

March 3, 2016

**VIA ELECTRONIC FILING**

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Re: *Southwest Power Pool, Inc.*, Docket No. ER13-1939-\_\_\_\_**  
(Open Access Transmission Tariff)

**Order No. 1000 Interregional Compliance Filing**

Dear Secretary Bose:

Pursuant to the Third Order on Compliance issued on February 2, 2016<sup>1</sup> by the Federal Energy Regulatory Commission (“Commission”), Southwest Power Pool, Inc. (“SPP”) submits revisions to Section IV.6 of Attachment O of its Open Access Transmission Tariff<sup>2</sup> as directed by the Commission to comply with its order.

**I. INTRODUCTION**

SPP is a Commission-approved Regional Transmission Organization (“RTO”).<sup>3</sup> It is an Arkansas non-profit corporation with its principal place of business in Little Rock, Arkansas. SPP has 94 Members, including 16 investor-owned utilities, 14 municipal systems, 20 generation and transmission cooperatives, 8 state agencies, 13 independent power producers, 12 power marketers, 10 independent transmission companies and 1 federal agency. As an RTO, SPP administers open access Transmission Service over approximately 56,000 miles of transmission lines covering portions of Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming, across the

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<sup>1</sup> *Sw. Power Pool, Inc.*, 154 FERC ¶ 61,076 (2016) (“Third Order on Compliance”).

<sup>2</sup> Southwest Power Pool, Inc., Open Access Transmission Tariff, Sixth Revised Volume No. 1 (“Tariff”).

<sup>3</sup> *Southwest Power Pool, Inc.*, 109 FERC ¶ 61,009 (2004), *order on reh’g*, 110 FERC ¶ 61,137 (2005).

facilities of SPP's Transmission Owners;<sup>4</sup> and administers the Integrated Marketplace, a centralized day ahead and real-time energy and operating reserve market with locational marginal pricing and market-based congestion management.<sup>5</sup>

On July 10, 2013, SPP submitted Tariff revisions in Docket No. ER13-1939-000 to incorporate Order No. 1000's interregional transmission planning coordination and cost allocation requirements into SPP's planning process.<sup>6</sup> On March 19, 2015, the Commission issued an order on SPP's compliance filing.<sup>7</sup> While accepting important aspects of SPP's compliance proposal for interregional coordination and cost allocation between SPP and SERTP, the First Order on Compliance required further changes to the SPP-SERTP process. SPP's compliance filing in response to the First Order on Compliance was filed on May 18, 2015<sup>8</sup> and the Second Order on Compliance was issued by the Commission as on August 31, 2015.<sup>9</sup> In the Second Order on Compliance the Commission required SPP to file a supplemental compliance filing to list either the particular type of transmission studies that SPP will conduct or cross-reference the specific provisions in the Tariff that indicate the type of transmission studies SPP will conduct to evaluate Order No. 1000 interregional facilities with SERTP.<sup>10</sup>

SPP submitted its compliance filing on September 30, 2015.<sup>11</sup> In its Third Order on Compliance, the Commission found that SPP's Third Compliance Filing failed to

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<sup>4</sup> See *Sw. Power Pool, Inc.*, 89 FERC ¶ 61,084 (1999); *Sw. Power Pool, Inc.*, 86 FERC ¶ 61,090 (1999); *Sw. Power Pool, Inc.*, 82 FERC ¶ 61,267, *order on reh'g*, 85 FERC ¶ 61,031 (1998).

<sup>5</sup> *Sw. Power Pool, Inc.*, 146 FERC ¶ 61,130 (2014) (order approving the start-up and operation of the Integrated Marketplace effective March 1, 2014).

<sup>6</sup> Compliance Filing of Southwest Power Pool, Inc., Docket No. ER13-1939-000 (July 10, 2013) ("First Compliance Filing"). In the First Compliance Filing, SPP submitted revisions to the Tariff as Addendum 4 to Attachment O to incorporate interregional transmission planning coordination and cost allocation procedures with the Southeastern Regional Transmission Planning Process ("SERTP"). Additionally, in the same filing, SPP submitted revisions to the Tariff to be terms of general applicability in SPP's review of Interregional Projects.

<sup>7</sup> *Sw. Power Pool, Inc.*, 150 FERC ¶ 61,210 (2015) ("First Order on Compliance").

<sup>8</sup> Order No. 1000 Interregional Compliance Filing for the SPP-SERTP Seam of Southwest Power Pool, Inc., Docket No. ER13-1939-001 (May 18, 2015) ("Second Compliance Filing").

<sup>9</sup> *Sw. Power Pool, Inc.*, 152 FERC ¶ 61,172 (2015) ("Second Order on Compliance").

<sup>10</sup> See Second Order on Compliance at P 21.

<sup>11</sup> Order No. 1000 Interregional Compliance Filing for the SPP-SERTP Process of Southwest Power Pool, Inc., ER13-1939-002 (September 30, 2015) ("Third Compliance Filing").

adequately address the Commission's directive;<sup>12</sup> and provided language that SPP could include which the Commission stated would satisfy the outstanding requirement.<sup>13</sup> The Commission did accept SPP's revision to Addendum 4 to Attachment O (the SPP-SERTP Process) which pointed an interested reader to Section IV.6 of Attachment O of the Tariff for the list of transmission studies SPP would perform to review an Interregional Project in its planning process.<sup>14</sup> SPP has interpreted the Commission's order to direct SPP to file the language provided by the Third Order on Compliance in Section IV.6 of Attachment O of the Tariff as the cross-reference to Addendum 4 to Attachment O.

This filing contains SPP's proposal to comply with the Third Order on Compliance's requirement that SPP include in the Tariff the specific language from the Regional Review Methodology (with one change noted) identified by the Commission.

## **II. TARIFF REVISIONS TO COMPLY WITH THE THIRD ORDER ON COMPLIANCE**

In the Third Order on Compliance, the Commission identified the following language from SPP's Regional Review Methodology<sup>15</sup> which if included in the Tariff would comply with Order No. 1000's requirement that the Tariff must list either the particular type of transmission studies that SPP will conduct or cross-references the specific provisions in the Tariff that indicate the type of transmission studies SPP will conduct to evaluate Order No. 1000 interregional transmission facilities:

Projects Addressing Reliability Issues Description of 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 Transmission Working Group (TWG).

Projects Addressing Economic Issues Description of Analyses: The analyses that will be performed will be based on the benefit metrics that will be used as determined

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<sup>12</sup> See Third Order on Compliance at P 10.

<sup>13</sup> See *id.* at P 11.

<sup>14</sup> *Id.* at P 12.

<sup>15</sup> The Regional Review Methodology is located on the SPP website at: <http://www.spp.org/documents/22991/spp%20regional%20review%20methodology.pdf>.

by the Economic Studies Working Group (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.

Projects Addressing Public Policy Issues 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 efficient or cost effective than regional solutions. The analysis will use a security constrained economic dispatch and unit commitment model to perform a curtailment and dispatch study. Additional analyses performed in the latest ITP10 may also be utilized as determined by the ESWG and TWG.<sup>16</sup>

To comply with this directive, SPP proposes to revise the Tariff at Section IV.6 of Attachment O to include the language identified above. The language being proposed by SPP in this compliance filing is nearly identical to the language referenced by the Commission, the only difference being edits to recognize the Transmission Provider, and not specific SPP working groups, as the ultimate entity responsible for the performance of the studies identified in the section. Additionally, the practice to not identify specific working groups for the performance of planning studies is also consistent with the overall structure of Attachment O of the Tariff and provides flexibility as stakeholder groups may evolve or change to reflect SPP's needs.

