and its affiliates.
4. The ETI transmission facilities will be placed under the SPP Open Access Transmission Tariff ("OATT") and all existing long-term firm transmission system contracts will be honored.
5. The Existing ERCOT market rules related to ROA will be used as much as possible.

## **4. RELIABILITY ASSESSMENT STUDY**

### **4.1. Study Process**

The Reliability Assessment Study was performed to identify expected system conditions for the ETI and SPP systems for 2012 assuming ETI remained within Entergy ("Status-Quo Case") and

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<sup>7</sup> Further details regarding this Study can be found at:  
[http://www.spp.org/committee\\_detail.asp?commID=73](http://www.spp.org/committee_detail.asp?commID=73)

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to identify incremental transmission system upgrades required for the reliable integration of ETI into SPP ("ETI/SPP Integration Case"). Additionally, any upgrades required for mitigation of market power identified in the Market Power Study were to be identified separately. The SPP-ETI QPR Study process is consistent with the process used in the Phase II Study. Sensitivity cases were also evaluated assuming Cottonwood exits the EIC ("Status-Quo Case – Cottonwood in ERCOT", ETI/SPP Integration Case – Cottonwood in ERCOT"). The transmission system models identified in the Status-Quo, Status-Quo – Cottonwood in ERCOT, ETI/SPP Integration, and ETI/SPP Integration – Cottonwood in ERCOT Cases were used as inputs into the Economic Assessment Study that is discussed in Section 5 below.

SPP worked closely with Entergy transmission personnel to review and finalize the network topology used in the reliability studies. Entergy transmission personnel provided ETI's Transmission Construction Plan and assisted in the review of the reliability run results to ensure all known constraints were properly addressed.

### **4.2. Tools**

In developing the reliability study assessments, SPP used the same processes and tools currently used for its own reliability assessments and transmission planning process set forth in the SPP OATT.

The tools used by SPP for the Reliability Assessment analysis were Siemens's Power System Simulation for Engineers ("PSS/E") and Managing and Utilizing System Transmission ("MUST") software tools. As with the annual SPP Transmission Planning Process, the goal is to assess the reliable delivery of electricity to consumers and identify transmission projects that would be needed to meet the SPP Criteria and NERC TPL standards.

### **4.3. Power Flow Case Development and Key Assumptions**

The Status-Quo Case started with a 2012 Summer Peak case that was developed as a part of the SPP Model Development Working Group ("MDWG") 2007 series models. The study year 2012 was selected as the appropriate timeframe and agreed upon by SPP, ERCOT and ETI. The model details were verified and updated based upon collaboration with ETI personnel and input from other stakeholders.



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The following key assumptions were used to develop the Status-Quo Case:

1. The ETI system was represented as a separate balancing authority area for modeling purposes.
2. All transmission upgrade projects with in-service dates in the 2012 timeframe that are approved and budgeted by Entergy and SPP for construction were modeled. This included all related projects identified in Entergy's Transmission Construction Plan and the related projects identified in Appendix B of the 2007 SPP Transmission Expansion Plan ("STEP")<sup>8</sup>.
3. All transmission projects currently proposed by Entergy for 2012 system conditions were examined by SPP staff. These projects are intended to address potential thermal and voltage violations based on single contingency events ("N-1"). A detailed list of the budgeted and proposed Entergy transmission projects is included in Appendix 1. After reviewing these upgrades, only selected projects were deemed necessary to address reliability criteria in the ETI area and these projects were included in the analysis. In addition, the upgrade of the Apollo-Porter 138 kV line was added to the Status Quo Case as this project is needed to maintain the local reliability in the Western region of ETI.
4. The Cottonwood unit is connected in the ETI area with a net output of 703 MW. The Cottonwood output was determined to be the combination of a 600 MW firm transmission reservation to Louisiana Generating, LLC ("LAGen") and 103 MW provided to Entergy System Planning and Operations.

These projects and assumptions represent the final set of projects and assumptions that were included in the Status-Quo Case.

The ETI/SPP Integration Case includes all of the assumptions and transmission projects identified in the Status-Quo Case plus all incremental transmission upgrades required for reliable integration of ETI into SPP, plus two additional transmission upgrades classified by SPP as Economic Upgrades. The incremental transmission upgrades for reliable integration are

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<sup>8</sup> STEP plan can be found at SPP's website (<http://www.spp.org/section.asp?group=1155&pageID=27>)

## SPP – ETI QPR Study Report

required to address SPP Planning Criteria only. SPP Planning Criteria requires (N-1) contingency flows on all transmission lines of no greater than 100% of thermal rating and that (N-1) contingency bus voltages must be greater than or equal to 0.9 per unit. To determine what incremental upgrades were needed, SPP analyzed the reliability effects of a set of contingencies represented by breaker-to-breaker transmission outages for the combined SPP and ETI system. This analysis included monitoring of all transmission elements in the combined SPP and ETI system with voltage levels 69 kV and above to identify reliability issues. In addition, all the transmission contingencies (breaker-to-breaker) 230 kV and above for the rest of the Entergy system were analyzed. The resulting projects are referred to as Reliability Projects and the costs of these projects are included in the Benefit/Cost Analysis calculations. Table III shows a list of projects and high level cost estimates associated with these Reliability Projects.

**Table III –Reliability Project Cost Estimates**

Project Description	High Level Direct Cost Estimate
Construct New Orange County 230 KV Substation	\$50,000,000
Upgrade Jacinto-Splendora 138 KV	\$7,850,700
Upgrade Fish Creek-Longmire 138 KV	\$3,660,000
Upgrade Lewis Creek-Egypt 138 KV	\$2,311,900
Upgrade Jasper-Rayburn 138 KV	\$8,235,000
Upgrade Tubular-Dobbin 138 KV	\$11,352,100
Upgrade Fish Creek-Spring Branch 138 KV	\$5,856,000
Upgrade Transco-SaratogaTap_69kV	\$4,260,000
Upgrade Dome-Sour Lake 69 KV	\$1,020,000
Upgrade Dome-Transco 69 KV	\$3,420,000
Upgrade Elizabeth-Gallier 69 KV	\$1,620,000
Upgrade Apollo-Splendora 138 KV	\$1,647,000
Upgrade Cedar Hill-Conroe 138 KV	\$3,233,000
Upgrade Goodrich-Port Neches 69 KV	\$600,000
<b>Total</b>	<b>\$105,065,700</b>

Two additional projects were identified by SPP to be included in the ETI/SPP Integration Case: (1) Series compensation on the Mt. Olive to Hartburg line, increasing its thermal rating from 1050 MW to 1450 MW at an estimated cost of \$10 Million and (2) the addition of a new

## **SPP – ETI QPR Study Report**

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Weber-Richard 500 kV line at an estimated cost of \$229 Million. As further discussed in Section 4.7, SPP has included the new Weber-Richard 500 kV line to alleviate potential market power concerns in the case where Cottonwood generation remains in EIC as a base assumption and SPP has also included a sensitivity case where the new Weber-Richard line is not included. In addition to alleviating potential market power concerns through the increase of ATC to ETI, the Weber-Richard 500 kV line project produces ancillary economic benefits through the increase in ATC, reduction in congestion in the Cottonwood area, and a reduction in voltage-related Reliability Must Run ("RMR") requirements in the Sabine area, resulting in SPP classifying this project as economic. Based on observed congestion hours and redispatch costs from the production cost analysis prior to upgrading the Mt. Olive to Hartburg line, this project is appropriately classified as economic.

