Southwest Power Pool
ECONOMIC STUDIES WORKING GROUP
November 21, 2013
SPP Campus
Little Rock, AR

• SUMMARY OF ACTIONS TAKEN •

1. SPP Staff will send an email to members to decide the date and time for the next conference call.
2. ESWG and TWG members will have a joint conference call to develop the FERC Order 1000 Detailed Project Proposal (DPP).
3. ESWG members will provide feedback by March 2014 regarding the 2010 Strategic Plan.
4. SPP Staff will develop a “useful information data set” regarding the Increased Input Prices.
5. SPP members will provide feedback regarding the Siting/Resource Plan by November 26th. The approval date is December 4th.
Agenda Item 1 – Administrative Items

Agenda Item 1a - Call to Order, Introductions
Chair Alan Myers (ITC Great Plains, LLC) called the meeting of the Economic Studies Working Group (ESWG) to order at 8:31 a.m., welcomed those in attendance, and asked for introductions. (Attachment 1 – Attendance List)

There were 24 in person participants and 28 web conference participants representing 10 of 11 members.

Agenda Item 1b – Receipt of Proxies
Juliano Freitas (SPP staff) requested proxy statements. One proxy was identified, Randy Collier proxy to Kenny Hale (City Utilities of Springfield). (Attachment 2 – Proxies)

Agenda Item 1c – Review of Agenda
Chair Alan Myers (ITC Great Plains, LLC) presented the agenda for review and asked for any additions or corrections. The agenda was approved unanimously. (Attachment 3 – Agenda)

A motion to approve the proposed agenda was made by Paul Dietz (Westar) and seconded by Kurt Stradley (LES).

Agenda Item 2 – Review of Past Action Items
Juliano Freitas (SPP staff) recapped the pending action item list and asked for updates or changes (Attachment 4 – Action Items). No updates or changes were requested.

Agenda Item 3 – Consent Agenda
The Consent Agenda included the following requested Actions:

a. Approval of Meeting Minutes – October 2, 2013 (Attachment 5 – ESWG 10.2.2013 Minutes)
b. Approval of Meeting Minutes – October 10, 2013 (Attachment 6 – ESWG 10.10.2013 Minutes)
c. Approval of Meeting Minutes – November 4, 2013 (Attachment 7 – ESWG 11.4.2013 Minutes)

Tim Owens (NPPD) asked SPP Staff to make two changes:

- On the October 2nd minutes Agenda Item 4, replace the statement: “The main concern with the results was that the Future 3 results included two scrubbed coal units at 1.3GW each”, with “The main concern with the results was that the Future 3 results included two scrubbed coal units without CCS at 1.3 GW each”.
- On the November 4th minutes Agenda Item 1c – Review Agenda, correct Tim Owens’ company replacing LES by NPPD.
Chair Alan Myers (ITC Great Plains, LLC) asked if there were any Consent Agenda Items to be removed, changed, or added. The consent agenda was approved unanimously.

A motion to approve the consent agenda was made by Kip Fox (AEP-Transource) and seconded by Kurt Stradley (LES).

**Agenda Item 4 – 2015 ITP10 Schedule**

Antoine Lucas (SPP staff) presented the 2015 ITP10 schedule including milestones, member review/feedback and also the ESWG approval dates. Members asked Staff to provide thirty days to review the assessments to provide solutions. The time period should start at the end of the assessments. Staff is finalizing the 2014 schedule, more accurate dates will depend on projects to be developed in parallel with the 2015 ITP10 (RCAR2, FERC Order 1000, potential Integrated System Integration, HPILS). (Attachment 8 – 2015 ITP10 Schedule)

**Agenda Item 5 – 2015 ITP10 Siting Plan**

Juliano Freitas (SPP Staff) presented the 2015 ITP10 Siting Plan for Futures 1 and 2, explaining the methodology applied to site the new conventional and renewable generating resources and also the maps associated with the plan. Due to some changes requested by members, the ESWG did not approve the 2015 ITP10 Siting Plan. Staff was directed to incorporate the requested changes and also contact members that participated in the Policy Survey and Generation review that do not have ESWG representation. The new deadlines are: 11/26 – Members will submit final data; 12/04 – ESWG members will vote to approve the Siting Plan. After December 4th any changes in the Resource Plan/Siting Plan will have severe impacts in the 2015 ITP10 Study. (Attachment 9 – 2015 ITP10 Siting Plan)

A motion to adjust the Resource Plan/Siting Plan contacting members to provide changes (if needed) was made by Kip Fox (AEP-Transource) and seconded by Bennie Weeks (Xcel Energy). The motion was approved unanimously.

**Agenda Item 6 – 2015 ITP10 External Resource/Siting Plan**

Juliano Freitas (SPP Staff) presented the External Resource and Siting Plans. During the process SPP Staff contacted all the external entities listed in the presentation except TVA (Ventyx Market Vision data used). In the first part of the presentation Juliano explained how Staff obtained the Load, Generation (including retirements) and capacity margin for MISO, AECI, WAPA and TVA. All of the assumptions used for the SPP region (Future 1 & 2) also were applied to the external regions. MISO was the only region providing its own resource and siting plan. As shown on slides 8 and 9 we can see solar and wind capacity added (8% and 13% accreditation respectively). For other regions, EIA prototypes were utilized (400 MW CC and 210 MW CT). The resource plan was determined manually using the load, generation and capacity margin submitted by each region as opposed to utilizing the Strategist software application as Staff did for the SPP region. The main concern was about the Siting Plan and the impact of locating the new units in external areas far away from the SPP border or distributing them in those areas. Without knowledge of the locations that external areas will utilize to site new generation, SPP Staff proposed to distribute the resources in external areas in order to represent a more likely outcome and also to capture possible seams issues. After a round of discussion, the group decided to adopt the SPP Staff suggestion. The ESWG members decided to approve the External Resource/Siting Plans in two steps, first the resource plan and second the siting plan. (Attachment 10 – 2015 ITP10 Siting Plan)

A motion to approve the External Resource Plan for tier 1 entities was made by Leon Howell (OGE) and seconded by Kip Fox (AEP - Transource). The motion was approved unanimously.

A motion to approve the External Siting Plan for tier 1 entities was made by Leon Howell (OGE) and seconded by Tim Owens (NPPD). The motion was approved. Kip Fox (AEP – Transource) abstained his vote for the following reason: “AEP abstained on the siting issue due the fact we did not clearly understand how the siting outside the SPP footprint has taken place. In the excel spreadsheet provide as part of the meeting materials, there
was questions on why additional units at Messick, Hartsburg, ISES, which are not in Entergy Construction plan are in future 2 siting plan. Additionally, MISO announced on November 21, that there was 3.6 GW of surplus generation in MISO South as a result of their independent resource adequacy analysis."

Bennie Weeks (Xcel Energy) opposed to the motion for the following reason: "MISO provided their best guess for future generation and that is OK. The others are purely speculation and the seams process is too complex, third party impacts to name only one, to expend valuable time on such speculation. It would be far better to model the economic market across the seam but if that can’t be done, at the very least, when siting the remaining capacity, it should not be close to the borders"

**Agenda Item 7 – Regional Review Methodology**

Brett Hooton (SPP Staff) presented and requested feedback regarding the process being developed to evaluate interregional projects on a regional level. FERC Order No. 1000 included requirements for regional planning, regional cost allocation, removal of a federal right of first refusal, interregional coordination, and interregional cost allocation. Specifically regarding interregional coordination, the Order requires SPP to develop procedures for the joint evaluation of interregional projects that may be more efficient or cost-effective than regional projects. For the purposes of this methodology paper, an interregional project can be either a project that interconnects two planning regions or a project that is completely within one region but provides benefits to both regions. Additionally the order requires that an interregional cost allocation methodology be developed and agreed to between neighboring regions. More information regarding interregional coordination and interregional cost allocation can be found in Attachment O of the SPP Tariff. (Attachment 11 – Regional Review Methodology)

A motion to approve the Interregional Process: Regional Review Methodology was made by Kip Fox (AEP - Transource) and seconded by Paul Dietz (Westar). The motion was approved unanimously.