Section IV.6 of Attachment O of the Tariff contains the general terms of applicability how Interregional Projects fit within the scope of SPP's planning process, and this section was accepted by the Commission in the First Order on Compliance. Utilizing Section IV.6 of Attachment O for placement of the language provided in the Third Order on Compliance (i.e., which identifies types of planning studies SPP performs to review and Interregional Project for the SPP-SERTP process) is a reasonable location for these terms. Placement of the Commission-identified language in Section IV.6 of Attachment O is also consistent with Addendum 4 to Attachment O which cross-references Section IV.6 as listing the types of transmission studies SPP will conduct to evaluate Order No. 1000 interregional transmission facilities.<sup>17</sup> For these reasons, SPP respectfully requests the Commission accept this filing as compliant with the directives of the Third Order on Compliance.

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<sup>16</sup> Third Order on Compliance at P 11.

<sup>17</sup> See *supra* n. 14.

### **III. EFFECTIVE DATE**

SPP requests an effective date of January 1, 2015<sup>18</sup> for the Tariff revisions proposed in this compliance filing. Granting an effective date of January 1, 2015 is consistent with the date granted by the Commission in all previous compliance orders in this docket. With this compliance filing, SPP understands and considers that it has satisfied any and all of the Commission's requirements for Order No. 1000's interregional planning and cost allocation that might apply to SPP.<sup>19</sup>

### **IV. ADDITIONAL INFORMATION**

#### **a. Documents Submitted with this Filing:**

In addition to this transmittal letter, the following documents are included with this filing:

Clean and Redline Tariff revisions under the Sixth Revised Volume No. 1.

#### **b. Service:**

SPP has served a copy of this filing on all individuals listed on the service list compiled by the Commission's secretary in this proceeding, as well as SPP Members, Transmission Customers, Market Participants, and all affected state commissions. A complete copy of this filing will be posted on the SPP web site, [www.spp.org](http://www.spp.org).

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<sup>18</sup> SPP is also submitting a version of the Tariff sheet dated February 1, 2015, in order to carryforward the language proposed herein into the Tariff dated February 1, 2015, accepted by the Commission in Docket No. ER14-2553-002.

<sup>19</sup> SPP reiterates its statement from its Third Compliance Filing that SPP has not identified any outstanding interregional planning and coordination requirements as it relates to coordination between SPP and any neighboring planning region (including regions that are in either the Eastern or Western Interconnections). This includes planning regions which will be adjacent to facilities under the Tariff after the integration of new SPP Members on October 1, 2015.

**c. Communications**

In the event the Commission assigns a new docket number for this filing, correspondence and communications with respect to this filing should be sent to, and SPP requests the Secretary to include on the official service list, the following:

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Manager–Regulatory Policy  
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**V. CONCLUSION**

For all the reasons stated herein, SPP respectfully requests that the Commission find the revisions proposed herein to Section IV.6 of Attachment O of the Tariff to be compliant with the directives of the Third Order on Compliance, and grant an effective date of January 1, 2015.

Respectfully submitted,

**/s/ Matthew Harward**

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**Attorney for  
Southwest Power Pool, Inc.**

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Little Rock, Arkansas, this 3rd day of March, 2016.

/s/ Michelle Harris  
Michelle Harris

#### **IV. Other Planning Studies**

##### **1) Sponsored Upgrade Studies**

Any entity may request that a Sponsored Upgrade be built. SPP will evaluate the impact of any Sponsored Upgrade on Transmission System reliability and identify any necessary mitigation of these impacts. Such entity must be willing to assume the cost of such Sponsored Upgrade, study costs, and any cost associated with such necessary mitigation. The proposed Sponsored Upgrade will be submitted to the proper stakeholder working group for their review as a part of the transmission planning process.

##### **2) High Priority Studies**

- a) The Transmission Provider shall perform high priority studies in accordance with this Attachment O and the Transmission Network Economic Modeling & Methods manual which shall be maintained on the SPP website.
- b) Potential Balanced Portfolios, as developed through the process specified in Section IV.3, shall be considered to be high priority studies.
- c) The stakeholders may request high priority studies, including a request for the Transmission Provider to study potential upgrades or other investments necessary to integrate any combination of resources, whether demand resources, transmission, or generation, identified by the stakeholders. Annually, the costs of up to three high priority studies requested by the stakeholders and performed by the Transmission Provider shall be recovered pursuant to Schedule 1-A of this Tariff. A high priority study of a potential Balanced Portfolio initiated by the Transmission Provider will not be considered a stakeholder request pursuant to this Section IV.2.c.
- d) The Transmission Provider, in consultation with the stakeholders, shall develop the scope for each high priority study and post the scope(s) on the SPP website.
- e) Each study shall include:
  - i) Quantification of benefits and costs in accordance with this Attachment O and the Transmission Network Economic Modeling and Methods manual; and
  - ii) An analysis of the sensitivity of the economics of the upgrades included in the high priority study to changes in assumptions.

- f) The Transmission Provider shall solicit input from the stakeholders and the Regional State Committee regarding the appropriate sensitivity analyses to be performed.
  - g) For each high priority study the Transmission Provider shall publish a report, including but not limited to, the study input assumptions, the estimated cost of the upgrades, any third party impacts, the expected economic benefits of the upgrades, and identify reliability impacts, if any, of the upgrades. The report and related studies and the criteria, assumptions and data underlying the report shall be posted on the SPP website, with password protected access if required to preserve the confidentiality of information in accordance with the provisions of the Tariff and the SPP Membership Agreement and to address Critical Energy Infrastructure Information (CEII) requirements. The CEII compliant redacted version of the report shall be posted on the SPP website. The redacted version shall include instructions for acquiring the complete version of the report.
  - h) The Transmission Provider may recommend, based on the results of a high priority study, a high priority upgrade for inclusion in the SPP Transmission Expansion Plan in accordance with the approval process set forth in Section V.
- 3) Evaluation of Potential Balanced Portfolios
- a) The Transmission Provider shall solicit input from stakeholders on combinations of potential economic upgrades to be evaluated as potential Balanced Portfolios.
  - b) Each economic upgrade to be included in a potential Balanced Portfolio:
    - i) Must include a 345 kV or higher voltage facility;
    - ii) May include lower voltage transmission facilities needed to integrate the 345 kV or higher facilities and achieve the benefits; however, the cost of the lower voltage transmission facilities cannot exceed the cost of the 345 kV or higher facilities included in the economic upgrade; and
    - iii) An economic upgrade that includes lower voltage transmission facilities for which the cost of such facilities exceeds the cost of the 345 kV or higher facilities constituting the economic upgrade may be included in the evaluation of a potential Balanced Portfolio, if a Project Sponsor agrees to bear the portion of the cost of the lower voltage facilities that is in excess of the cost of the 345 kV or higher facilities.

- iv) Will include an evaluation of the costs of the upgrades, including any cost impacts potentially allocable to the Transmission Provider or a Zone(s) from third party upgrade(s) required to relieve congestion on a neighboring system due to the construction of the potential Balanced Portfolio.
- c) The Transmission Provider shall determine for each Zone the net present value of the revenue requirements of each potential Balanced Portfolio as follows:
- i) The revenue requirements for each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system. This requirement is for evaluation purposes only and shall not restrict the timing of the construction of individual upgrades within a Balanced Portfolio approved by the SPP Board of Directors.
  - ii) Based on input from the Transmission Owners and other pertinent information, the Transmission Provider shall estimate the construction costs of each upgrade in the potential Balanced Portfolio.
  - iii) For each upgrade in the potential Balanced Portfolio, the Transmission Provider shall use the transmission fixed charge rate(s) for the appropriate Transmission Owner(s) to estimate the revenue requirements. In each annual planning cycle, the Transmission Owner shall supply its fixed charge rate to the Transmission Provider.
  - iv) The fixed charge rate(s) shall take account of all costs necessary to support the upgrade in the potential Balanced Portfolio, including but not limited to, operation and maintenance expenses, depreciation, property and payroll taxes, income taxes, if applicable, return on investment and any other factors affecting the revenue requirement associated with the upgrade.
  - v) The revenue requirements also shall include any specific costs that are projected to be incurred by the Transmission Provider or a Zone(s) as a result of third-party impacts due to one or more upgrades within a proposed Balanced Portfolio.
  - vi) The revenue requirements for the potential Balanced Portfolio shall equal the sum of the revenue requirements of the upgrades that comprise the potential Balanced Portfolio.