### **4.4. Study Results - Cottonwood in ERCOT**

SPP conducted a sensitivity analysis based on the likelihood that the Cottonwood units may exit the EIC and move to ERCOT as allowed by FERC's March 15, 2007 Order Granting Petition for Declaratory Order<sup>9</sup>, in which FERC granted Cottonwood's petition for a declaratory order disclaiming jurisdiction over the proposed transmission line to ERCOT. Kelson Transmission Company, LLC's application for a Certificate for Convenience and Necessity is the subject of PUCT Docket No. 34611.<sup>10</sup> In this analysis, SPP followed the same approach as described in Section 4.3. The possible removal of Cottonwood from the EIC necessitated the creation of a Status-Quo Case – Cottonwood in ERCOT and an ETI/SPP Integration Case – Cottonwood in ERCOT. For the Status-Quo Case – Cottonwood in ERCOT, the new Weber-Richard 500 kV line is required for reliability purposes and, as such, the \$229 Million cost is not included as a cost in the Benefit/Cost Analysis as this cost would be incurred irrespective of the ETI integration into SPP. For the ETI/SPP Integration Case – Cottonwood in ERCOT, the same set of remaining Reliability Projects and Economic Projects required in the ETI/SPP Integration Case (Cottonwood in EIC) is also required.

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<sup>9</sup> 118 FERC ¶ 61,198 – Docket EL06-87-000.

<sup>10</sup> A hearing has been held, but parties have not yet filed briefs.

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### **4.5. Stability Analysis**

PowerTech Labs, Inc. ("PowerTech") was selected to perform an analysis of the dynamic performance of the system in the seconds following a fault or other disturbance. This type of analysis is required to ensure that the connections between the SPP and ETI regions are sufficient such that the system will remain stable following an instantaneous disturbance (such as the loss of additional generation or transmission outages).

These dynamic analyses require modeling of the topology of the grid, the dynamic response of individual generators and of aggregated electrical loads (motors, lights, etc.). Due to the complexity of this analysis, PowerTech will not complete its final analysis until the first quarter of 2009.

Based on preliminary study results, no angular stability problems were identified. However, as part of the voltage security analysis, generator-to-generator transfers were simulated along with generator-to-load transfers. Based on these preliminary results, it can be concluded that the Lewis Creek Units are critical to the ETI region and are required to be must-run at minimum output for all hours to enhance the transfer capability into the ETI region and maintain voltage security. The preliminary results also indicate that one of the two large Sabine units connected to the ETI 230 kV system is also needed in the summer months to support voltage in the Eastern part of the ETI system.

A copy of the Preliminary PowerTech report is attached as Appendix 6. Upon completion of the PowerTech final analysis, SPP will submit an update to the PUCT indicating whether any updates or revisions to the SPP-ETI QPR Study are necessary.

### **4.6. Transfer Capability Assessment into ETI**

SPP also determined the transfer capability into ETI for the ETI/SPP Integration Case and the ETI/SPP Integration Case – Cottonwood in ERCOT for use in the Market Power Study using the same methodology SPP uses for calculating transfer capability on the SPP system. For this analysis, SPP simulated an import into ETI from the outside (50% SPP and 50% non-ETI Entergy). Available Transmission Capability or FCITC ("First Contingency Incremental Transfer Capability") was originally calculated at 899 MW for the ETI/SPP Integration Case (Cottonwood

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in EIC), assuming the Weber-Richard 500 kV line was not added. Discussion between SPP and Entergy staff regarding the certainty of the 899 MW FCITC value<sup>11</sup> prompted SPP to include the new Weber-Richard 500 kV line as a base assumption to ensure that a firm FCITC value could be used in the Market Power Analysis<sup>12</sup>. Table IV shows a summary of the components used to arrive at the ATC values, with and without the Weber-Richard 500 kV line.

**Table IV – Summary of ATC Calculations**

Case	TTC <sup>13</sup> (MW)	Firm Capacity <sup>14</sup> (MW)	Incremental ATC <sup>15</sup> (MW)	Net ATC <sup>16</sup> (MW)
ETI/SPP Integration Case – without Weber-Richard 500 kV line	1738	839	0	899
ETI/SPP Integration Case with Weber- Richard 500 kV line	1738	839	325	1,224
ETI/SPP Integration Case – with Weber- Richard 500 kV line	1838	839	356	1,355

### 4.7. Summary

The Reliability Assessment Study was performed based on the assumption that ETI will become a full member of SPP and place its transmission facilities under the SPP OATT (Open Access Transmission Tariff). This assessment was consistent with the type of assessment that SPP Staff would perform to add any other new member (e.g. Nebraska Entities).

<sup>11</sup> Redispatch within the Entergy system outside of ETI would be required to maintain the 899 MW FCITC value, which could not be guaranteed.

<sup>12</sup> Assuming a zero ATC value in the Market Power Analysis would have created market power concerns, as compared to relying upon the 899 MW FCITC value.

<sup>13</sup> Total Transfer Capability excluding Reliability Projects

<sup>14</sup> Reserved Long-Term Firm Transmission Service

<sup>15</sup> Additional ATC from Reliability and Economic Projects

<sup>16</sup> TTC – Firm Capacity + Incremental ATC

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The Reliability Assessment Study performed by SPP Staff indicates that approximately \$105 Million of Reliability Projects in the ETI area are needed to comply with the SPP Criteria. This investment does not vary as a result of Cottonwood moving into ERCOT or under the base Tenaska-Frontier firm contract assumption. If Tenaska-Frontier's firm contract beyond 2010 is honored due to rollover rights, the cost of the Reliability Projects drops to approximately \$42 Million if Cottonwood remains in EIC or to approximately \$34 Million if Cottonwood moves to ERCOT.