**Agenda Item 8 – Increased Prices Input Sensitivities**

Kelsey Allen (SPP Staff) recapped the Board of Directors (BOD) direction on how to approach the Increased Input Prices future in the 2015 ITP10. The BOD recommended developing an analytical approach that will yield useful information to be included in the 2015 ITP10 Report that provides a measure of the ability of the recommended portfolio to accommodate Future 3 assumptions and needs. In order to meet this direction, SPP Staff recommended inclusion of Future 3 assumptions in the BAU model (high gas price, carbon tax, load growth reduction), identify wind additions as a proxy for Future 3 resource plan results (perform analysis to determine maximum wind capability of the footprint (VSAT)) and develop a list of remaining needs in the hybrid model after the final portfolio has been developed. The ESWG members wanted to determine what kind of “useful information” we want to get out of the sensitivity analysis. SPP Staff agreed to develop a proposal showing how the results can be used in a constructive way. (Attachment 12 – Increased Prices Input Sensitivities)

**ACTION ITEM:** SPP Staff will refine the methodology proposed for the Increased Input Prices sensitivity analysis.

**Agenda Item 9 – 2015 ITP10 Consolidation Methodology**

This item was moved to our next conference call, date to be decided.

**Agenda Item 10 – 2010 Strategic Plan**

Michael Desselle (SPP Staff) presented the three foundational strategies necessary to attend demand and connect generation resources using a reliable and efficient transmission system. Also, the goal is to develop an efficient market process. In order to add more benefits to the next Strategic Plan, it is essential to incorporate new scenarios and member’s feedback is the key to succeed. Michael listed the three main benefits of adding new scenarios:
- The articulation of a robust Expected Case will provide the strategic foundation for any strategic initiatives
- The scenarios will provide very specific tests for the robustness of the strategic initiatives articulated in the plan
- The scenarios will provide the context for identifying signposts to departure from the Expected Case and developing potential alternative strategies should different outcomes actually unfold

The Strategic Planning Committee is asking members to engage now and provide feedback by March 2014 to consolidate the ideas from other Working Groups, stakeholders and the Board of Directors. (Attachment 13 – 2010 Strategic Plan)

**ACTION ITEM: ESWG members will provide feedback by March 2014 regarding the 2010 Strategic Plan.**

**Agenda Item 11 – 2015 ITP10 Metrics Review**

ESWG members started the discussion about metrics review in order to accomplish MOPC Action Item 222: ESWG/TWG finalize the benefits metrics & allocation methods for 2015 ITP10 Portfolio analysis and bring back to April 2014 MOPC. The ESWG members mainly talked about four topics:

- Match RCAR metrics with ITP10 metrics
- Develop Task Force or handle in ESWG
- Review all previously utilized metrics or most notable only
- Review all metrics including those developed by MTF, but not used in the RCAR

The ESWG members decided to handle the topic but not to compose the Metrics Task Force again, the group will review in detail all the metrics developed by the task force in 2012. Also, the CAWG members were encouraged to participate and help to review the metrics. The group will start reviewing the 2015 ITP10 Metrics; the second step is to review the RCAR metrics calculation and benefits allocation. (Attachment 14 – 2015 Metrics Review)

**Agenda Item 12 – 2015 ITP10 Benchmark**

This item was moved to our next conference call, date to be decided.

**Agenda Item 13 – New Interconnection Local/Regional Impacts**

This item was moved to our next conference call, date to be decided.

**Closing Items**

Chair Alan Myers ((ITC Great Plains, LLC) requested if any other items merited discussion.

The meeting was adjourned at 2:35 p.m.

Respectfully Submitted,

Juliano Freitas,
Secretary
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<td>Tim Soles</td>
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<td>Wayman Smith</td>
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Proxy from Randy Collier (City Utilities of Springfield).
ECONOMIC STUDIES WORKING GROUP

November 21st, 2013
SPP Campus, Little Rock, AR

- AGENDA -

8:30 pm – 2:30 pm

1. Administrative items
   a. Call to Order, Introductions ................................................................. Alan Myers (5 minutes)
   b. Receipt of Proxies .............................................................................. Juliano Freitas (1 minute)
   c. Review of Agenda ............................................................................. Alan Myers (1 minute)

2. Review of Past Action Items ................................................................. Juliano Freitas (10 minutes)

3. Consent Agenda (Approval Item)......................................................... Alan Myers (10 minutes)
   a. Approval of Meeting Minutes – October 2nd, 2013
   b. Approval of Meeting Minutes – October 10th, 2013
   c. Approval of Meetings Minutes – November 4th, 2013

4. 2015 ITP10 Schedule ........................................................................... Antoine Lucas (10 minutes)

5. 2015 ITP10 Siting Plan (Approval Item) ................................................. Juliano Freitas (30 minutes)

6. 2015 ITP10 External Resource/Siting Plan (Approval Item) ................. Juliano Freitas (45 minutes)

7. Regional Review Methodology (Approval Item) .................................. Brett Hooton (15 Minutes)

8. Increased Input Prices Sensitivity ......................................................... SPP Staff (30 minutes)

9. 2015 ITP10 Consolidation Methodology ............................................. Kelsey Allen (30 minutes)

10. 2010 Strategic Plan ............................................................................. Michael Desselle (30 minutes)

11. 2015 ITP10 Metrics Review ............................................................... ESWG Members (30 Minutes)

12. 2015 ITP10 Benchmark ................................................................. Antoine Lucas (30 Minutes)