- vii) The Transmission Provider shall estimate the cost for each Zone by allocating the revenue requirements for the potential Balanced Portfolio to each Zone based on its Region-wide Load Ratio Share forecasted over the ten year period analyzed.
  - viii) If any costs of an upgrade in the potential Balanced Portfolio will be borne by other funding mechanisms, such costs shall not be included in the determination of the net present value of the revenue requirements for the potential Balanced Portfolio.
- d) The Transmission Provider shall determine for each Zone the net present value of the benefits of each potential Balanced Portfolio as follows:
- i) The benefits from each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system.
  - ii) The Transmission Provider shall use an adjusted production cost metric to analyze the benefits of the potential Balanced Portfolio, where adjusted production cost is the production cost minus revenues from sales plus cost of purchases. As described in Section IV.5 of this Attachment O, the Transmission Provider shall continue to evaluate and explore with the stakeholders any additional metrics and criteria which have quantifiable economic effects.
  - iii) The adjusted production cost benefit for each Zone shall equal the difference between the adjusted production cost with the potential Balanced Portfolio modeled and without the potential Balanced Portfolio modeled.
  - iv) The Transmission Provider shall estimate the annual benefits for each Zone over the same ten-year period as used to determine the costs by calculating the annual benefits for at least three specific years in the ten-year time period and interpolating the annual benefits for the remaining years.
- e) A potential Balanced Portfolio shall meet the following conditions:
- i) Cost Beneficial: The sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c; and

- ii) **Balanced:** For each Zone, the sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c. Additionally, the balance may be achieved through the provisions set forth in Section IV.4.
  - f) In developing a potential Balanced Portfolio, the Transmission Provider shall timely publish a report, including but not limited to, the study input assumptions, the estimated costs included in the potential Balanced Portfolio, and the expected economic benefits of the potential Balanced Portfolio. With regard to such report, the Transmission Provider shall comply with the information sharing and reporting requirements in Part VII (Information Exchange) and Section IV.2 (High Priority Studies) of this Attachment O, including the requirements for treatment of confidential information.
- 4) **Options for Achieving a Balanced Portfolio**
  - a) Section IV.3 of this Attachment O sets forth provisions to achieve a Balanced Portfolio when there are deficient Zones. A deficient Zone is a Zone where the costs allocated to the Zone in Section IV.3.c exceed the benefits allocated to the Zone in Section IV.3.d, including any additional costs or benefits derived from the application of the provisions in this Section IV.4.
  - b) In order to achieve a Balanced Portfolio, the Transmission Provider may include transmission upgrades that do not adhere to the voltage requirements of Sections IV.3.b.i and ii of this Attachment O.
  - c) If including the lower voltage transmission facilities does not achieve a Balanced Portfolio, the Transmission Provider may balance the portfolio by transferring a portion of the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal Annual Transmission Revenue Requirement from the deficient Zone(s) to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement. Transmission Provider shall include the following constraints in this assessment:
    - i) Limit the amount to be transferred from the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal Annual Transmission Revenue Requirement to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement to the minimum amount that will balance the portfolio over the ten-year period analyzed;

- ii) Transfer from the Base Plan Zonal Annual Transmission Revenue Requirement first, then, if necessary, transfer from the Zonal Annual Transmission Revenue Requirement; and
  - iii) For each Zone, meet the conditions specified in Section IV.3.e.ii of this Attachment O.
- 5) Development of Additional Benefit Metrics for Balanced Portfolios
  - a) The Transmission Provider shall continue to evaluate and explore with the stakeholders via the transmission planning process any additional metrics and criteria which have quantifiable economic effects, such as:
    - i) Reduction in system losses;
    - ii) Differing environmental impacts;
    - iii) Improvement to capacity margin and operating reserve requirements;
    - iv) Energy, capacity and ancillary service market facilitation;
    - v) Increased competition in wholesale markets;
    - vi) Reliability enhancement, including storm hardening and black start capability; and
    - vii) Critical infrastructure and homeland security.
  - b) Any subsequent adjustment to the metrics and criteria for evaluating potential Balanced Portfolios developed by the Transmission Provider, with input from the stakeholders, shall be proposed through Tariff amendments.
- 6) Evaluation of Proposed Interregional Projects
  - a) Proposed Interregional Projects shall be developed through the Transmission Provider's participation in an Interregional Planning Process with one or more Interregional Planning Regions in accordance with the provisions of Section VIII of this Attachment O.
  - b) The Transmission Provider shall facilitate a regional review of the proposed Interregional Projects identified in the Coordinated System Plan ("CSP") report developed and issued pursuant to the applicable Interregional Planning Process. The regional review will be subject to the timelines identified in the respective Interregional Planning Region

procedures in accordance with the applicable Addendum(s) to this Attachment O.

- c) The Transmission Provider shall, in consultation with stakeholders, develop the Regional Review Methodology which shall be posted on the Transmission Provider's website. The methodology will contain, at a minimum, the specific procedures to:
  - i. Determine the assumptions and criteria necessary to complete the regional review of proposed Interregional Projects.
  - ii. Determine the regional models to be used in the evaluation of proposed Interregional Projects.
  - iii. Determine the appropriate updates to the regional models to be used in the evaluation of proposed Interregional Projects.
  - iv. Quantify the benefits of each proposed Interregional Project using the Transmission Provider's regional benefit metrics consistent with Section III.6 of this Attachment O.
  
- d) For an Interregional Project that is reviewed pursuant to the Regional Review Methodology, the Transmission Provider shall perform the following types of transmission planning studies:
  - i. **Projects Addressing Reliability Issues Description of 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 determined to be needed by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze transmission reliability issues.
  - ii. **Projects Addressing Economic Issues Description of Analyses:** The analyses that will be performed will be based on the benefit metrics that will be used as determined by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze economic issues. At a minimum a security constrained unit commitment /security constrained economic dispatch analysis will be utilized for the calculation of adjusted production cost. Additional analyses will be included in the scope as determined by the Transmission Provider, in consultation with the stakeholder working groups, on what metrics to utilize.

- iii. Projects Addressing Public Policy Issues 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 efficient or cost effective than regional solutions. The analysis will use a security constrained economic dispatch and unit commitment model to perform a curtailment and dispatch study. Additional analyses performed in the latest ITP10 may also be utilized as determined by the Transmission Provider, in consultation with the applicable stakeholder working groups.
- e) For each regional review of a proposed Interregional Project, the Transmission Provider shall publish a report which includes, but is not limited to, the following:
- i. The results of the regional review analysis and a comparison to the results contained in the CSP report;
  - ii. The study input assumptions and criteria used to assess the proposed Interregional Project;
  - iii. The proposed Interregional Project's reliability impacts on the Transmission Provider's system and impacts on third parties not participating in the applicable Interregional Planning Process;
  - iv. Any expected benefits of the proposed Interregional Project; and
  - v. The Transmission Provider shall make a recommendation whether to approve the proposed Interregional Project and the allocation of proposed Interregional Project costs between the Interregional Planning Regions.
- f) The Transmission Provider's report shall be posted on the Transmission Provider's website. If the Transmission Provider's report contains confidential information in accordance with the provisions of the Tariff, the SPP Membership Agreement, or CEII requirements the report will be password protected to preserve the confidentiality of information and a redacted version of the report shall be posted on the Transmission Provider's website. The redacted version shall include instructions for acquiring the complete version of the report.
- g) The Transmission Provider's report shall be reviewed by the appropriate stakeholder group(s) in accordance with the provisions of Section II of Attachment O. The stakeholder group(s) and the Transmission Provider will each provide a recommendation to the Markets and Operations Policy Committee. The Markets and Operations Policy Committee shall make a

recommendation to the SPP Board of Directors regarding the approval of a proposed Interregional Project.