In addition to the Reliability Projects, SPP has identified two additional transmission projects applicable to the ETI/SPP Integration Cases (Cottonwood in EIC) for inclusion in the Benefit/Cost Analysis under the base assumption: (1) the upgrade of the Mt. Olive to Hartburg 500 kV line, which is justified based on economics, and (2) the addition a new Weber to Richard 500 kV line, which is needed to address potential market power concerns but also provides ancillary economic benefits. Both of these projects have been classified as Economic Projects for the Cottonwood in EIC scenarios. Additionally, SPP also evaluated a sensitivity to the base assumption by not including the Weber to Richard 500 kV line.

For both the Status Quo Cases and the ETI/SPP Integration Cases for Cottonwood in ERCOT, the new Weber to Richard 500 kV line is needed for reliability purposes and, as such, its cost is not included in the Benefit/Cost Analysis as this line would be needed irrespective of the ETI integration into SPP.

Based on preliminary stability study analysis which only included the Reliability Projects, the addition of the Reliability Projects will have minimal to no impact on the RMR requirements in the Western Region (Lewis Creek units) but may reduce the voltage-related RMR requirements in the Sabine area. The addition of the Economic Projects is not expected to have any impact on RMR requirements in the Western Region but is expected to further reduce voltage-related RMR requirements in the Sabine area, subject to verification through further stability analyses.

Further, SPP Staff has concluded that as a result of the Reliability Projects and Economic Projects identified in this process, the Incremental Available Transfer Capability will be increased by approximately 325 MW in the ETI/SPP Integration Case – Cottonwood in EIC and increased by approximately 356 MW in the ETI/SPP Integration Case – Cottonwood in ERCOT.

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The results of this study track were used as direct inputs into the Market Power Study and Economic Assessment Study, assuring close coordination between study tracks.

### **5. MARKET POWER STUDY**

Potomac Economics was engaged to perform an evaluation of market power related to ETI joining the SPP and to identify mitigation options that would address any market power issues found. This section provides a summary of Potomac's findings. A complete copy of the report is included as Appendix 3.

The study was designed to address requirements of the Public Utility Regulatory Act ("PURA") as modified by Texas Senate Bill 7.<sup>17</sup> There are two relevant requirements in this case; first, PURA establishes a maximum market share threshold of 20 percent for any area to be defined as a Qualified Power Region ("QPR"),<sup>18</sup> which is satisfied if no suppliers have a market share greater than 20 percent. In this market power analysis, an entity and its affiliates are considered a single supplier or owner. Potomac Economics analysis confirms that this test is satisfied for the combined SPP/ETI Area.<sup>19</sup>

Second, PURA requires that the analysis include an assessment of import capability for QPRs that are not entirely within Texas: In determining whether a power region not entirely within the state meets the requirements of this section, the commission is required to consider the extent to which the available transmission facilities limit the delivery of electricity from generators located outside the state to areas of the power region within the state.<sup>20</sup>

However, PURA and subsequent PUCT precedent do not provide specific guidance or requirements for the analysis necessary to satisfy this section. Hence, Potomac Economics interpreted this section as a requirement to evaluate local market power in transmission-

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<sup>17</sup> Public Utility Regulatory Act, TEX. UTIL. CODE ANN. §39 (PURA)

<sup>18</sup> PURA §39.152(a)(3)

<sup>19</sup> Throughout this report the term "ETI Area" is used to describe the area of Texas currently served by Entergy Texas, Inc. (ETI).

<sup>20</sup> PURA §39.152(b)

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constrained areas in the portions of the ETI service area ("the ETI Area"). Because transmission constraints can isolate areas with a relatively small number of potential suppliers, it is the local market power analysis that is most likely to generate the need for some form of market power mitigation.

Potomac Economics used a number of market power indicators in its analysis, which included, several measures of how concentrated the ownership of supply is in the constrained areas, as well as a determination of whether the largest supplier's resources are needed to meet the demand in the area (i.e., whether the supplier is "pivotal"). Finally, because there are significant transmission constraints that bind into and within the ETI Area, Potomac Economics defined two geographic markets for these analyses:

- The entire ETI Area; and
- The Western Subregion within the ETI Area (which is defined as the load and resources west of the Jacinto and Cypress substations).

The analysis of the local market power issues in the ETI Area indicate limited potential competitive concerns in the ETI Area or Western Sub-region. The market concentration results indicate that the market in the ETI Area will support workable competition, although the concentrations are in the highly-concentrated range. Requiring ETI to sell a portion of its capacity in the ETI Area via capacity auctions as described in PURA and PUCT rules would substantially reduce the market concentration in the area.

With regard to the pivotal supplier analysis, most scenarios show that ETI will not be pivotal (including all analyses of the Western Sub-region). In two cases where Potomac Economics found ETI to be pivotal, they also find a number of factors that significantly ease their competitive concerns. First, ETI has a number of Reliability-Must-Run (RMR) obligations in the area that compel its generation to run to support the reliability of the system which would prevent ETI from threatening to withhold supply.

Second, Potomac Economics addresses the concern in this study of whether ETI could raise prices to retail customers in the region. In scenarios that show ETI is pivotal, it is pivotal over a relatively small portion of the load. Hence, ETI would have to withhold most of its resources to raise prices to a small portion of load. Further, the magnitude of that price increase would be



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limited by ETI's obligations as a provider-of-last-resort ("POLR"<sup>21</sup>). Although the specifics of the POLR pricing provisions that would apply to ETI are unknown, it is highly unlikely that they would allow a price increase large enough to make withholding profitable in this case.

Third, in the cases where ETI is pivotal, it is only in a small number of hours. The pivotal supplier analysis uses the load forecast for the annual peak of the year. In general, the load declines sharply from the annual peak hour to other hours, which limits the extent to which ETI is pivotal. In other words, ETI's resources would only be needed to serve a portion of the load when load levels are close to the annual peak.

Finally, as a Regional Transmission Organization ("RTO"), SPP will have a market monitor and market power mitigation measures necessary to address concerns in the region. Given the vast quantities of withholding that would be necessary to exploit ETI's pivotal supplier status; its conduct would not go unnoticed by the market monitor or the Federal Energy Regulatory Commission ("FERC").

Hence, Potomac Economics found that market power mitigation measures are not necessary to address competitive issues in this case. However, if policymakers desire additional assurance that the market will perform competitively, implementing a 15 percent capacity auction as called for in PURA would lower concentration levels and reduce the extent to which ETI is pivotal. Unless additional transmission capacity can be built that produce net benefits to the region, capacity auctions are the most cost-effective form of market power mitigation.

## **6. ECONOMIC ASSESSMENT STUDY**

### **6.1. Purpose**

Ventyx Energy, LLC ("Ventyx") performed the Economic Assessment Study for this Report under the direct supervision of SPP, as it has developed its own databases containing detailed industry data that can be used independently for custom analyses or incorporated into studies using the Ventyx planning software. The quantitative economic benefit analysis combined the Ventyx

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<sup>21</sup> This analysis assumes that there would be an ETI affiliate responsible for retail operations which would operate as a POLR.