13. New Interconnection Local/Regional Impacts ................................... Antoine Lucas (45 Minutes)

14. Closing Items ........................................................................................ All

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1 Background Materials Included
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<tr>
<th>ID</th>
<th>Action Item</th>
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<tr>
<td>057</td>
<td>SPP staff will write a straw-man procedure or portion of the ITP manual that deals with conventional and wind generation planning and siting within the ITP process. The process should be in place by the Spring of 2013.</td>
<td>Aug 23, 2012 ESWG</td>
<td>In Progress Staff</td>
<td>Staff will provide a draft report in November 2014. Staff recommends a discussion during the ESWG meetings in the previous months.</td>
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<td>076</td>
<td>ESWG will analyze the aggregate studies impact on the 2015 ITP10 study for transmission service request</td>
<td>May 16, 2013</td>
<td>In Progress ESWG Members</td>
<td>Item on hold, wait for Aggregate Studies new results</td>
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<td>082</td>
<td>SPP Staff will review the hurdle rates between SPP and 1st tier RTOs using MISO data</td>
<td>July 11, 2013</td>
<td>In Progress Staff</td>
<td>Staff will review hurdle rates during the benchmarking process scheduled for end-of-year completion.</td>
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<td>083</td>
<td>SPP Staff will propose a methodology to model Must Run units in the 2015 ITP10 Study</td>
<td>July 11, 2013</td>
<td>In Progress Staff</td>
<td>Needed by 1st quarter 2014.</td>
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<td>086</td>
<td>SPP Staff will update the 2015 ITP10 schedule to differentiate between data collection and member review periods with each study milestone.</td>
<td>August 13, 2013</td>
<td>In Progress</td>
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<td>087</td>
<td>ESWG members and SPP Staff will compare the generation resources in the different models used in the SPP studies processes</td>
<td>August 13-2013</td>
<td>In Progress</td>
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<td>091</td>
<td>SPP Staff will setup a meeting with Alan Myers and Noman Williams to coordinate ESWG and TWG schedules.</td>
<td>August 13, 2013</td>
<td>Complete</td>
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<td>094</td>
<td>Send members a list of generators being affected by drought based on 1934 and 2012 Palmer Index, coal units with less than 200 MW and hydro units with 20% output reduction. This list will be used in Future 2 to determine the base load unit’s capacity reduction.</td>
<td>September 5, 2013</td>
<td>Complete</td>
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<td>Status</td>
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<td>095</td>
<td>ESWG members will review the RCAR benefits for reliability and public policy projects</td>
<td>September 5, 2013</td>
<td>Combined with Item 102</td>
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<td>096</td>
<td>Steve Gaw (Wind Coalition) will provide a new capital cost for wind. This cost will be used in the levelized cost list of resource prototypes in the 2015 ITP10 Resource Plan</td>
<td>September 5, 2013</td>
<td>Complete</td>
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<td>097</td>
<td>SPP Staff will provide more details regarding the difference between consolidation of projects and consolidation of needs.</td>
<td>September 5, 2013</td>
<td>Complete</td>
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<td>098</td>
<td>SPP staff will provide more details about the needs and projects assessment timeline</td>
<td>September 17, 2013</td>
<td>In progress</td>
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<td>099</td>
<td>SPP Staff will post the spreadsheet including the base load unit reductions for Future 2</td>
<td>October 2, 2013</td>
<td>Complete</td>
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<td>100</td>
<td>ESWG members will re-evaluate the benchmarking process</td>
<td>November 4, 2013</td>
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<td>101</td>
<td>ESWG to provide wording for Solutions recommendation of the Scope by April 2014 MOPC</td>
<td>October 15-16, 2013</td>
<td>In progress</td>
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<td>102</td>
<td>ESWG/TWG finalize the benefits metrics &amp; allocation methods for 2015 ITP10 Portfolio analysis and bring back to April 2014 MOPC</td>
<td>October 15-16, 2013</td>
<td>In progress</td>
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<td>103</td>
<td>SPP Staff will refine the methodology proposed for the Increased Input Prices sensitivity analysis</td>
<td>November 21, 2013</td>
<td>In progress</td>
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<td>104</td>
<td>ESWG members will provide feedback regarding the 2010 Strategic Plan by March 2014</td>
<td>November 21, 2013</td>
<td>In progress</td>
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</table>
• SUMMARY OF ACTIONS TAKEN •

1. SPP Staff will post the spreadsheet including the base load unit reductions for Future 2.
2. SPP Staff will add a new column to the Post-Approval edits tab (check 4b. 20131002 2015 ITP10 Resource Plan Reference.xlsx in the background materials) showing who suggested the resource plan modifications.
3. The new deadline to submit Resource Plan feedback is 12PM October 7th, SPP Staff will seek for approval by October 10th.
Southwest Power Pool
ECONOMIC STUDIES WORKING GROUP
October 2, 2013
Web Conference

• MINUTES •

Agenda Item 1 – Administrative Items

Agenda Item 1a - Call to Order, Introductions
Chair Alan Myers (ITC Great Plains, LLC) called the meeting of the Economic Studies Working Group (ESWG) to order at 9:03 a.m., welcomed those in attendance, and asked for introductions. (Attachment 1 – Attendance List)

There were 39 web conference participants representing 10 of 12 members.

Agenda Item 1b – Receipt of Proxies
Juliano Freitas (SPP staff) requested proxy statements. One proxy was identified, Kip Fox proxy to Wayman Smith (AEP) for the last 2 hours of the meeting. (Attachment 2 – Proxy)

Agenda Item 1c – Review of Agenda
Chair Alan Myers (ITC Great Plains, LLC) presented the agenda for review and asked for any additions or corrections. The agenda was approved unanimously. (Attachment 3 – Agenda)

Agenda Item 2 – 2015 ITP10 Schedule

Antoine Lucas (SPP staff) presented the 2015 ITP10 schedule including milestones, member review/feedback and also the ESWG approval dates. The intention of this presentation was to show members the impact of the Resource Planning milestone on the 2015 ITP10 Study schedule. The ESWG members approved moving the Siting Plan approval from October 24th to the end of the month, day to be decided at the October 10th meeting. (Attachment 4 – 2015 ITP10 Schedule)

Agenda Item 3 – 2015 ITP10 Scope

Kelsey Allen (SPP Staff) presented and asked members to approve the 2015 ITP10 Scope. Based on ESWG member feedback, primarily related to economic seams projects and the calculation methodology of benefit metrics, SPP Staff received a request to modify two items:

1) Solutions Development (Page 20): the following language was added, “To the extent remedies are recommended as a result of the Regional Cost Allocation Review, project remedies will be evaluated as part of the 2015 ITP10 analysis as appropriate”.

2) Benefit Metric Development and Usage (Page 23): the following language was added, “To the extent that any adjustments or changes to these Benefit Metrics are recommended by the Regional Allocation Review Task Force (RARTF), these changes will be considered by ESWG”.

A motion to approve the 2015 ITP10 Scope was made by Tim Owens (NPPD) and seconded by Randy Collier (City Utility of Springfield). The motion was approved unanimously.

Agenda Item 4 – 2015 ITP10 Resource Plan

Juliano Freitas and Kelsey Allen (SPP Staff) presented the 2015 ITP10 Resource Plan results. The presentation was divided in two parts: Renewable and Conventional Resource Plan. The Renewable Resource Plan is based on the 2015 Policy Survey approved by the ESWG on 08/20/2013; the plan was developed to address unmet renewable policy survey requirements. The Conventional Resource Plan
based on the 2015 Load and Generation Review as well the Renewable Resource Plan. The Conventional Resource Plan was developed to address the zonal capacity margin requirement of 12%. The alternatives to meet the Conventional Resource Plan requirements are based on the EIA 2013 Prototypes, with an exception for wind. The wind prototype was modified per ESWG request to reflect more appropriate capital and fixed O&M costs. Also, PTCs are included in the calculation, but phased out over a ten year period by beginning at a value of 100% in 2015 and gradually reduced by 10% of the original value annually until completely removed in 2024. The final results are in the Attachment 6. The main concern with the results was that the Future 3 results included two scrubbed coal units at 1.3GW each. According to members, this technology will not be feasible in the future due to regulatory pressures and asked SPP Staff to not consider this prototype as an option. Members asked for more time to review the results and provide feedback. The new deadline to submit feedback is 12PM October 7th. SPP Staff will seek approval by October 10th. (Attachment 5 – 2015 ITP10 Resource Plan)

A motion to approve the changes made in the 2015 Policy Survey was made by Greg Sweet (EMDE) and seconded by Randy Collier (City Utility of Springfield). The motion was approved unanimously.

Stakeholders requested more information regarding the base load unit reductions in order to have more details about the specific units being affected.

**ACTION ITEM:** SPP Staff will post the spreadsheet including the base load unit reductions for Future 2

Also, stakeholders asked for SPP Staff to document all the changes requested by members in order to create a list of actions related to base load unit reductions.