- h) The SPP Board of Directors shall review all reports and recommendations related to the regional review of the proposed Interregional Project.
  - i. The SPP Board of Directors may approve a proposed Interregional Project only where the benefits equal or exceed the costs for the SPP Region.
  - ii. The Transmission Provider shall notify the applicable interregional joint planning committee whether a proposed Interregional Project has been approved by the SPP Board of Directors.
- i) To qualify as an approved Interregional Project, the proposed Interregional Project must be approved by the SPP Board of Directors and the corresponding Interregional Planning Region in accordance with the applicable Interregional Planning Process.
- j) Upon approval by the corresponding Interregional Planning Region and the SPP Board of Directors, the Transmission Provider's portion of the approved Interregional Project will be constructed in accordance with Section VI of this Attachment O.

#### **IV. Other Planning Studies**

##### **1) Sponsored Upgrade Studies**

Any entity may request that a Sponsored Upgrade be built. SPP will evaluate the impact of any proposed Sponsored Upgrade on Transmission System reliability and identify any necessary mitigation of these impacts. The proposed Sponsored Upgrade shall not be approved as a Sponsored Upgrade if it has been previously identified and included in the current SPP Transmission Expansion Plan as either 1) an upgrade required to satisfy requests for Transmission Service; 2) an upgrade required to satisfy requests for generation interconnection; 3) an approved ITP Upgrade; 4) an upgrade within approved Balanced Portfolios; or 5) an approved high priority upgrade. Such entity must be willing to assume the cost of such Sponsored Upgrade, study costs, and any cost associated with such necessary mitigation. The proposed Sponsored Upgrade will be submitted to the proper stakeholder working group for their review as a part of the transmission planning process.

##### **2) High Priority Studies**

- a) The Transmission Provider shall perform high priority studies in accordance with this Attachment O and the Transmission Network Economic Modeling & Methods manual which shall be maintained on the SPP website.
- b) Potential Balanced Portfolios, as developed through the process specified in Section IV.3, shall be considered to be high priority studies.
- c) The stakeholders may request high priority studies, including a request for the Transmission Provider to study potential upgrades or other investments necessary to integrate any combination of resources, whether demand resources, transmission, or generation, identified by the stakeholders. Annually, the costs of up to three high priority studies requested by the stakeholders and performed by the Transmission Provider shall be recovered pursuant to Schedule 1-A of this Tariff. A high priority study of a potential Balanced Portfolio initiated by the Transmission Provider will not be considered a stakeholder request pursuant to this Section IV.2.c.
- d) The Transmission Provider, in consultation with the stakeholders, shall develop the scope for each high priority study and post the scope(s) on the SPP website.
- e) Each study shall include:

- i) Quantification of benefits and costs in accordance with this Attachment O and the Transmission Network Economic Modeling and Methods manual; and
    - ii) An analysis of the sensitivity of the economics of the upgrades included in the high priority study to changes in assumptions.
  - f) The Transmission Provider shall solicit input from the stakeholders and the Regional State Committee regarding the appropriate sensitivity analyses to be performed.
  - g) For each high priority study the Transmission Provider shall publish a report, including but not limited to, the study input assumptions, the estimated cost of the upgrades, any third party impacts, the expected economic benefits of the upgrades, and identify reliability impacts, if any, of the upgrades. The report and related studies and the criteria, assumptions and data underlying the report shall be posted on the SPP website, with password protected access if required to preserve the confidentiality of information in accordance with the provisions of the Tariff and the SPP Membership Agreement and to address Critical Energy Infrastructure Information (CEII) requirements. The CEII compliant redacted version of the report shall be posted on the SPP website. The redacted version shall include instructions for acquiring the complete version of the report.
  - h) The Transmission Provider may recommend, based on the results of a high priority study, a high priority upgrade for inclusion in the SPP Transmission Expansion Plan in accordance with the approval process set forth in Section V.
- 3) Evaluation of Potential Balanced Portfolios
  - a) The Transmission Provider shall solicit input from stakeholders on combinations of potential economic upgrades to be evaluated as potential Balanced Portfolios.
  - b) Each economic upgrade to be included in a potential Balanced Portfolio:
    - i) Must include a 345 kV or higher voltage facility;
    - ii) May include lower voltage transmission facilities needed to integrate the 345 kV or higher facilities and achieve the benefits; however, the cost of the lower voltage transmission facilities cannot exceed the cost of the 345 kV or higher facilities included in the economic upgrade; and

- iii) An economic upgrade that includes lower voltage transmission facilities for which the cost of such facilities exceeds the cost of the 345 kV or higher facilities constituting the economic upgrade may be included in the evaluation of a potential Balanced Portfolio, if a Project Sponsor agrees to bear the portion of the cost of the lower voltage facilities that is in excess of the cost of the 345 kV or higher facilities.
    - iv) Will include an evaluation of the costs of the upgrades, including any cost impacts potentially allocable to the Transmission Provider or a Zone(s) from third party upgrade(s) required to relieve congestion on a neighboring system due to the construction of the potential Balanced Portfolio.
  - c) The Transmission Provider shall determine for each Zone the net present value of the revenue requirements of each potential Balanced Portfolio as follows:
    - i) The revenue requirements for each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system. This requirement is for evaluation purposes only and shall not restrict the timing of the construction of individual upgrades within a Balanced Portfolio approved by the SPP Board of Directors.
    - ii) Based on input from the Transmission Owners and other pertinent information, the Transmission Provider shall estimate the construction costs of each upgrade in the potential Balanced Portfolio.
    - iii) For each upgrade in the potential Balanced Portfolio, the Transmission Provider shall use the transmission fixed charge rate(s) for the appropriate Transmission Owner(s) to estimate the revenue requirements. In each annual planning cycle, the Transmission Owner shall supply its fixed charge rate to the Transmission Provider.
    - iv) The fixed charge rate(s) shall take account of all costs necessary to support the upgrade in the potential Balanced Portfolio, including but not limited to, operation and maintenance expenses, depreciation, property and payroll taxes, income taxes, if applicable, return on investment and any other factors affecting the revenue requirement associated with the upgrade.

- v) The revenue requirements also shall include any specific costs that are projected to be incurred by the Transmission Provider or a Zone(s) as a result of third-party impacts due to one or more upgrades within a proposed Balanced Portfolio.
  - vi) The revenue requirements for the potential Balanced Portfolio shall equal the sum of the revenue requirements of the upgrades that comprise the potential Balanced Portfolio.
  - vii) The Transmission Provider shall estimate the cost for each Zone by allocating the revenue requirements for the potential Balanced Portfolio to each Zone based on its Region-wide Load Ratio Share forecasted over the ten year period analyzed.
  - viii) If any costs of an upgrade in the potential Balanced Portfolio will be borne by other funding mechanisms, such costs shall not be included in the determination of the net present value of the revenue requirements for the potential Balanced Portfolio.
- d) The Transmission Provider shall determine for each Zone the net present value of the benefits of each potential Balanced Portfolio as follows:
- i) The benefits from each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system.
  - ii) The Transmission Provider shall use an adjusted production cost metric to analyze the benefits of the potential Balanced Portfolio, where adjusted production cost is the production cost minus revenues from sales plus cost of purchases. As described in Section IV.5 of this Attachment O, the Transmission Provider shall continue to evaluate and explore with the stakeholders any additional metrics and criteria which have quantifiable economic effects.
  - iii) The adjusted production cost benefit for each Zone shall equal the difference between the adjusted production cost with the potential Balanced Portfolio modeled and without the potential Balanced Portfolio modeled.
  - iv) The Transmission Provider shall estimate the annual benefits for each Zone over the same ten-year period as used to determine the costs by calculating the annual benefits for at least three specific years in the ten-year time period and interpolating the annual benefits for the remaining years.