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MarketVision database and SPP-specific data, along with customized modeling parameters developed during and for this study, as inputs. SPP worked closely with ETI to verify the input data assumptions and review results. Additionally, some inputs were defined based on the Cost Benefit Task Force – Cost Benefit Study for Future Market Design. This section provides the input data assumptions used in developing the assessment results. Consistent with the reliability assessment, the economic assessment encompasses the time period of 2012.

### **6.2. Tools**

Ventyx used its PROMOD IV® Full Transmission Nodal Market simulation software to evaluate ETI as a member of the SPP Market. The tools used for this study are similar to the tools ERCOT used in that it produces an hourly chronological module that simulates the generation, load and transmission constraints of a system. The module performs a security constrained commitment and dispatch every hour of the study period to meet the load. Outputs from the module are used to calculate the cost metrics for SPP and ETI.

### **6.3. Study Cases**

Consistent with the Reliability Assessment Study, SPP created four base assumption study cases and one sensitivity study case for PROMOD IV® analysis, for both the \$11.00 gas price assumption and the \$7.00 gas price assumption:

- **Status-Quo Case (Cottonwood in EIC)** – Includes all transmission projects described under Section 4 except the Reliability Projects and Economic Projects. This case represents ETI as part of the Entergy system.
- **ETI/SPP Integration Case (Cottonwood in EIC)** – includes all transmission projects described under Section 4, including the Reliability Projects and Economic Projects. This case represents ETI as part of the SPP system.
- **ETI/SPP Integration Case (Cottonwood in EIC) Sensitivity** – includes all transmission projects described under Section 4, including the Reliability Projects and Mt. Olive to Hartburg upgrade but excluding the new Weber to Richard 500 kV line. This case represents ETI as part of the SPP system.

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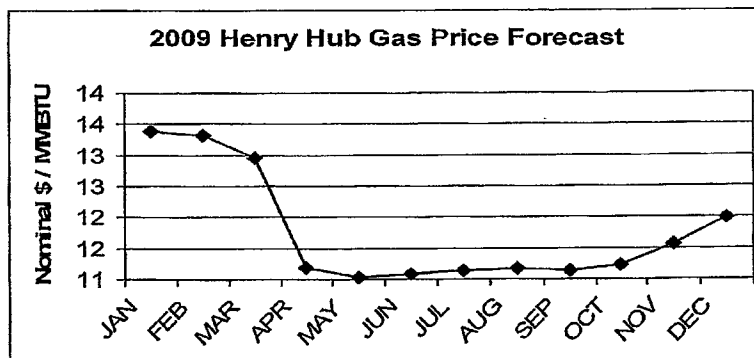
- **Status-Quo Case – Cottonwood in ERCOT** – includes transmission projects described under Section 4, including the Weber-Richard 500 kV line but excluding the Reliability Projects and the Mt. Olive - Hartburg upgrade. This case represents ETI as part of the Entergy system and assumes that Cottonwood generation is not connected to EIC.
- **ETI/SPP Integration Case - Cottonwood in ERCOT** – includes all transmission projects described under Section 4, including the Reliability Projects and Economic Projects. This case represents ETI as part of the Entergy system and assumes that Cottonwood generation is not connected to EIC.

### 6.4. Key Input Assumptions

Following is a summary of key PROMOD IV® input data assumptions.

**1. Gas Price Forecasts** - The annual gas price forecast for 2012 was developed by Ventyx and is consistent with the gas price assumptions used in the SPP Cost Benefit Study for Future Markets. The annual average gas price was \$11.00/MMBTU and the monthly prices were developed following the pattern shown in Table V. The monthly gas prices shown below were scaled to the annual assumed gas forecast of \$11.00/MMBTU. A sensitivity was also performed assuming an annual average gas price of \$7.00/MMBTU with the monthly profiles shown in Table V.

**Table V - Monthly Gas Price Profile**



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**2. Oil Price Forecast** - Fuel price forecasts for 2012 for Heavy Oil (#6) and Light Oil (#2) were developed by Ventyx and are consistent with the oil price assumptions used in the SPP Cost Benefit Study for Future Markets. The annual average price for Heavy Oil was \$10.00/MMBTU and the annual average price for Light Oil was \$16.00/MMBTU. The monthly oil price forecast profile was developed using the monthly gas price pattern shown in Table V.

**3. ETI Peak Demand and Energy** – ETI peak demand for 2012 was 4696 MW and ETI projected native load Energy consumption was 25,522,776 MWhs. These values include Cooperative load within the ETI Area.<sup>22</sup>

**4. Hurdle Rates** – Unit Commitment hurdle rates between SPP and Entergy between SPP and all other markets were \$25.00/MWh. The hurdle rate for dispatching purposes between SPP and Entergy was \$14.00/MWh. All other hurdle rates for dispatching purposes were set at \$7.00/MWh.

**5. Transmission System Topology** – The SPP/Entergy transmission system topology for the Status-Quo Case and the ETI/SPP Integration Case is defined in Section 4. The set of monitored lines and contingency lists specified in PROMOD IV® for the purposes of Security Constrained Unit Commitment ("SCUC") and Security Constrained Economic Dispatch ("SCED") was agreed upon by SPP and ETI.

**6. Market Structure** – In all cases, the assumed market structure for SPP and Entergy is summarized as follows:

- Centralized Day-Ahead Unit Commitment;
- Centralized Security Constrained Economic Dispatch;
- Single Balancing Authority Area with Ancillary Service requirements determined at the Balancing Authority Area level;
- Locational Marginal Prices (LMPs) calculated at all generator and load nodes.

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<sup>22</sup> Applicable shares of Plum Point and Independence generation resources were allocated to ETI in the PROMOD IV analysis to offset the Cooperative load in both the Status Quo Cases and ETI/SPP Integration Cases.

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**7. RMR Requirements – Status Quo Cases** – In order to address the voltage-related RMR requirements in the Lewis Creek and Sabine areas, both Lewis Creek units and all five Sabine units were modeled as must-run for reliability for each hour at the following minimum output levels:

Unit	Minimum Output - MW
Lewis Creek 1	62.5
Lewis Creek 2	62.5
Sabine 1	60
Sabine 2	60
Sabine 3	80
Sabine 4	175
Sabine 5	175

These must-run assumptions are consistent with historical Lewis Creek and Sabine operations.