**ACTION ITEM:** SPP Staff will add a new column to the Post-Approval edits tab (check 4b. 20131002 2015 ITP10 Resource Plan Reference.xlsx in the background materials) showing who suggested the resource plan modifications

**Agenda Item 5 – HPILS Economic Load Assumptions**

SPP Staff asked ESWG members to review the load factor proposed for the incremental loads. Originally the load factor for incremental loads without a load shape provided by members was 100%. A decision point was made, for any member that did not supply a load factor or load shape with their submission of HPILS loads through the ITP10 HPILS data request, SPP will utilize a 90% load factor and a generic shape that assumes a drop off of demand 840 hours out of the year, roughly weekend nights.

**Closing Items**

Chair Alan Myers (ITC Great Plains, LLC) requested if any other items merited discussion.

The meeting was adjourned at 12:14 p.m.

Respectfully Submitted,

Juliano Freitas,

Secretary
Southwest Power Pool
ECONOMIC STUDIES WORKING GROUP
October 10, 2013
Web Conference

• SUMMARY OF ACTIONS TAKEN •

1. SPP Staff will run the resource plan models to apply corrected WAPA/Nebraska transactions.
2. Staff will propose new dates for next meetings in October (web conference) and the face-to-face meeting in December. The members will vote via email.
Southwest Power Pool
ECONOMIC STUDIES WORKING GROUP
October 10, 2013
Web Conference

• MINUTES •

Agenda Item 1 – Administrative Items
Agenda Item 1a - Call to Order, Introductions
Chair Alan Myers (ITC Great Plains, LLC) called the meeting of the Economic Studies Working Group (ESWG) to order at 9:05 a.m., welcomed those in attendance, and asked for introductions. (Attachment 1 – Attendance List)

There were 45 web conference participants representing 10 of 12 members.

Agenda Item 1b – Receipt of Proxies
Juliano Freitas (SPP staff) requested proxy statements. One proxy was identified, Kip Fox proxy to Wayman Smith (AEP). (Attachment 2 – Proxy)

Agenda Item 1c – Review of Agenda
Chair Alan Myers (ITC Great Plains, LLC) presented the agenda for review and asked for any additions or corrections. The agenda was approved unanimously. (Attachment 3 – Agenda)

A motion to approve the proposed agenda was made by Kurt Stradley (LES) and seconded by Leon Howell (OGE). The motion was approved unanimously.

Agenda Item 2 – 2015 ITP10 Schedule
Antoine Lucas (SPP staff) presented the 2015 ITP10 schedule including milestones, member review/feedback and also the ESWG approval dates. The intention of this presentation was to show members the impact of the Resource Planning and Siting Plan milestones on the 2015 ITP10 Study schedule. The ESWG members approved moving the Siting Plan approval from October 24th to the end of the month, day to be decided on the October 10th meeting. The members will approve the Resource Plan on October 15th prior the MOPC meeting (Attachment 4 – 2015 ITP10 Schedule)

Agenda Item 3 – 2015 ITP10 Resource Plan
Juliano Freitas (SPP Staff) presented the 2015 ITP10 Resource Plan results. This was the second pass for the 2015 ITP10 Resource Plan, the deadline to submit feedback was 12PM October 7th. The main changes comparing pass 1 and pass 2 are:

- Corrected Future 3 carbon tax setup: in pass 1 we only had the cost rate but not the dispatch rate, this way we did not have the impact on the dispatch order for “dirty” vs. “clean” units.
- Corrected max capacities of some units, consistent with Generation Review: SPP Staff fixed the partial ownerships associated with SPP and external areas, seasonal capacities and also duplicated units in the Strategist model.
- Some wind units were adding unexpected energy onto system in Pass 1. Setup changed (commission date) to correct the issue.

The main impact in the results after fixing the items mentioned above is listed below:

- F1 KSMO
  - Pass 1: 8 CTs, 3 CCs
  - Pass 2: 14 CTs, no CCs
  - Pass 1 simulations had setup error limiting the number of CTs that could be added
- F3 KSMO and South
  - Minor decrease in CTs
  - Minor increase in CCs
  - Significant increase in wind
  - Driven by correct implementation of carbon tax

Nebraska’s entities are concerned about the transactions involving Nebraska and WAPA, according to the members, the model is not correctly capturing the energy dispatched throughout the year and is adding more energy than expected. It will not change the capacity needed but potentially can change the resource mix proposed for the sub-region.

OGE expressed concerns about the load increase in the SPP region. In past ESWG meetings, OGE opposed including HPILS load in the ITP10 models, but also noted that without consideration of the HPILS load, the ITP10 system loads seem to be above their expectation. (Attachment 5 – 2015 ITP10 Resource Plan)

A motion to approve the 2015 ITP10 Resource Plan conditionally was made by Tim Owens (NPPD) and seconded by Wayman Smith (AEP). In the next three business days following the meeting SPP Staff will run Strategist to implement the changes proposed by LES, OPPD and NPPD. Also, companies are allowed to submit changes regarding the resource mix proposed by SPP Staff. The final results will be approved by email vote before the MOPC meeting on October 15th. The motion was approved unanimously.

**ACTION ITEM:** SPP Staff will run the resource plan models to apply the right WAPA/Nebraska transactions.

**ACTION ITEM:** SPP Staff will propose new dates for next meetings in October (web conference) and the face-to-face meeting in December. The members will vote via email.

SPP Staff, asked for guidance in order to complete the external resource plan, the main issue was about assumptions to be used in order to accomplish the task. The ESWG decided to use the same resource plan assumptions for SPP and external areas for Futures 1 and 3. For Future 2, SPP Staff was recommended to reduce hydro unit’s maximum capacity by 20%, retire coal units under 200MW and reduced base load unit’s capacity by 10%.

**Agenda Item 4 – 2015 ITP10 Siting Plan**

Juliano Freitas (SPP Staff) presented the 2015 ITP10 Siting Plan 1st Draft. The siting plan proposed by SPP Staff was based on HPLIS and 2013 ITP20 sites. The methodology was based on the following assumptions:

- Utilized siting plans from the following studies:
  - HPILS
  - 2013 ITP20

- Resource additions matched to the aforementioned siting plans by:
  - Technology
  - Zone
  - Capacity

- If capacity was the binding factor, ITP20 capacities were increased

- If no matches, resource additions were sited with an available site from a geographically adjacent zone

- HPILS Resources sited below 100kV were stepped up to the higher kV bus

- Future 3 wind siting based on ITP20 Future 2 wind sites

The members will provide feedback by October 17th. Final approval date will be at October 23rd. (Attachment 6 – 2015 ITP10 Siting Plan)

**Agenda Item 5 – Coincident demand for LOLE Studies**
Michael Odom (SPP Staff) proposed to move from SPP Non-Coincident (BA peak) to an SPP Coincident peak demand forecast for the Loss-Of-Load Expectation (LOLE) studies: Capacity Margin LOLE study and NERC Probabilistic Assessment. The reasons for the proposed changes are (Attachment 7 – Coincident Demand for LOLE Studies):

- Moving to a Consolidated Balancing Authority in 2014
  - Look at demand from an SPP CBA perspective
- Capacity Margin will be based on demand level at SPP peak
  - Could lower the amount of capacity necessary to meet the Capacity Margin requirement in the SPP Criteria
- NERC prefers Coincident peak forecasts for assessments

A motion to approve the coincident demand for LOLE studies changes was made by Paul Dietz (Westar) and seconded by Bruce Walkup (AECC). The motion was approved unanimously.

**Agenda Item 6 – Transmission Project Classification, Assignment of Benefits**

ESWG members will further discuss this issue in the upcoming meetings, potentially calling the Metrics Task Force (MTF) in order to approach the way benefits are calculated in the 2015 ITP10 Study.

**Closing Items**

Chair Alan Myers (ITC Great Plains, LLC) requested if any other items merited discussion.