- e) A potential Balanced Portfolio shall meet the following conditions:
    - i) Cost Beneficial: The sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c; and
    - ii) Balanced: For each Zone, the sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c. Additionally, the balance may be achieved through the provisions set forth in Section IV.4.
  - f) In developing a potential Balanced Portfolio, the Transmission Provider shall timely publish a report, including but not limited to, the study input assumptions, the estimated costs included in the potential Balanced Portfolio, and the expected economic benefits of the potential Balanced Portfolio. With regard to such report, the Transmission Provider shall comply with the information sharing and reporting requirements in Part VII (Information Exchange) and Section IV.2 (High Priority Studies) of this Attachment O, including the requirements for treatment of confidential information.
- 4) Options for Achieving a Balanced Portfolio
- a) Section IV.3 of this Attachment O sets forth provisions to achieve a Balanced Portfolio when there are deficient Zones. A deficient Zone is a Zone where the costs allocated to the Zone in Section IV.3.c exceed the benefits allocated to the Zone in Section IV.3.d, including any additional costs or benefits derived from the application of the provisions in this Section IV.4.
  - b) In order to achieve a Balanced Portfolio, the Transmission Provider may include transmission upgrades that do not adhere to the voltage requirements of Sections IV.3.b.i and ii of this Attachment O.
  - c) If including the lower voltage transmission facilities does not achieve a Balanced Portfolio, the Transmission Provider may balance the portfolio by transferring a portion of the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal Annual Transmission Revenue Requirement from the deficient Zone(s) to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement. Transmission Provider shall include the following constraints in this assessment:
    - i) Limit the amount to be transferred from the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal

Annual Transmission Revenue Requirement to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement to the minimum amount that will balance the portfolio over the ten-year period analyzed;

- ii) Transfer from the Base Plan Zonal Annual Transmission Revenue Requirement first, then, if necessary, transfer from the Zonal Annual Transmission Revenue Requirement; and
- iii) For each Zone, meet the conditions specified in Section IV.3.e.ii of this Attachment O.

5) Development of Additional Benefit Metrics *for Balanced Portfolios*

- a) The Transmission Provider shall continue to evaluate and explore with the stakeholders via the transmission planning process any additional metrics and criteria which have quantifiable economic effects, such as:
  - i) Reduction in system losses;
  - ii) Differing environmental impacts;
  - iii) Improvement to capacity margin and operating reserve requirements;
  - iv) Energy, capacity and ancillary service market facilitation;
  - v) Increased competition in wholesale markets;
  - vi) Reliability enhancement, including storm hardening and black start capability; and
  - vii) Critical infrastructure and homeland security.
- b) Any subsequent adjustment to the metrics and criteria for evaluating potential Balanced Portfolios developed by the Transmission Provider, with input from the stakeholders, shall be proposed through Tariff amendments.

6) Evaluation of Proposed Interregional Projects

- a) Proposed Interregional Projects shall be developed through the Transmission Provider's participation in an Interregional Planning Process with one or more Interregional Planning Regions in accordance with the provisions of Section VIII of this Attachment O.

- b) The Transmission Provider shall facilitate a regional review of the proposed Interregional Projects identified in the Coordinated System Plan (“CSP”) report developed and issued pursuant to the applicable Interregional Planning Process. The regional review will be subject to the timelines identified in the respective Interregional Planning Region procedures in accordance with the applicable Addendum(s) to this Attachment O.
- c) The Transmission Provider shall, in consultation with stakeholders, develop the Regional Review Methodology which shall be posted on the Transmission Provider’s website. The methodology will contain, at a minimum, the specific procedures to:
  - i. Determine the assumptions and criteria necessary to complete the regional review of proposed Interregional Projects.
  - ii. Determine the regional models to be used in the evaluation of proposed Interregional Projects.
  - iii. Determine the appropriate updates to the regional models to be used in the evaluation of proposed Interregional Projects.
  - iv. Quantify the benefits of each proposed Interregional Project using the Transmission Provider’s regional benefit metrics consistent with Section III.6 of this Attachment O.
- d) For an Interregional Project that is reviewed pursuant to the Regional Review Methodology, the Transmission Provider shall perform the following types of transmission planning studies:
  - i. **Projects Addressing Reliability Issues Description of 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 determined to be needed by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze transmission reliability issues.
  - ii. **Projects Addressing Economic Issues Description of Analyses:** The analyses that will be performed will be based on the benefit metrics that will be used as determined by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze economic issues. At a minimum a security constrained unit commitment /security constrained economic

dispatch analysis will be utilized for the calculation of adjusted production cost. Additional analyses will be included in the scope as determined by the Transmission Provider, in consultation with the stakeholder working groups, on what metrics to utilize.

- iii. Projects Addressing Public Policy Issues 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 efficient or cost effective than regional solutions. The analysis will use a security constrained economic dispatch and unit commitment model to perform a curtailment and dispatch study. Additional analyses performed in the latest ITP10 may also be utilized as determined by the Transmission Provider, in consultation with the applicable stakeholder working groups.
- e) For each regional review of a proposed Interregional Project, the Transmission Provider shall publish a report which includes, but is not limited to, the following:
- i. The results of the regional review analysis and a comparison to the results contained in the CSP report;
  - ii. The study input assumptions and criteria used to assess the proposed Interregional Project;
  - iii. The proposed Interregional Project's reliability impacts on the Transmission Provider's system and impacts on third parties not participating in the applicable Interregional Planning Process;
  - iv. Any expected benefits of the proposed Interregional Project; and
  - v. The Transmission Provider shall make a recommendation whether to approve the proposed Interregional Project and the allocation of proposed Interregional Project costs between the Interregional Planning Regions.
- f) The Transmission Provider's report shall be posted on the Transmission Provider's website. If the Transmission Provider's report contains confidential information in accordance with the provisions of the Tariff, the SPP Membership Agreement, or CEII requirements the report will be password protected to preserve the confidentiality of information and a redacted version of the report shall be posted on the Transmission Provider's website. The redacted version shall include instructions for acquiring the complete version of the report.

- g) The Transmission Provider's report shall be reviewed by the appropriate stakeholder group(s) in accordance with the provisions of Section II of Attachment O. The stakeholder group(s) and the Transmission Provider will each provide a recommendation to the Markets and Operations Policy Committee. The Markets and Operations Policy Committee shall make a recommendation to the SPP Board of Directors regarding the approval of a proposed Interregional Project.
- h) The SPP Board of Directors shall review all reports and recommendations related to the regional review of the proposed Interregional Project.
  - i. The SPP Board of Directors may approve a proposed Interregional Project only where the benefits equal or exceed the costs for the SPP Region.
  - ii. The Transmission Provider shall notify the applicable interregional joint planning committee whether a proposed Interregional Project has been approved by the SPP Board of Directors.
- i) To qualify as an approved Interregional Project, the proposed Interregional Project must be approved by the SPP Board of Directors and the corresponding Interregional Planning Region in accordance with the applicable Interregional Planning Process.
- j) Upon approval by the corresponding Interregional Planning Region and the SPP Board of Directors, the Transmission Provider's portion of the approved Interregional Project will be constructed in accordance with Section VI of this Attachment O.

#### **IV. Other Planning Studies**

1) Sponsored Upgrade Studies

Any entity may request that a Sponsored Upgrade be built. SPP will evaluate the impact of any Sponsored Upgrade on Transmission System reliability and identify any necessary mitigation of these impacts. Such entity must be willing to assume the cost of such Sponsored Upgrade, study costs, and any cost associated with such necessary mitigation. The proposed Sponsored Upgrade will be submitted to the proper stakeholder working group for their review as a part of the transmission planning process.