**8. RMR Requirements – Integration Cases** – Consistent with preliminary stability analysis results<sup>23</sup> as provided in Appendix 6 as reviewed and agreed to by both SPP and ETI, voltage-related RMR requirements in the Sabine area can be reduced. These preliminary results indicate that only Sabine 5 would be required to be must-run, but both Lewis Creek units would continue to be required as must-run for reliability. However, to be conservative, SPP assumed that Sabine 5 would continue to be must-run and that Sabine 4 would be required to be must-run in the June through December time frame, with must-run modeling in the October through December timeframe being required to account for planned and forced outages associated with Sabine 5 and Cottonwood.

### 6.5. Production Cost Results

An Adjusted Production Cost ("APC") metric was used to measure ETI production cost savings in the analysis. This APC metric is consistent with the APC metric used in the SPP Cost Benefit Study for Future Markets and is defined as follows:

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<sup>23</sup> Note that the stability analysis only included the addition of the Reliability Projects and is thus conservative with respect to reduction in Sabine RMR requirements. Inclusion of the Economic Projects in the stability analysis may further reduce the Sabine RMR requirements.

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$$\begin{aligned} \text{ETI Adjusted Production Costs} &= \text{ETI Variable Generation Cost}^{24} \\ &+ \text{Purchases at ETI Load Hub Price} - \text{Sales at ETI Generation Hub Price.} \end{aligned}$$

The ETI Load Hub Price is equal to the load weighted average Locational Marginal Price ("LMP") of all ETI load buses and is calculated directly by PROMOD IV®. The ETI Generation Hub Price is equal to the generation weighted average LMP of all ETI generator buses and is calculated directly by PROMOD IV®. The APC is calculated on an hourly basis and then summed up by month and year. Table VI shows the projected annual 2012 ETI APC for each scenario studied.

**Table VI – Summary of ETI APC**

Scenario	Gen - Gwhr	Gen - \$MM	Gen Cost - \$/Mwhr	Pur - Gwhr	Pur Cost - \$MM	Pur Cost - \$/Mwhr	Sales - Gwhr	Sales Rev - \$MM	Sales Rev - \$/Mwh	APC - \$MM
1	21,192.8	2,114.276	99.76	4,367.1	341.583	78.22	-590.5	-74.317	125.85	2,381.542
2	18,379.8	1,765.241	96.04	6,661.9	545.103	81.82	-72.3	-9.196	127.22	2,301.147
3	20,105.2	1,920.946	95.54	4,997.2	419.402	83.93	-133.1	-16.648	125.10	2,323.700
4	17,465.4	1,811.222	103.70	7,570.2	638.708	84.37	-66.3	-9.340	140.95	2,440.590
5	16,186.8	1,607.328	99.30	8,785.7	801.118	91.18	-3.2	-0.480	151.15	2,407.965
6	22,129.5	1,412.030	63.81	3,710.9	193.546	52.16	-871.0	-65.172	74.82	1,540.404
7	18,436.5	1,147.623	62.25	6,614.4	355.837	53.80	-81.5	-6.775	83.10	1,496.685
8	19,897.4	1,231.822	61.91	5,168.5	284.439	55.03	-96.5	-7.841	81.25	1,508.420
9	18,500.5	1,228.345	66.40	6,539.3	366.827	56.10	-70.4	-6.039	85.79	1,589.133
10	16,623.3	1,073.696	64.59	8,346.9	487.484	58.40	-0.8	-0.083	100.40	1,561.097

### Scenario Definitions:

1. Status-Quo Case – Cottonwood in EIC - \$11.00 Gas
2. ETI/SPP Integration Case – Cottonwood in EIC with Weber-Richard Line- \$11.00 Gas
3. ETI/SPP Integration Case – Cottonwood in EIC without Weber-Richard Line- \$11.00 Gas
4. Status-Quo Case – Cottonwood in ERCOT - \$11.00 Gas
5. ETI/SPP Integration Case – Cottonwood in ERCOT - \$11.00 Gas
6. Status-Quo Case – Cottonwood in EIC - \$7.00 Gas
7. ETI/SPP Integration Case – Cottonwood in EIC – with Weber-Richard Line - \$7.00 Gas
8. ETI/SPP Integration Case – Cottonwood in EIC – without Weber-Richard Line - \$7.00 Gas
9. Status-Quo Case – Cottonwood in ERCOT - \$7.00 Gas
10. ETI/SPP Integration Case – Cottonwood in ERCOT - \$7.00 Gas

Based on the APC results described above, SPP calculated the expected reduction in APC between the Status-Quo Cases and the Integration Cases. The ETI production cost benefit results are summarized in Table VII.

<sup>24</sup> Does not include Start-Up Costs.

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**Table VII – Summary of ETI APC Benefits**

Scenario	Gen - GWh	Gen - \$MM	Gen Cost - \$/MWh	Pur - GWh	Pur Cost - \$MM	Pur Cost - \$/MWh	Sales - GWh	Sales Rev - \$MM	Sales Rev - \$/MWh	Benefits \$MM
1	2,813.0	349.035	124.08	-2,294.8	-203.520	88.69	-518.3	-65.120	125.65	80.395
2	1,087.6	193.330	177.76	-630.1	-77.818	123.50	-457.5	-57.669	126.06	57.842
3	1,278.6	203.894	159.47	-1,215.5	-162.410	133.61	-63.1	-8.859	140.44	32.625
4	3,693.0	264.407	71.60	-2,903.5	-162.291	55.90	-789.5	-58.397	73.97	43.719
5	2,232.1	180.208	80.74	-1,457.5	-90.893	62.36	-774.5	-57.331	74.02	31.985
6	1,877.2	154.648	82.38	-1,807.6	-120.656	66.75	-69.6	-5.955	85.61	28.036

### Scenario Definitions:

1. APC of Status-Quo Case – Cottonwood in EIC - \$11.00 Gas less APC of ETI/SPP Integration Case – Cottonwood in EIC – **with** Weber-Richard Line - \$11.00 Gas
2. APC of Status-Quo Case – Cottonwood in EIC - \$11.00 Gas less APC of ETI/SPP Integration Case – Cottonwood in EIC – **without** Weber-Richard Line - \$11.00 Gas
3. APC of Status-Quo Case – Cottonwood in ERCOT - \$11.00 Gas less APC of ETI/SPP Integration Case – Cottonwood in ERCOT - \$11.00 Gas
4. APC of Status-Quo Case – Cottonwood in EIC - \$7.00 Gas less APC of ETI/SPP Integration Case – Cottonwood in EIC – **with** Weber-Richard Line - \$7.00 Gas
5. APC of Status-Quo Case – Cottonwood in EIC - \$7.00 Gas less APC of ETI/SPP Integration Case – Cottonwood in EIC – **without** Weber-Richard Line - \$7.00 Gas
6. APC of Status-Quo Case – Cottonwood in ERCOT - \$7.00 Gas less APC of ETI/SPP Integration Case – Cottonwood in ERCOT - \$7.00 Gas

Under Scenario 1, ETI internal generation was reduced by 2,813.0 GWh and was replaced by more economic ETI purchases<sup>25</sup> (2,294.8 GWh) and a reduction in ETI sales<sup>26</sup> (518.3 GWh). The APC ETI benefits of \$80.395 Million are then equal to the reduction in ETI generation cost (\$349.035 Million) less the cost of purchases (\$203.52 Million) less the loss in sales revenue (\$65.12 Million).