The meeting was adjourned at 11:19 p.m.

Respectfully Submitted,

Juliano Freitas,
Secretary
Southwest Power Pool
ECONOMIC STUDIES WORKING GROUP
November 4, 2013
Web Conference

• SUMMARY OF ACTIONS TAKEN •

1. The ESWG members decided to start the next meeting on November 21st at 8:30 AM and finish at 2:30 PM. SPP Staff will update the website.
2. ESWG members will re-evaluate the benchmarking process.
Agenda Item 1 – Administrative Items

Agenda Item 1a - Call to Order, Introductions

Chair Alan Myers (ITC Great Plains, LLC) called the meeting of the Economic Studies Working Group (ESWG) to order at 9:05 a.m., welcomed those in attendance, and asked for introductions. (Attachment 1 – Attendance List)

There were 47 web conference participants representing 9 of 12 members.

Agenda Item 1b – Receipt of Proxies

Juliano Freitas (SPP staff) requested proxy statements. One proxy was identified, Bennie Weeks proxy to Roy Boyer (Xcel Energy). (Attachment 2 – Proxy)

Agenda Item 1c – Review of Agenda

Chair Alan Myers (ITC Great Plains, LLC) presented the agenda for review and asked for any additions or corrections. SPP Staff proposed to remove item 4 from the agenda. This topic will be presented in the next ESWG meeting on November 21st. The agenda was approved unanimously. (Attachment 3 – Agenda)

A motion to approve the proposed agenda was made by Kurt Stradley (LES) and seconded by Tim Owens (LESNPPD). The motion was approved unanimously.

Agenda Item 2 – 2015 ITP10 Schedule

Antoine Lucas (SPP staff) presented the 2015 ITP10 schedule including milestones, member review/feedback and also the ESWG approval dates. The intention of this presentation was to show members the impact of the Siting and Economic Model Development milestone on the 2015 ITP10 Study schedule. Also, the upcoming Benchmarking milestone was discussed. SPP Staff proposed to remove the benchmarking process from the 2015 ITP10, because from the comparison between the EIS market (17 balancing authorities) to a simulated CBA market (1 balancing authority), may not produce a reasonable comparison for the 2015 ITP10 Model. ESWG members requested more time to analyze the proposed idea; with the main concern being how to evaluate hurdle rates to be used in the 2015 ITP10. (Attachment 4 – 2015 ITP10 Schedule)

Agenda Item 3 – 2015 ITP10 Siting Plan Futures 1 & 2

Juliano Freitas (SPP Staff) presented the 2015 ITP10 Siting Plan for Futures 1 and 2, explaining the methodology applied to site the new conventional and renewable generating resources and also the maps associated with the plan. ESWG members requested more time to verify the Siting Plan and also provided more feedback requesting minor changes. SPP Staff extended the feedback window until November 11th, seeking approval at the November 21st meeting. (Attachment 5 – 2015 ITP10 Siting Plan Futures 1 & 2)

Agenda Item 5 – Interregional Process: Regional Review Whitepaper

Brett Hooton (SPP Staff) presented and asked feedback regarding the process being developed evaluate interregional projects on a regional level. FERC Order No. 1000 included requirements for regional planning, regional cost allocation, removal of a federal right of first refusal, interregional coordination, and
interregional cost allocation. Specifically regarding interregional coordination, the Order requires SPP to develop procedures for the joint evaluation of interregional projects that may be more efficient or cost-effective than regional projects. For the purposes of this methodology paper, an interregional project can be either a project that interconnects two planning regions or a project that is completely within one region but provides benefits to both regions. Additionally the order requires that an interregional cost allocation methodology be developed and agreed to between neighboring regions. More information regarding interregional coordination and interregional cost allocation can be found in Attachment O of the SPP Tariff.

The Order is clear that a region cannot force another region to approve for or pay for a project. The project must be approved by each planning region. The Regional Review Methodology document included in the background materials describes how SPP will regionally review, analyze, and approve an interregional transmission project. Brett Hooton asked that edits to the document be provided to him within one week. The paper will be edited and discussed at the next ESWG meeting where the ESWG will be asked to approve the methodology. (Attachment 6 – Interregional Process: Regional Review Whitepaper)

**Closing Items**

Chair Alan Myers (ITC Great Plains, LLC) requested if any other items merited discussion.

The meeting was adjourned at 10:30 a.m.

Respectfully Submitted,

Juliano Freitas,

Secretary
2015 ITP10
Schedule

November 21\textsuperscript{st}, 2013
## ITP10 Milestone Schedule (Apr-Oct 2013)

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- **Scoping (Complete)**: 17 wks
- **Policy Survey (Complete)**: 9 wks
- **Load & Gen Review (Complete)**: 10 wks
- **Resource Plan (√)**: 4 wks
- **Siting Plan**: 2 wks
- **ESWG Approval Member Review/Feedback Period**

### Milestones

- **Above Milestones**
- **Economic Model Development**

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**Legend**
- **ESWG Approval**
- **Member Review/Feedback Period**
- **Milestone Period**
ITP10 Milestone Schedule (Nov 2013-May 2014)

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<td>DC to AC Conversion</td>
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- 4wks: 4 weeks
- 30 days: 30 days
- 2wks: 2 weeks

ESWG Approval

Member Review/Feedback Period

Milestone Period

24 of 73
## ITP10 Milestone Schedule (Jun-Dec 2014)

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- **ESWG Approval**
- **Member Review/Feedback Period**
- **Milestone Period**

**2014**

25 of 73
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<td>October</td>
<td>January ’15</td>
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2015 ITP10 Siting Plan

• Developed to identify sites for resource additions resulting from the Conventional and Renewable Resource Plans

• Serves as input to the economic model used for transmission analysis

• Siting plan for Futures 1 & 2
Methodology

• Utilized siting plans from the following studies:
  – HPILS
  – 2013 ITP20
  – Member feedback

• Resource additions matched to the aforementioned siting plans by:
  – Technology
  – Zone
  – Capacity

• If capacity was the binding factor, ITP20 capacities were increased
Methodology

• If no matches, resource additions were sited with an available site from a geographically adjacent zone
• HPILS Resources sited below 100kV were stepped up to the higher kV bus
2024 CONVENTIONAL AND RENEWABLE SITING PLANS
Future 1

Unit Additions

Combine Cycle: 11
Combustion Turbine: 43
Wind (from Survey): 17
Solar (from Survey): 2

MW Additions

Combine Cycle: 4,400
Combustion Turbine: 9,030
Wind (from Survey): 2,690
Solar (from Survey): 20

Totals

Units: 73
MW: 16,140
Future 2 Unit Additions
Combine Cycle: 16
Combustion Turbine: 59
Wind (from Survey): 17
Solar (from Survey): 2
_____________
MW Additions
Combine Cycle: 6,400
Combustion Turbine: 12,390
Wind (from Survey): 2,690
Solar (from Survey): 20
_____________
Totals
Units: 94
MW: 21,500
_____________
7
33 of 73
External Resource Planning

- Regions Included:
  - AECI
  - MISO
  - WAPA
  - TVA

- Coordinated data exchange with AECI, MISO, and WAPA
Generation and Load Information Received

- **MISO**
  - Generation and load data from current MTEP13 model
  - No information for Entergy or CLECO

- **AECI**
  - Generation and load updates as requested
  - Includes new units and updated retirement dates

- **WAPA**
  - Generation for Basin, Heartland, and WAPA
  - Load data for Heartland and WAPA
    - MRO powerflow models used for updating load for Basin, Corn Belt, and others
Additional Generation and Load Data