2) High Priority Studies

- a) The Transmission Provider shall perform high priority studies in accordance with this Attachment O and the Transmission Network Economic Modeling & Methods manual which shall be maintained on the SPP website.
- b) Potential Balanced Portfolios, as developed through the process specified in Section IV.3, shall be considered to be high priority studies.
- c) The stakeholders may request high priority studies, including a request for the Transmission Provider to study potential upgrades or other investments necessary to integrate any combination of resources, whether demand resources, transmission, or generation, identified by the stakeholders. Annually, the costs of up to three high priority studies requested by the stakeholders and performed by the Transmission Provider shall be recovered pursuant to Schedule 1-A of this Tariff. A high priority study of a potential Balanced Portfolio initiated by the Transmission Provider will not be considered a stakeholder request pursuant to this Section IV.2.c.
- d) The Transmission Provider, in consultation with the stakeholders, shall develop the scope for each high priority study and post the scope(s) on the SPP website.
- e) Each study shall include:
  - i) Quantification of benefits and costs in accordance with this Attachment O and the Transmission Network Economic Modeling and Methods manual; and
  - ii) An analysis of the sensitivity of the economics of the upgrades included in the high priority study to changes in assumptions.

- f) The Transmission Provider shall solicit input from the stakeholders and the Regional State Committee regarding the appropriate sensitivity analyses to be performed.
  - g) For each high priority study the Transmission Provider shall publish a report, including but not limited to, the study input assumptions, the estimated cost of the upgrades, any third party impacts, the expected economic benefits of the upgrades, and identify reliability impacts, if any, of the upgrades. The report and related studies and the criteria, assumptions and data underlying the report shall be posted on the SPP website, with password protected access if required to preserve the confidentiality of information in accordance with the provisions of the Tariff and the SPP Membership Agreement and to address Critical Energy Infrastructure Information (CEII) requirements. The CEII compliant redacted version of the report shall be posted on the SPP website. The redacted version shall include instructions for acquiring the complete version of the report.
  - h) The Transmission Provider may recommend, based on the results of a high priority study, a high priority upgrade for inclusion in the SPP Transmission Expansion Plan in accordance with the approval process set forth in Section V.
- 3) Evaluation of Potential Balanced Portfolios
- a) The Transmission Provider shall solicit input from stakeholders on combinations of potential economic upgrades to be evaluated as potential Balanced Portfolios.
  - b) Each economic upgrade to be included in a potential Balanced Portfolio:
    - i) Must include a 345 kV or higher voltage facility;
    - ii) May include lower voltage transmission facilities needed to integrate the 345 kV or higher facilities and achieve the benefits; however, the cost of the lower voltage transmission facilities cannot exceed the cost of the 345 kV or higher facilities included in the economic upgrade; and
    - iii) An economic upgrade that includes lower voltage transmission facilities for which the cost of such facilities exceeds the cost of the 345 kV or higher facilities constituting the economic upgrade may be included in the evaluation of a potential Balanced Portfolio, if a Project Sponsor agrees to bear the portion of the cost of the lower voltage facilities that is in excess of the cost of the 345 kV or higher facilities.

- iv) Will include an evaluation of the costs of the upgrades, including any cost impacts potentially allocable to the Transmission Provider or a Zone(s) from third party upgrade(s) required to relieve congestion on a neighboring system due to the construction of the potential Balanced Portfolio.
- c) The Transmission Provider shall determine for each Zone the net present value of the revenue requirements of each potential Balanced Portfolio as follows:
- i) The revenue requirements for each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system. This requirement is for evaluation purposes only and shall not restrict the timing of the construction of individual upgrades within a Balanced Portfolio approved by the SPP Board of Directors.
  - ii) Based on input from the Transmission Owners and other pertinent information, the Transmission Provider shall estimate the construction costs of each upgrade in the potential Balanced Portfolio.
  - iii) For each upgrade in the potential Balanced Portfolio, the Transmission Provider shall use the transmission fixed charge rate(s) for the appropriate Transmission Owner(s) to estimate the revenue requirements. In each annual planning cycle, the Transmission Owner shall supply its fixed charge rate to the Transmission Provider.
  - iv) The fixed charge rate(s) shall take account of all costs necessary to support the upgrade in the potential Balanced Portfolio, including but not limited to, operation and maintenance expenses, depreciation, property and payroll taxes, income taxes, if applicable, return on investment and any other factors affecting the revenue requirement associated with the upgrade.
  - v) The revenue requirements also shall include any specific costs that are projected to be incurred by the Transmission Provider or a Zone(s) as a result of third-party impacts due to one or more upgrades within a proposed Balanced Portfolio.
  - vi) The revenue requirements for the potential Balanced Portfolio shall equal the sum of the revenue requirements of the upgrades that comprise the potential Balanced Portfolio.

- vii) The Transmission Provider shall estimate the cost for each Zone by allocating the revenue requirements for the potential Balanced Portfolio to each Zone based on its Region-wide Load Ratio Share forecasted over the ten year period analyzed.
  - viii) If any costs of an upgrade in the potential Balanced Portfolio will be borne by other funding mechanisms, such costs shall not be included in the determination of the net present value of the revenue requirements for the potential Balanced Portfolio.
- d) The Transmission Provider shall determine for each Zone the net present value of the benefits of each potential Balanced Portfolio as follows:
- i) The benefits from each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system.
  - ii) The Transmission Provider shall use an adjusted production cost metric to analyze the benefits of the potential Balanced Portfolio, where adjusted production cost is the production cost minus revenues from sales plus cost of purchases. As described in Section IV.5 of this Attachment O, the Transmission Provider shall continue to evaluate and explore with the stakeholders any additional metrics and criteria which have quantifiable economic effects.
  - iii) The adjusted production cost benefit for each Zone shall equal the difference between the adjusted production cost with the potential Balanced Portfolio modeled and without the potential Balanced Portfolio modeled.
  - iv) The Transmission Provider shall estimate the annual benefits for each Zone over the same ten-year period as used to determine the costs by calculating the annual benefits for at least three specific years in the ten-year time period and interpolating the annual benefits for the remaining years.
- e) A potential Balanced Portfolio shall meet the following conditions:
- i) Cost Beneficial: The sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c; and

- ii) **Balanced:** For each Zone, the sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c. Additionally, the balance may be achieved through the provisions set forth in Section IV.4.
  - f) In developing a potential Balanced Portfolio, the Transmission Provider shall timely publish a report, including but not limited to, the study input assumptions, the estimated costs included in the potential Balanced Portfolio, and the expected economic benefits of the potential Balanced Portfolio. With regard to such report, the Transmission Provider shall comply with the information sharing and reporting requirements in Part VII (Information Exchange) and Section IV.2 (High Priority Studies) of this Attachment O, including the requirements for treatment of confidential information.
- 4) **Options for Achieving a Balanced Portfolio**
- a) Section IV.3 of this Attachment O sets forth provisions to achieve a Balanced Portfolio when there are deficient Zones. A deficient Zone is a Zone where the costs allocated to the Zone in Section IV.3.c exceed the benefits allocated to the Zone in Section IV.3.d, including any additional costs or benefits derived from the application of the provisions in this Section IV.4.
  - b) In order to achieve a Balanced Portfolio, the Transmission Provider may include transmission upgrades that do not adhere to the voltage requirements of Sections IV.3.b.i and ii of this Attachment O.
  - c) If including the lower voltage transmission facilities does not achieve a Balanced Portfolio, the Transmission Provider may balance the portfolio by transferring a portion of the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal Annual Transmission Revenue Requirement from the deficient Zone(s) to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement. Transmission Provider shall include the following constraints in this assessment:
    - i) Limit the amount to be transferred from the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal Annual Transmission Revenue Requirement to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement to the minimum amount that will balance the portfolio over the ten-year period analyzed;

- ii) Transfer from the Base Plan Zonal Annual Transmission Revenue Requirement first, then, if necessary, transfer from the Zonal Annual Transmission Revenue Requirement; and
  - iii) For each Zone, meet the conditions specified in Section IV.3.e.ii of this Attachment O.
- 5) Development of Additional Benefit Metrics for Balanced Portfolios
  - a) The Transmission Provider shall continue to evaluate and explore with the stakeholders via the transmission planning process any additional metrics and criteria which have quantifiable economic effects, such as:
    - i) Reduction in system losses;
    - ii) Differing environmental impacts;
    - iii) Improvement to capacity margin and operating reserve requirements;
    - iv) Energy, capacity and ancillary service market facilitation;
    - v) Increased competition in wholesale markets;
    - vi) Reliability enhancement, including storm hardening and black start capability; and
    - vii) Critical infrastructure and homeland security.
  - b) Any subsequent adjustment to the metrics and criteria for evaluating potential Balanced Portfolios developed by the Transmission Provider, with input from the stakeholders, shall be proposed through Tariff amendments.
- 6) Evaluation of Proposed Interregional Projects
  - a) Proposed Interregional Projects shall be developed through the Transmission Provider's participation in an Interregional Planning Process with one or more Interregional Planning Regions in accordance with the provisions of Section VIII of this Attachment O.
  - b) The Transmission Provider shall facilitate a regional review of the proposed Interregional Projects identified in the Coordinated System Plan ("CSP") report developed and issued pursuant to the applicable Interregional Planning Process. The regional review will be subject to the timelines identified in the respective Interregional Planning Region

procedures in accordance with the applicable Addendum(s) to this Attachment O.