Under Scenario 2, ETI internal generation was reduced by 1,087.6 GWh and was replaced by more economic ETI purchases (630.1 GWh) and a reduction in ETI sales (457.5 GWh). The ETI benefits of \$57.842 Million are then equal to the reduction in ETI generation cost (\$193.330 Million) less the cost of purchases (\$77.818 Million) less the loss in sales revenue (\$57.669 Million).

<sup>25</sup> Purchases volume is a combination of purchases from internal SPP market and purchases external to SPP.

<sup>26</sup> Sales volume is a combination of ETI internal sales to SPP and sales external to SPP

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Under Scenario 3, ETI internal generation was reduced by 1,278.6 GWh and was replaced by more economic ETI purchases (1,215.5 GWh) and a reduction in ETI sales (63.1 GWh). The ETI benefits of \$32.625 Million are then equal to the reduction in ETI generation cost (\$203.894 Million) less the cost of purchases (\$162.410 Million) less the loss in sales revenue (\$8.859 Million).

Under Scenario 4, ETI internal generation was reduced by 3,693.0 GWh and was replaced by more economic ETI purchases (2,903.5 GWh) and a reduction in ETI sales (789.5 GWh). The ETI benefits of \$43.719 Million are then equal to the reduction in ETI generation cost (\$264.407 Million) less the cost of purchases (\$162.291 Million) less the loss in sales revenue (\$58.397 Million).

Under Scenario 5, ETI internal generation was reduced by 2,232.1 GWh and was replaced by more economic ETI purchases (1,457.5 GWh) and a reduction in ETI sales (774.5 GWh). The ETI benefits of \$31.985 Million are then equal to the reduction in ETI generation cost (\$180.208 Million) less the cost of purchases (\$90.893 Million) less the loss in sales revenue (\$57.331 Million).

Under Scenario 6, ETI internal generation was reduced by 1,877.2 GWh and was replaced by more economic ETI purchases (1,807.6 GWh) and a reduction in ETI sales (69.6 GWh). The ETI benefits of \$28.036 Million are then equal to the reduction in ETI generation cost (\$154.648 Million) less the cost of purchases (\$120.656 Million) less the loss in sales revenue (\$5.955 Million).

### **6.6. Summary**

For the Cottonwood in EIC assumption with the Weber-Richard 500 kV line and \$11.00 gas price assumption, the total reduction in ETI APC resulting from the integration of ETI into SPP is estimated at \$80.4 Million assuming:

- All Sabine units are must-run at minimum output in the Status Quo Case;
- Only Sabine 4 is must-run in Jun-Dec timeframe and Sabine 5 is must-run in Jan-Dec timeframe in ETI/SPP Integrated Case and all other Sabine units are modeled as economic;



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- All transmission upgrade projects with in-service dates in the 2012 timeframe that were approved and budgeted by Entergy and SPP for construction and certain Entergy proposed transmission upgrade projects were included in both the Status-Quo Case and the ETI/SPP Integration Case;
- All Reliability Projects were included in the ETI/SPP Integration Case; and
- Both the Mt. Olive to Hartburg upgrade and the new Weber to Richard 500 kV line were included in the ETI/SPP Integration Case.

For the Cottonwood in EIC assumption without the Weber-Richard line and \$11.00 gas price assumption, the total reduction in ETI APC resulting from the integration of ETI into SPP is estimated at \$57.8 Million under the same assumptions as the Cottonwood in EIC with the Weber-Richard 500 kV line and \$11.00 gas scenario except that the Weber-Richard line was not included.

For the Cottonwood in ERCOT assumption and \$11.00 gas price assumption, the total reduction in ETI APC resulting from the integration of ETI into SPP is estimated at \$32.6 Million assuming:

- All Sabine units are must-run at minimum output in the Status Quo Case;
- Only Sabine 4 is must-run in Jun-Dec timeframe and Sabine 5 is must-run in Jan-Dec timeframe in ETI/SPP Integrated Case and all other Sabine units are modeled as economic;
- All transmission upgrade projects with in-service dates in the 2012 timeframe that were approved and budgeted by Entergy and SPP for construction and certain Entergy proposed transmission upgrade projects were included in both the Status-Quo Case and the ETI/SPP Integration Case;
- All Reliability Projects were included in the ETI/SPP Integration Case;
- The new Weber to Richard 500 kV line was included in the Status Quo Case; and
- Both the Mt. Olive to Hartburg upgrade and the new Weber to Richard 500 kV line were included in the ETI/SPP Integration Case.

For the Cottonwood in EIC with the Weber-Richard line assumption and \$7.00 gas price assumption, the total reduction in ETI APC resulting from the integration of ETI into SPP is estimated at \$43.7 Million under the same assumptions as the Cottonwood in EIC, \$11.00 gas scenario.

For the Cottonwood in EIC assumption without the Weber-Richard line and \$7.00 gas price assumption, the total reduction in ETI APC resulting from the integration of ETI into SPP is

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estimated at \$32.0 Million under the same assumptions as the Cottonwood in EIC with the Weber-Richard 500 kV line and \$7.00 gas scenario except that the Weber-Richard line was not included.

For the Cottonwood in ERCOT assumption and \$7.00 gas price assumption, the total reduction in ETI APC resulting from the integration of ETI into SPP is estimated at \$28.0 Million under the same assumptions as the Cottonwood in ERCOT, \$11.00 gas scenario.

### **7. RETAIL OPEN ACCESS STUDY**

SPP was tasked with developing a high-level cost estimate for implementing Retail Open Access ("ROA") in SPP with the integration of ETI. This section discusses the processes and assumptions utilized in developing the cost estimates and implementation objectives.

#### **7.1. Process**

SPP reviewed its current processes and procedures to determine what processes and systems would need to be changed in order to integrate ETI into SPP and enable ROA for ETI. SPP worked with internal staff, ERCOT Staff, and stakeholders to identify and compare processes currently utilized by ERCOT to support ROA, and to determine which existing processes could be leveraged to implement ROA for ETI as part of SPP and which processes would be need to be revised or created to implement ROA for ETI in SPP. To accomplish this, SPP representatives worked with ERCOT Staff to develop a list of functional areas to be analyzed. Assumptions and changes were communicated to the stakeholders through stakeholder meetings. A comparison summary table is included in Appendix 7.