- Ventyx MarketVision data used for recent generation additions
  - Entergy
  - CLECO
  - TVA
  - Small WAPA entities
- Entergy 2012 Annual Report used to calculate load
- EIA data from CLECO used to calculate load
Future 2 Assumptions

- Future 2 ESWG approved criteria:
  - 20% capacity reduction for all hydro units
  - Retirement of all coal units under 200 MW
  - 10% capacity reduction of all base load units
Capacity Margin Assumptions

• A request for resource plan and/or assumptions to use was sent to all Tier 1 regions
  – WAPA, AECI each sent their capacity margin assumption
  – MISO sent resource plan for MTEP13
• TVA uses 13.05% capacity margin
Selection of Prototypes

- WAPA, AECI, TVA
  - Added CC and CT prototype units that are based on EIA data to meet reserve margin requirements

- MISO
  - Utilized MTEP13 resource plan provided by MISO
## Future 1 Results

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<td><strong>4,800</strong></td>
<td><strong>9,930</strong></td>
<td><strong>1,700</strong></td>
<td><strong>3,900</strong></td>
<td><strong>20,330</strong></td>
<td><strong>15,385</strong></td>
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</table>

Note: 2024 results are cumulative.
*Additions based on MISO prototypes
# Future 2 Results

<table>
<thead>
<tr>
<th>Region</th>
<th>CC Capacity Added</th>
<th>CT Capacity Added</th>
<th>Solar Capacity Added</th>
<th>Wind Capacity Added</th>
<th>Total Capacity Added</th>
<th>Accredited Capacity Added</th>
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<td>1,700</td>
<td>7,800</td>
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<table>
<thead>
<tr>
<th>Region</th>
<th>CC Capacity Added</th>
<th>CT Capacity Added</th>
<th>Solar Capacity Added</th>
<th>Wind Capacity Added</th>
<th>Total Capacity Added</th>
<th>Accredited Capacity Added</th>
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</thead>
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<td>AECI</td>
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<td>630</td>
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<td>0</td>
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<td>3,400</td>
<td>7,800</td>
<td>46,770</td>
<td>36,879</td>
</tr>
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</table>

Note: 2024 results are cumulative.

*Additions based on MISO prototypes
Siting

- AECI, TVA, WAPA, and Entergy
  - 2013 ITP20 sites as starting point
  - Additional sites at high voltage buses
- MISO
  - Utilized sites provided by MISO
Approval

- SPP Staff recommends the ESWG approve the 2015 ITP10 external resource plans for Futures 1 and 2 for the AECI, TVA, WAPA, and MISO regions.
Regional Review Methodology

Introduction
In 2011 FERC issued Order No. 1000 (the Order). The Order included requirements for regional planning, regional cost allocation, removal of a federal right of first refusal, interregional coordination, and interregional cost allocation. Specifically regarding interregional coordination, the Order requires SPP to develop procedures for the joint evaluation of interregional projects that may be more efficient or cost-effective than regional projects. For the purposes of this methodology paper, an interregional project can be either a project that interconnects two planning regions or a project that is completely within one region but provides benefits to both regions. Additionally the order requires that an interregional cost allocation methodology be developed and agreed to between neighboring regions. More information regarding interregional coordination and interregional cost allocation can be found in Attachment O of the SPP Tariff.

The Order is clear that a region cannot force another region to approve for or pay for a project. The project must be approved by each planning region. The methodology described in this paper is meant to describe how SPP will regionally review, analyze, and approve an interregional transmission project.

Overview of the Interregional Compliance with Order 1000
The Order requires SPP to coordinate with the public utility providers in neighboring transmission planning regions. SPP has three Order 1000 neighboring planning regions: 1. Midcontinent Independent System Operator (MISO), 2. Mid-Continent Area Power Pool (MAPP), and 3. Southeastern Regional Transmission Planning region (SERTP).

MISO
The MISO region includes the MISO RTO members, including the transmission owners who are in the process of joining MISO such as Entergy and Cleco. More information regarding the MISO region is available on the MISO website. SPP is interconnected with the following MISO members (or future members): Entergy, Cleco, Ameren Missouri, and MidAmerican Energy Company.

SPP and MISO filed interregional coordination and cost allocation procedures with FERC on July 10, 2013. While SPP and MISO were not in complete agreement on what kind of projects can qualify as an interregional project or on the allocation of costs for an interregional project, there was agreement on interregional coordination and the evaluation of an interregional project.

Interregional coordination between SPP and MISO and the evaluation of interregional projects is defined in the draft SPP-MISO JOA contained in the SPP and MISO’s filings.

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1 www.misoenergy.org
2 SPP FERC filing docket numbers ER13-1939 & ER13-1937. MISO FERC filing docket numbers ER13-1945 & ER13-1938
MAPP
The MAPP region includes the transmission owners who are members of the MAPP Planning Authority. More information regarding the MAPP region can be found on MAPP’s website.\(^3\) SPP is interconnected to MAPP through the Integrated System (IS)\(^4\) which is comprised of WAPA Upper Great Plains Region\(^5\), Basin Electric\(^6\), and Heartland Rural Electric Cooperative\(^7\).

SPP and MAPP each filed for an extension of the compliance deadline for the interregional requirements of the Order. On July 8, 2013 FERC granted the request for an extension of time.\(^8\) However, SPP and MAPP have generally agreed to a coordination and evaluation of interregional projects process. This process is similar to what was agreed to between SPP and MISO. Since SPP and MAPP were granted an extension language governing this process has not yet been filed with FERC.

SERTP
The SERTP region includes the transmission owning sponsors of SERTP. More information on the SERTP region, including a full list of the sponsoring transmission owning sponsors can be found on the SERTP website.\(^9\) SPP is interconnected to the SERTP region through Associated Electric Cooperative (AECI)\(^10\).

SPP and SERTP filed interregional coordination and cost allocation procedures on July 10, 2013.\(^11\) SPP and SERTP are not in complete agreement on what projects can be considered as an interregional project.

Interregional Project Description
An approved interregional project is defined as a project that is evaluated through an Order 1000 compliant interregional process and is approved by both regions. SPP’s agreement with each neighbor identifies the types of projects that can qualify as an interregional project.

With MISO, SPP has agreed that an interregional project can be both a project that interconnects the two planning regions, and also a project that is completely within one region but provides benefits to both regions. SPP and MISO disagree on additional criteria. MISO also requires that a transmission project be at a voltage greater than 300 kV. SPP does not have a voltage requirement. Additionally, MISO is limiting interregional transmission projects to those that address economic issues. SPP does not limit interregional transmission projects based on the types of transmission issues that are being addressed. These items are currently being reviewed by FERC in the compliance filings.

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\(^3\) www.mappcor.org
\(^5\) http://www.wapa.gov/ugp/
\(^6\) http://www.basinelectric.com/
\(^7\) http://www.heartland-rec.com/
\(^8\) http://www.southeasternrtp.com/
\(^9\) http://www.aeci.org/
\(^10\) FERC docket number RM10-23-000
With MAPP, SPP and MAPP agree on what projects can be considered as an interregional project. Both projects that interconnect SPP and MAPP, and projects completely in one planning region but provide benefits to both regions, can qualify as an interregional project. Neither MAPP nor SPP have voltage criterion.