- c) The Transmission Provider shall, in consultation with stakeholders, develop the ~~Regional Review Methodology~~ which shall be posted on the Transmission Provider's website. The methodology will contain, at a minimum, the specific procedures to:
- i. Determine the assumptions and criteria necessary to complete the regional review of proposed Interregional Projects.
  - ii. Determine the regional models to be used in the evaluation of proposed Interregional Projects.
  - iii. Determine the appropriate updates to the regional models to be used in the evaluation of proposed Interregional Projects.
  - iv. Quantify the benefits of each proposed Interregional Project using the Transmission Provider's regional benefit metrics consistent with Section III.6 of this Attachment O.

d) For an Interregional Project that is reviewed pursuant to the Regional Review Methodology, the Transmission Provider shall perform the following types of transmission planning studies:

- i. Projects Addressing Reliability Issues Description of 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 determined to be needed by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze transmission reliability issues.
- ii. Projects Addressing Economic Issues Description of Analyses: The analyses that will be performed will be based on the benefit metrics that will be used as determined by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze economic issues. At a minimum a security constrained unit commitment /security constrained economic dispatch analysis will be utilized for the calculation of adjusted production cost. Additional analyses will be included in the scope as determined by the Transmission Provider, in consultation with the stakeholder working groups, on what metrics to utilize.

iii. Projects Addressing Public Policy Issues 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 efficient or cost effective than regional solutions. The analysis will use a security constrained economic dispatch and unit commitment model to perform a curtailment and dispatch study. Additional analyses performed in the latest ITP10 may also be utilized as determined by the Transmission Provider, in consultation with the applicable stakeholder working groups.

de) For each regional review of a proposed Interregional Project, the Transmission Provider shall publish a report which includes, but is not limited to, the following:

- i. The results of the regional review analysis and a comparison to the results contained in the CSP report;
- ii. The study input assumptions and criteria used to assess the proposed Interregional Project;
- iii. The proposed Interregional Project's reliability impacts on the Transmission Provider's system and impacts on third parties not participating in the applicable Interregional Planning Process;
- iv. Any expected benefits of the proposed Interregional Project; and
- v. The Transmission Provider shall make a recommendation whether to approve the proposed Interregional Project and the allocation of proposed Interregional Project costs between the Interregional Planning Regions.

ef) The Transmission Provider's report shall be posted on the Transmission Provider's website. If the Transmission Provider's report contains confidential information in accordance with the provisions of the Tariff, the SPP Membership Agreement, or CEII requirements the report will be password protected to preserve the confidentiality of information and a redacted version of the report shall be posted on the Transmission Provider's website. The redacted version shall include instructions for acquiring the complete version of the report.

fg) The Transmission Provider's report shall be reviewed by the appropriate stakeholder group(s) in accordance with the provisions of Section II of Attachment O. The stakeholder group(s) and the Transmission Provider will each provide a recommendation to the Markets and Operations Policy Committee. The Markets and Operations Policy Committee shall make a

recommendation to the SPP Board of Directors regarding the approval of a proposed Interregional Project.

| gh) The SPP Board of Directors shall review all reports and recommendations related to the regional review of the proposed Interregional Project.

i. The SPP Board of Directors may approve a proposed Interregional Project only where the benefits equal or exceed the costs for the SPP Region.

ii. The Transmission Provider shall notify the applicable interregional joint planning committee whether a proposed Interregional Project has been approved by the SPP Board of Directors.

| hi) To qualify as an approved Interregional Project, the proposed Interregional Project must be approved by the SPP Board of Directors and the corresponding Interregional Planning Region in accordance with the applicable Interregional Planning Process.

| ij) Upon approval by the corresponding Interregional Planning Region and the SPP Board of Directors, the Transmission Provider's portion of the approved Interregional Project will be constructed in accordance with Section VI of this Attachment O.

#### **IV. Other Planning Studies**

##### **1) Sponsored Upgrade Studies**

Any entity may request that a Sponsored Upgrade be built. SPP will evaluate the impact of any proposed Sponsored Upgrade on Transmission System reliability and identify any necessary mitigation of these impacts. The proposed Sponsored Upgrade shall not be approved as a Sponsored Upgrade if it has been previously identified and included in the current SPP Transmission Expansion Plan as either 1) an upgrade required to satisfy requests for Transmission Service; 2) an upgrade required to satisfy requests for generation interconnection; 3) an approved ITP Upgrade; 4) an upgrade within approved Balanced Portfolios; or 5) an approved high priority upgrade. Such entity must be willing to assume the cost of such Sponsored Upgrade, study costs, and any cost associated with such necessary mitigation. The proposed Sponsored Upgrade will be submitted to the proper stakeholder working group for their review as a part of the transmission planning process.

##### **2) High Priority Studies**

- a) The Transmission Provider shall perform high priority studies in accordance with this Attachment O and the Transmission Network Economic Modeling & Methods manual which shall be maintained on the SPP website.
- b) Potential Balanced Portfolios, as developed through the process specified in Section IV.3, shall be considered to be high priority studies.
- c) The stakeholders may request high priority studies, including a request for the Transmission Provider to study potential upgrades or other investments necessary to integrate any combination of resources, whether demand resources, transmission, or generation, identified by the stakeholders. Annually, the costs of up to three high priority studies requested by the stakeholders and performed by the Transmission Provider shall be recovered pursuant to Schedule 1-A of this Tariff. A high priority study of a potential Balanced Portfolio initiated by the Transmission Provider will not be considered a stakeholder request pursuant to this Section IV.2.c.
- d) The Transmission Provider, in consultation with the stakeholders, shall develop the scope for each high priority study and post the scope(s) on the SPP website.
- e) Each study shall include:

- i) Quantification of benefits and costs in accordance with this Attachment O and the Transmission Network Economic Modeling and Methods manual; and
    - ii) An analysis of the sensitivity of the economics of the upgrades included in the high priority study to changes in assumptions.
  - f) The Transmission Provider shall solicit input from the stakeholders and the Regional State Committee regarding the appropriate sensitivity analyses to be performed.
  - g) For each high priority study the Transmission Provider shall publish a report, including but not limited to, the study input assumptions, the estimated cost of the upgrades, any third party impacts, the expected economic benefits of the upgrades, and identify reliability impacts, if any, of the upgrades. The report and related studies and the criteria, assumptions and data underlying the report shall be posted on the SPP website, with password protected access if required to preserve the confidentiality of information in accordance with the provisions of the Tariff and the SPP Membership Agreement and to address Critical Energy Infrastructure Information (CEII) requirements. The CEII compliant redacted version of the report shall be posted on the SPP website. The redacted version shall include instructions for acquiring the complete version of the report.
  - h) The Transmission Provider may recommend, based on the results of a high priority study, a high priority upgrade for inclusion in the SPP Transmission Expansion Plan in accordance with the approval process set forth in Section V.
- 3) Evaluation of Potential Balanced Portfolios
  - a) The Transmission Provider shall solicit input from stakeholders on combinations of potential economic upgrades to be evaluated as potential Balanced Portfolios.
  - b) Each economic upgrade to be included in a potential Balanced Portfolio:
    - i) Must include a 345 kV or higher voltage facility;
    - ii) May include lower voltage transmission facilities needed to integrate the 345 kV or higher facilities and achieve the benefits; however, the cost of the lower voltage transmission facilities cannot exceed the cost of the 345 kV or higher facilities included in the economic upgrade; and