##### **7.1.1 Customer Registration**

Should ETI join SPP, ERCOT would continue to manage the customer registration process in the same manner it does today, which includes loading Electric Service Identifiers ("ESI IDs") for the ETI area into the registration database, assisting with the retail market testing, qualifying Transmission Distribution Service Providers ("TDSPs") and Retail Energy Providers ("REPs") for retail transactions, managing the dispute process for data in the retail customer registration system, and validating meter data. SPP would use its existing processes and procedures to register each REP (including ETI's affiliated REP) as a Transmission Customer ("TC") within SPP.

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As part of the initial implementation, ERCOT would work with ETI to obtain registration data and load that data into their systems. ERCOT would coordinate with ETI, SPP and stakeholders to create load profiles for the ETI area. This process of setting the ETI area up in ERCOT's customer registration system is very similar whether ETI becomes part of ERCOT or SPP. Additionally, ERCOT would regularly provide an ESI ID Service History and Usage Extract (aka "SCR727" extract) for ETI to validate the information in ERCOT's system. Once the initial SCR727 data is loaded and load profiles are established, ETI will receive daily SCR727 extracts.

### **7.1.2 Transmission Access and Scheduling**

In the ERCOT region, all entities serving load (such as REPs) or providing power must be represented by Qualified Scheduling Entities ("QSEs") for scheduling and wholesale settlement purposes. These QSEs must submit energy and load schedules and may also submit ancillary service bids. These QSEs settle with ERCOT and pass various ERCOT charges on to their clients through bilateral agreements to which ERCOT is not a party. REPs operating in the ERCOT region do not have to request transmission service as all load-serving entities are allowed access to the transmission system.

As participants in the SPP region, REPs would be considered TCs. Each TC with load must request transmission service from SPP, designating resources to serve its load. SPP studies each transmission service request and either approves the request or identifies transmission upgrades needed to support the request. Once an entity has transmission access as a TC, it must also register as a Market Participant with SPP in order to schedule and settle with SPP. If a REP does not wish to interact directly with SPP for scheduling and settlement purposes, it may designate an agent to act on its behalf (like a QSE in ERCOT<sup>27</sup>). Registering with SPP allows an entity to do business with SPP on the Open Access Same Time Information System ("OASIS") and participate in SPP markets.

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<sup>27</sup> A REP operating in the SPP area would not need a QSE in order to interact with ERCOT for customer registration purposes. QSEs are involved in ERCOT scheduling and whole settlement functions only – processes which are handled differently in SPP.

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### **7.1.3 Data Aggregation**

Using data obtained from its customer registration system, ERCOT aggregates the data, applies loss calculations and loads the aggregated data into its wholesale settlement system to enable wholesale settlement. Because ERCOT's system is not currently designed to export data to another ISO, SPP and ERCOT identified a mechanism to enable SPP to have access to the data via existing processes. As mentioned above, ETI would receive SCR727 extract data on a regular basis. This extract conveniently contains all the usage data SPP would need to settle its markets. ETI would be able to provide SPP with access to this extract on an on-going basis via a digital certificate assigned to SPP. Through this arrangement, SPP would always have access to the most current data in ERCOT's registration system. SPP would then be able to aggregate the data and load it into its settlement system. Aggregating the data and applying appropriate loss calculations would require a new data aggregation module to be built within SPP's settlement system. This module would convert, aggregate and load the needed data into SPP's staging system for validation. Once validated, the data will be loaded into SPP's production system for billing and settlements.

### **7.1.4 Settlement and Invoicing**

Both ERCOT and SPP have complex settlement systems for the allocation of various charges to various Market Participants. ERCOT and SPP do not have identical timelines for settlement and invoicing; however, SPP expects that SPP's settlement timelines will be able to accommodate the timing of the data received via the SCR727 extract.

ERCOT currently invoices QSEs for wholesale market charges and ERCOT fees, and each TDSP in the ERCOT region invoices REPs active in its territory for charges pursuant to its tariff. ERCOT also currently charges a non-ERCOT REP an annual fee of \$1.15 per ESI ID. Although there have been discussions regarding the discontinuance of this fee due to complete depreciation of ERCOT's customer registration system, SPP used the \$1.15 per ESI ID fee as a placeholder for estimating approximate costs for using the ERCOT customer registration system to serve a non-ERCOT area. If this particular fee is eliminated in the future, SPP expects that it would work with ERCOT to negotiate a new fee structure with comparable total cost.

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For balancing energy and associated fees, SPP would invoice the TCs or their agents. Any other administrative fees would be allocated to the REPs through SPP's settlement processes.

### **7.1.5 Disputes**

ERCOT already provides a robust dispute system<sup>28</sup> for any issues regarding the data contained in its customer registration system. Therefore, SPP expects that any dispute regarding the data in ERCOT's systems would be handled through ERCOT's existing system. Disputes regarding wholesale settlement or invoicing would generally be handled by SPP; however, any settlement dispute which results from claimed inaccuracies in the underlying data provided from ERCOT's registration system would not constitute a valid settlement dispute with SPP and those data issues would have to be resolved with ERCOT.

## **7.2. Cost Estimates**

### **7.2.1 Assumptions**

The following assumptions were used in developing the cost estimates.

ERCOT will perform or assist with the following activities:

- Continue the management of the registration database for ETI ESI IDs' in Texas;
- Assist ETI in submitting appropriate transactions to load the ESI ID's into their database approximately 425,000 ESI IDs;
- Assist ETI affiliated REP to submit appropriate transactions to move-in ~ 425,000 ESI IDs;
- Submit appropriate initial meter reads for the ESI IDs;
- Assist ETI and REPs in completion of Retail Market Testing;
- Produce the initial SCR727 Service History and Usage Extract load for ETI (to also be provided to SPP);
- Produce daily SCR727 extracts for ETI (to also be provided to SPP);

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<sup>28</sup> Known as "MarkeTrak."

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- Work with ETI, SPP and stakeholders via the Profiling Working Group for to create Weather Zone and Profile Tree approvals;
- Assist ETI with Profile ID assignments;
- Assist ETI with Load Research Sampling and;
- Support the retail activities in the ETI territory of Texas.

SPP will perform the following activities:

- Register all REPs as TCs for transmission access and Market Participants for scheduling, settlement, and billing;
- Support interaction with REPs on an on-going basis;
- Develop aggregation processes and programs to validate and load initial meter reads for ESI IDS;
- Develop ongoing processes to validate, load, and aggregate data from the SCR727 extract and;
- Coordinate with ERCOT and ETI for load profiling and SCR727 extract processes.