With SERTP only projects that interconnect the SPP and SERTP regions can qualify as an interregional project. Additionally, SERTP requires additional criteria with which SPP does not agree.12

Regional Review Objectives
The interregional transmission process developed with all of SPP’s neighbors each contain a distinct interregional and regional evaluation phase. Each process also requires that both SPP and the applicable neighboring region approve the interregional transmission project in their regional process. This methodology paper reviews how SPP will evaluate and approve an interregional transmission project. The primary objectives of the regional review are as follows:

- Evaluate an interregional project using SPP developed assumptions and analyses
- SPP stakeholder review through the applicable stakeholder groups
- Provide for an approval process

Scope Development
A unique study scope will be developed for each evaluation of an interregional project or group of projects. The scope must include at a minimum the following sections:

- Assumptions: planning horizon, dispatch scenarios, load forecasts, capacity forecasts, modeling footprint, etc.
- Models
- Analyses
- Stakeholder process

The study scope will be approved by the Transmission Working Group (TWG) for the evaluation of interregional projects that address reliability issues. The study scope will be approved by the Economic Studies Working Group (ESWG) for interregional projects addressing economic issues. If an interregional project addresses public policy issues or addresses multiple issues, the scope shall be approved by both the TWG and the ESWG.

Determining Transmission Project Objective(s)
The interregional process starts with the identification of issues. Potential interregional transmission solutions are evaluated to determine whether the solution addresses the issue and provides benefit to SPP and the neighboring region. The nature of the initial issue being addressed by the interregional

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12 The SERTP limits an interregional project to those being over 100 miles and greater than 300 kV.
The project will be used to identify if the interregional project is addressing reliability, economic, or public policy issue.

Projects Addressing Reliability Issues

Criteria
A project addressing a reliability issue will be evaluated using the criteria identified in the most recent ITPNT study scope. The criteria will be used to determine if the interregional project addresses the reliability issue and provides reliability benefit to SPP.

Analyses
The study scope will determine what types of analyses will be performed. These analyses will be based on the issue that is being addressed by the interregional transmission project. At a minimum a steady state N-1 analysis will be performed. If needed, the scope will also include directives to perform stability and/or dynamic analyses. Additional analyses can be performed if needed and directed by the TWG.

Study Assumptions
The model(s) and assumptions used for the evaluation of the interregional transmission project will be based off of either the current or most recent ITPNT or the current or most recent ITP10 as determined by the TWG taking into consideration the expected need date. If the expected need date is within six years the ITPNT should be used. If the expected need date is greater than six years the ITP10 should be used. The following assumptions will be based on the applicable ITP process: planning horizon, dispatch, load forecast, generation capacity, and modeling footprint.

Model Development
The latest ITPNT model will be the basis for the model used to evaluate the issue and the interregional transmission project, unless the dispatch scenario is based off of the most recent ITP10. Updates necessary to reasonably evaluate the interregional transmission project will be made on top of the ITPNT model. If the dispatch scenario is based off of the most recent ITP10 model, than the ITP10 model will be the basis. The transmission topology will be updated to include any additional projects which have been issued an NTC but are not yet reflected in the model.

Stability and dynamic models will be developed only if they are required to evaluate the interregional transmission project and determine whether it addresses the reliability issue being mitigated. If a stability and/or dynamic model is needed, the most recent model developed in either the ITPNT or ITP10 will be used as determined by the TWG.

Stakeholder Process
The TWG and the Seams Steering Committee (SSC) will be the primary stakeholder groups that will direct the regional review of interregional transmission projects which address a reliability issues. Both of these groups will receive updates at their normal stakeholder meetings. Additionally the TWG is responsible for approving the study scope. Both the TWG and SSC will be asked to make a
recommendation to the Markets and Operations Policy Committee (MOPC) on approval of the interregional transmission project.

The MOPC will be provided an update on the regional review as it is in progress. At the conclusion of the regional review analysis, the MOPC, giving consideration to the recommendation of the TWG and SSC, will determine whether or not to recommend approval of the interregional project(s) to the SPP Board of Directors (Board).

The Board also will be provided an update on the regional review as it is in progress. At the conclusion of the region review analysis the Board will determine whether or not to approve the interregional project(s).

Projects Addressing Economic Issues

Criteria
An interregional transmission project that addresses an economic issue will be evaluated on a benefit to cost basis with a benefit to cost ratio (B/C) requirement of 1.0. The benefits used for the benefits portion of the B/C will be based on the metrics used in the current or most recent ITP10. It is not necessary that all of the metrics used in the ITP10 be used in the evaluation of the interregional transmission projects; a subset may be used as determined by the ESWG. At a minimum Adjusted Production Cost (APC) savings will be used. The costs used for the B/C will only be the costs that will be assigned to the SPP region. The interregional process will determine how much of the cost is assigned to SPP and how much is assigned to the neighboring region.

Description of Analyses
The analyses that will be performed will be based on the benefit metrics that will be used as determined by the ESWG. At a minimum a security constrained unit commitment /security constrained economic dispatch analysis will be utilized for the calculation of APC. Additional analyses will be included in the scope based on the ESWG’s decision on what metrics to utilize.

Assumptions Development
The latest or current ITP10 model(s) and assumptions from the business as usual future will be used unless the ESWG determines that adjustments are needed due to a significant change in expected conditions. These assumptions will include load forecast, generation plan (capacity forecast, retirements, public policy requirements, etc.), fuel prices, emission rates and prices, modeling footprints, constraints, and transmission topology. The transmission topology will be updated to include any additional projects which have been issued an NTC but are not yet reflected in the model.

The planning horizon for an interregional transmission project will not exceed 10 years. It is a Tariff requirement that an interregional transmission project have an in-service date within 10 years.
Stakeholder Process

The ESWG and the SSC will be the primary stakeholder groups that will direct the regional review of interregional transmission projects addressing economic issues. Both of these groups will receive updates at their normal stakeholder meetings. Additionally, the ESWG is responsible for approving the study scope. Both the ESWG and SSC will be asked to make a recommendation to the Markets and Operations Policy Committee (MOPC) on approval of the interregional transmission project.

The MOPC will be provided an update on the regional review as it is in progress. At the conclusion of the regional review analysis, the MOPC, giving consideration to the recommendation of the ESWG and SSC, will determine whether or not to recommend approval of the interregional project(s) to the SPP Board of Directors (Board).

The Board also will be provided an update on the regional review as it is in progress. At the conclusion of the region review analysis, the Board will determine whether or not to approve the interregional project(s).

Projects Addressing Public Policy Issues

Criteria

An interregional transmission project that addresses a public policy issue will be evaluated to determine whether the project is a cost effective solution to meeting the applicable public policy requirement(s). The specific criteria used to evaluate a public policy project will be based on criteria in the latest ITP10.

Description of Analyses

Public policy projects will be evaluated to determine whether or not the transmission project will aid in meeting the applicable public policy requirement, and if so, is it more cost effective than regional solutions. The analysis will use a security constrained economic dispatch and unit commitment model to perform a wind curtailment and dispatch study. Additional analyses performed in the latest ITP10 may also be utilized as determined by the ESWG and TWG.

Assumptions Development

As with the evaluation of economic projects, the latest or current ITP10 model(s) and assumptions from the business as usual future will be used unless the ESWG or TWG determines that adjustments are needed due to a significant change in expected conditions or as needed to model the public policy requirement(s). These assumptions will include load forecast, generation plan (capacity forecast, retirements, public policy requirements, etc.), fuel prices, emission rates and prices, modeling footprints, constraints, and transmission topology. The transmission topology will be updated to include any additional projects which have been issued an NTC but are not yet reflected in the model.

The planning horizon for an interregional transmission project will not exceed 10 years. It is a Tariff requirement that an interregional transmission project have an in-service date within 10 years.
Stakeholder Process
The ESWG, TWG, and the SSC will be the primary stakeholder groups that will direct the regional review of interregional transmission projects addressing public policy issues. These groups will receive updates at their normal stakeholder meetings. Additionally the ESWG and TWG are both responsible for approving the study scope. The ESWG, TWG, and SSC will be asked to make a recommendation to the Markets and Operations Policy Committee (MOPC) on approval of the interregional transmission project.

The MOPC will be provided an update on the regional review as it is in progress. At the conclusion of the regional review analysis, the MOPC, giving consideration to the recommendations of the ESWG, TWG, and SSC, will determine whether or not to recommend approval of the interregional project(s) to the SPP Board of Directors (Board).

The Board will also be provided an update on the regional review as it is in progress. At the conclusion of the region review analysis the Board will determine whether or not to approve the interregional project(s).

Projects Addressing Multiple Issues
Many proposed transmission projects are expected to provide multiple types of benefits. Studies will be performed based on the types of expected benefits. If a project is expected to provide both economic and reliability benefits, the study scope would include the necessary evaluations as described in each respective section of this methodology document. For projects addressing multiple issues (economic, reliability, and/or public policy) both the ESWG and TWG, in addition to the SSC will guide the study.

Timing
For an interregional project to be an approved interregional project both regions (SPP and the applicable neighboring region) must approve the project within six months of the completion of the interregional evaluation. The Joint Planning Committee (JPC) can provide an extension to allow for additional time. This extension may be utilized to allow for SPP’s quarterly Board of Directors cycle.

Deliverable
The regional review will conclude with a report being developed which reviews the study assumptions, analyses, results, and benefit calculations. The report will include a recommendation on whether or not the SPP Board should approve the interregional project(s).
Helping our members work together to keep the lights on... today and in the future
State of 2015 ITP10 Futures

- Staff completed resource plans for three futures
  - Business as Usual (Future 1)
  - Decreased Base Load Capacity (Future 2)
  - Increased Input Prices (Future 3)

- Siting plans for Future 1 and Future 2 to be approved 11/21
State of 2015 ITP10 Futures

- BOD Direction
  - Approved the MOPC recommended scope for ITP10 and directed staff to develop, with stakeholders, an analytical approach that will yield useful information to be included in the ITP10 report that provides a measure of the ability of the recommended portfolio to accommodate Future 3 assumptions and needs
Staff Proposal

• Increased Input Prices as a Sensitivity
  – Include Future 3 assumptions in the BAU model
    ▪ High gas price, carbon tax, load growth reduction
    ▪ Identify wind additions as a proxy for Future 3 resource plan results
      – Perform analysis to determine maximum wind capability of the footprint (VSAT)
  – Develop list of remaining needs in the hybrid model after the final portfolio has been developed
Benefits

• Focus in-depth analysis on assumptions driven by the MOPC

• Allow Staff and Members more time for analysis of expected Futures

• Identify system maximum wind capability

• Determine flexibility and value of the final portfolio under assumptions of Increased Input Prices
Our Vision of the Future
Three Foundational Strategies

- Build a Robust Transmission System
- Develop Efficient Market Processes
- Create Member Value
Three Foundational Strategies

**Initiatives**
- Implement Priority Projects
- Develop and implement Integrated Transmission Plan
- Regional cost recovery
- Inter-regional optimization
- Operational optimization

**Build a Robust Transmission System**
Three Foundational Strategies

Initiatives

- Implement Day Ahead market with transmission congestion rights
- Implement reliability unit commitment process
- Incorporate operating reserves into Real Time Balancing and Day Ahead markets
- Implement Consolidated Balancing Authority
- Demand Response Integration
- Manage implementation
Three Foundational Strategies

Initiatives
- Reliability excellence
- Benchmarking and measurement
- Enhance market monitoring tools
- Continuous process improvement
- Strategic membership expansion
- Communication and education
# Strategic Initiative Overview

<table>
<thead>
<tr>
<th>INITIATIVES</th>
<th>FOUNDATIONAL STRATEGIES</th>
<th>ACCOUNTABLE PARTIES</th>
</tr>
</thead>
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<tr>
<td></td>
<td>BUILD A ROBUST TRANSMISSION SYSTEM</td>
<td>DEVELOP EFFICIENT MARKET PROCESSES</td>
</tr>
<tr>
<td>Implement Priority Projects</td>
<td>PRIMARY</td>
<td>SUPPORTIVE</td>
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<td>Develop/Implement Integrated</td>
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<td>Operational Optimization</td>
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<td>Implement Day Ahead Market with</td>
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<td>Transmission Congestion Rights</td>
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<tr>
<td>Implement Reliability Unit Commitment Process</td>
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<td>Incorporate Operating Reserves into Real Time Balancing and Day Ahead Markets</td>
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<td>PRIMARY</td>
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<td>Implement Consolidated Balancing Authority</td>
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<td>Demand Response Integration</td>
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<td>Manage Implementation</td>
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<tr>
<td>Communication and Education</td>
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</table>

**PRIMARY**: These initiatives provide primary support for this strategy.

**SECONDARY**: These initiatives also provide enhanced member value.

**SUPPORTIVE**: These initiatives help support, enable, or increase the effectiveness of this strategy.
# Strategic Initiative Timelines

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<tr>
<td>Regional Cost Recovery</td>
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<td>Inter-Regional Optimization</td>
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<td>Operational Optimization</td>
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| DEVELOP EFFICIENT MARKET PROCESSES                         |      |      |      |      |      |

<table>
<thead>
<tr>
<th>CREATE MEMBER VALUE</th>
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<tr>
<td>Communication and Education</td>
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</table>
Establishing the use of scenarios

- The finalization and internalization of key signposts along with the establishment of a process to monitor and report on material changes
- Polling membership on what their organizations see as the key uncertainties will provide insight
- Benefit to communicating scenarios to key external constituencies
Action Items

• Deliberative Approach
• Engaging now
• Seeking WG input by March/April
• To be consolidated with other input from WGs, stakeholders and the Board
MOPC Action Item 222: ESWG/TWG finalize the benefits metrics & allocation methods for 2015 ITP10 Portfolio analysis and bring back to April 2014 MOPC
Background

- ESWG formed MTF to develop metrics for use in RCAR
- MTF developed report on metrics
- MTF report approved
  - ESWG September 13, 2012
  - MOPC October 16-17, 2012
  - BOD October 30, 2012
Metrics

• MTF recommended that thirteen (13) monetized benefit metrics be utilized in the RCAR process
• Five (5) were benefit metrics previously used in the ITP process
• Eight (8) were benefit metrics newly developed by the MTF
Metrics

- Adjusted Production Cost (APC) Savings
- Reduction of Emission Rates and Values
- Savings due to Lower Ancillary Service Needs and Production Costs
- Avoided or Delayed Reliability Projects
- Capacity Cost Savings due to Reduced On-Peak Transmission Losses
- Mitigation of Transmission Outage Costs
- Assumed Benefit of Mandated Reliability Projects
- Benefits from Meeting Public Policy Goals
- Increased Wheeling Through and Out Revenues
- Capital Savings due to Reduction of Members’ Minimum Required Margin
- Reducing the Cost of Extreme Events
- Reduced Loss of Load Probability
- Marginal Energy Losses Benefits
Most Notable Metrics

• Assumed Benefit of Mandated Reliability Projects
  – Benefits assumed equal to costs
  – Benefits allocated same way costs were allocated to the zone

• Benefits from Meeting Public Policy Goals
  – Benefits assumed equal to costs
  – Benefits allocated to each zone based on zone’s percentage of the unmet renewable requirement
Discussion Questions

• Match RCAR metrics with ITP10 metrics
• Develop Task Force or handle in ESWG
• Review all previously utilized metrics or most notable only
• Review all metrics including those developed by MTF, but not used in the RCAR