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### 7.2.2 Cost Estimates

The following estimates were developed with input from SPP Staff, Areva and ERCOT. SPP developed a cost range for each component associated with implementation. In addition, SPP developed an estimate of ongoing maintenance costs associated with enabling ROA in SPP. Labor rates were based on 2009 Cost Benefit Task Force ("CBTF")<sup>29</sup> rates and include a blend of SPP resources and consultants.

#### Implementation estimates

Item	Low	High
Registration and Set-up Resources	\$ 520,000	\$ 850,000
Settlement System Changes	\$1,275,000	\$3,000,000
Miscellaneous Hardware	\$ 100,000	\$ 200,000
ERCOT Startup Costs to Implement ROA for ETI	\$ 437,000	\$ 740,000
<b>Total ROA Implementation Estimates</b>	<b>\$2,332,000</b>	<b>\$4,790,000</b>

The registration and set-up components include the labor and costs associated with the creation of accounts in the SPP customer account management, credit and associated systems. The settlement system component is comprised of: 1) requirements gathering and 2) associated implementation costs of an aggregation module that integrates with the current settlement system. Miscellaneous hardware costs include storage and estimated Information Technology ("IT") costs. The ERCOT startup costs were developed from information contained in Appendix 9 of ERCOT's Phase II Study and one-time development costs provided by ERCOT to SPP in 2008. ERCOT's high level impact analysis is included as Appendix 8.

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<sup>29</sup> An SPP stakeholder group.

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### Annual Maintenance Estimates

Item	Low	High
Staffing	\$ 375,000	\$ 560,000
Settlement System Fees	\$ 150,000	\$ 150,000
Miscellaneous Hardware	\$ 40,000	\$ 70,000
ERCOT Fees (est.)	\$ 50,000	\$ 480,000
<b>Total Annual Maintenance Estimates</b>	<b>\$ 615,000</b>	<b>\$1,260,000</b>

For the estimated maintenance costs, staffing rates were based on the 2009 CBTF rates. The staffing estimate assumes that SPP would need to hire two to five new Full Time Equivalents to support the additional settlement systems processes and related work along with the related IT functions. Estimated cost of the settlement system additions were supplied by the potential vendor. Miscellaneous Hardware costs are for the storage and associated items that would be required by SPP IT Staff. The ERCOT fee estimates were based on the assumptions and high level impact analysis that was provided by ERCOT.

## 8. BENEFIT TO COST RESULTS

### 8.1 Benefit to Cost Analysis Results

The Benefit/Cost Analysis compares the benefits to ETI associated with integration into SPP to the associated costs to ETI, as calculated in accordance with the study tracks defined under Section 2 of this Report, through calculation of an ETI Benefit-to-Cost Ratio ("BC Ratio"). ETI Benefit-to-Cost Ratio is calculated for all scenarios, as:  $[(\text{ETI production cost savings} / 0.18^{30}) / (\text{Reliability Project capital costs} + \text{Economic Project capital costs} + \text{ROA implementation capital costs})]$ . A BC Ratio of less than 1.0 indicates a net negative benefit and a BC Ratio of greater than 1.0 indicates a net positive benefit. A BC Ratio equal to 1.0 indicates a break-even situation. Based on this calculation, the ETI BC Ratios for each scenario are summarized in Table I.

<sup>30</sup> Consistent with the Phase II Study, in order to directly compare the production cost savings to the cost of the Reliability Projects, Economic Projects and ROA implementation for cost/benefit calculation purposes, the production cost savings is divided by the assumed annual carrying charge rate. SPP uses an 18% carrying charge rate assumption in its Balanced Portfolio analysis process.



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For the Cottonwood in EIC assumption, SPP calculated a range of potential ETI net benefits reflecting the assumption regarding inclusion or exclusion of the new Weber-Richard 500 kV line. For the \$11.00 gas price assumption, ETI net benefits range from a low of \$97.8 Million if the line is included to a high of \$201.5 Million if the line is excluded. For the \$7.00 gas price assumption, ETI net benefits range from a low of \$(105.9) Million if the line is included to a high of \$57.9 Million if the line is excluded, thus indicating a potential net negative benefit to ETI under the \$7.00 gas price assuming the new Weber-Richard line is included. However, for all BC Ratio calculations, SPP has used conservative assumptions by including the entire cost of the Economic Projects under the cost side of the equation. Further analysis and discussion is required regarding the expected cost allocation of Economic Project costs which may conclude that some of the Economic Project costs should be borne by parties other than ETI, which could result in a net positive benefit to ETI assuming inclusion of the Weber-Richard 500 kV line under the \$7.00 gas price assumption.

Under both the \$11.00 gas price and \$7.00 gas price assumption for the case where Cottonwood moves into ERCOT, net benefits to ETI remain positive, ranging from \$36 Million for the \$7.00 gas price assumption to \$61.4 Million for the \$11.00 gas price assumption.

**Table I – ETI Benefit/Cost Analysis Summary**

Scenario	Production Cost Savings \$MM	Equivalent Capital Cost \$MM	Reliability Project Costs \$MM	Economic Project Costs \$MM	ROA Costs \$MM	Net Benefit \$MM	BC Ratio
1	80.4	446.6	105	239	4.8	97.8	1.28
2	43.7	242.9	105	239	4.8	(105.9)	0.70
1A	57.8	321.3	105	10	4.8	201.5	2.68
2A	32.0	177.7	105	10	4.8	57.9	1.48
3	32.6	181.2	105	10	4.8	61.4	1.51
4	28.0	155.8	105	10	4.8	36.0	1.30

Scenario 1 - Cottonwood in EIC - \$11.00 Gas – With Weber-Richard 500 kV line  
Scenario 2 - Cottonwood in EIC - \$7.00 Gas – With Weber-Richard 500 kV line  
Scenario 1A - Cottonwood in EIC - \$11.00 Gas – Without Weber-Richard 500 kV line  
Scenario 2A - Cottonwood in EIC - \$7.00 Gas – Without Weber-Richard 500 kV line  
Scenario 3 - Cottonwood in ERCOT - \$11.00 Gas  
Scenario 4 - Cottonwood in ERCOT - \$7.00 Gas

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### **9. APPENDIXES**

- 9.1. Appendix 1 - List of Entergy Proposed Projects**
- 9.2. Appendix 2 - Topology Map**
- 9.3. Appendix 3 - Market Power Study Report**
- 9.4. Appendix 4 - Entergy Construction Plan**
- 9.5. Appendix 5 - STEP Plan**
- 9.6. Appendix 6 - SPP-Entergy SPP\_ETI Integration Summary Stability Report**
- 9.7. Appendix 7 - ROA Functionality Chart**
- 9.8. Appendix 8 - ERCOT High Level Impact Analysis**