- iii) An economic upgrade that includes lower voltage transmission facilities for which the cost of such facilities exceeds the cost of the 345 kV or higher facilities constituting the economic upgrade may be included in the evaluation of a potential Balanced Portfolio, if a Project Sponsor agrees to bear the portion of the cost of the lower voltage facilities that is in excess of the cost of the 345 kV or higher facilities.
    - iv) Will include an evaluation of the costs of the upgrades, including any cost impacts potentially allocable to the Transmission Provider or a Zone(s) from third party upgrade(s) required to relieve congestion on a neighboring system due to the construction of the potential Balanced Portfolio.
  - c) The Transmission Provider shall determine for each Zone the net present value of the revenue requirements of each potential Balanced Portfolio as follows:
    - i) The revenue requirements for each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system. This requirement is for evaluation purposes only and shall not restrict the timing of the construction of individual upgrades within a Balanced Portfolio approved by the SPP Board of Directors.
    - ii) Based on input from the Transmission Owners and other pertinent information, the Transmission Provider shall estimate the construction costs of each upgrade in the potential Balanced Portfolio.
    - iii) For each upgrade in the potential Balanced Portfolio, the Transmission Provider shall use the transmission fixed charge rate(s) for the appropriate Transmission Owner(s) to estimate the revenue requirements. In each annual planning cycle, the Transmission Owner shall supply its fixed charge rate to the Transmission Provider.
    - iv) The fixed charge rate(s) shall take account of all costs necessary to support the upgrade in the potential Balanced Portfolio, including but not limited to, operation and maintenance expenses, depreciation, property and payroll taxes, income taxes, if applicable, return on investment and any other factors affecting the revenue requirement associated with the upgrade.

- v) The revenue requirements also shall include any specific costs that are projected to be incurred by the Transmission Provider or a Zone(s) as a result of third-party impacts due to one or more upgrades within a proposed Balanced Portfolio.
  - vi) The revenue requirements for the potential Balanced Portfolio shall equal the sum of the revenue requirements of the upgrades that comprise the potential Balanced Portfolio.
  - vii) The Transmission Provider shall estimate the cost for each Zone by allocating the revenue requirements for the potential Balanced Portfolio to each Zone based on its Region-wide Load Ratio Share forecasted over the ten year period analyzed.
  - viii) If any costs of an upgrade in the potential Balanced Portfolio will be borne by other funding mechanisms, such costs shall not be included in the determination of the net present value of the revenue requirements for the potential Balanced Portfolio.
- d) The Transmission Provider shall determine for each Zone the net present value of the benefits of each potential Balanced Portfolio as follows:
- i) The benefits from each potential Balanced Portfolio shall be calculated as if all of the upgrades associated with the potential Balanced Portfolio are simultaneously available to the power system.
  - ii) The Transmission Provider shall use an adjusted production cost metric to analyze the benefits of the potential Balanced Portfolio, where adjusted production cost is the production cost minus revenues from sales plus cost of purchases. As described in Section IV.5 of this Attachment O, the Transmission Provider shall continue to evaluate and explore with the stakeholders any additional metrics and criteria which have quantifiable economic effects.
  - iii) The adjusted production cost benefit for each Zone shall equal the difference between the adjusted production cost with the potential Balanced Portfolio modeled and without the potential Balanced Portfolio modeled.
  - iv) The Transmission Provider shall estimate the annual benefits for each Zone over the same ten-year period as used to determine the costs by calculating the annual benefits for at least three specific years in the ten-year time period and interpolating the annual benefits for the remaining years.

- e) A potential Balanced Portfolio shall meet the following conditions:
    - i) Cost Beneficial: The sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c; and
    - ii) Balanced: For each Zone, the sum of the benefits of the potential Balanced Portfolio determined in Section IV.3.d must equal or exceed the sum of the costs determined in Section IV.3.c. Additionally, the balance may be achieved through the provisions set forth in Section IV.4.
  - f) In developing a potential Balanced Portfolio, the Transmission Provider shall timely publish a report, including but not limited to, the study input assumptions, the estimated costs included in the potential Balanced Portfolio, and the expected economic benefits of the potential Balanced Portfolio. With regard to such report, the Transmission Provider shall comply with the information sharing and reporting requirements in Part VII (Information Exchange) and Section IV.2 (High Priority Studies) of this Attachment O, including the requirements for treatment of confidential information.
- 4) Options for Achieving a Balanced Portfolio
- a) Section IV.3 of this Attachment O sets forth provisions to achieve a Balanced Portfolio when there are deficient Zones. A deficient Zone is a Zone where the costs allocated to the Zone in Section IV.3.c exceed the benefits allocated to the Zone in Section IV.3.d, including any additional costs or benefits derived from the application of the provisions in this Section IV.4.
  - b) In order to achieve a Balanced Portfolio, the Transmission Provider may include transmission upgrades that do not adhere to the voltage requirements of Sections IV.3.b.i and ii of this Attachment O.
  - c) If including the lower voltage transmission facilities does not achieve a Balanced Portfolio, the Transmission Provider may balance the portfolio by transferring a portion of the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal Annual Transmission Revenue Requirement from the deficient Zone(s) to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement. Transmission Provider shall include the following constraints in this assessment:
    - i) Limit the amount to be transferred from the Base Plan Zonal Annual Transmission Revenue Requirement and/or the Zonal

Annual Transmission Revenue Requirement to the Balanced Portfolio Region-wide Annual Transmission Revenue Requirement to the minimum amount that will balance the portfolio over the ten-year period analyzed;

- ii) Transfer from the Base Plan Zonal Annual Transmission Revenue Requirement first, then, if necessary, transfer from the Zonal Annual Transmission Revenue Requirement; and
- iii) For each Zone, meet the conditions specified in Section IV.3.e.ii of this Attachment O.

5) Development of Additional Benefit Metrics *for Balanced Portfolios*

- a) The Transmission Provider shall continue to evaluate and explore with the stakeholders via the transmission planning process any additional metrics and criteria which have quantifiable economic effects, such as:
  - i) Reduction in system losses;
  - ii) Differing environmental impacts;
  - iii) Improvement to capacity margin and operating reserve requirements;
  - iv) Energy, capacity and ancillary service market facilitation;
  - v) Increased competition in wholesale markets;
  - vi) Reliability enhancement, including storm hardening and black start capability; and
  - vii) Critical infrastructure and homeland security.
- b) Any subsequent adjustment to the metrics and criteria for evaluating potential Balanced Portfolios developed by the Transmission Provider, with input from the stakeholders, shall be proposed through Tariff amendments.

6) Evaluation of Proposed Interregional Projects

- a) Proposed Interregional Projects shall be developed through the Transmission Provider's participation in an Interregional Planning Process with one or more Interregional Planning Regions in accordance with the provisions of Section VIII of this Attachment O.

- b) The Transmission Provider shall facilitate a regional review of the proposed Interregional Projects identified in the Coordinated System Plan (“CSP”) report developed and issued pursuant to the applicable Interregional Planning Process. The regional review will be subject to the timelines identified in the respective Interregional Planning Region procedures in accordance with the applicable Addendum(s) to this Attachment O.
- c) The Transmission Provider shall, in consultation with stakeholders, develop the rRegional rReview methodology which shall be posted on the Transmission Provider’s website. The methodology will contain, at a minimum, the specific procedures to:
  - i. Determine the assumptions and criteria necessary to complete the regional review of proposed Interregional Projects.
  - ii. Determine the regional models to be used in the evaluation of proposed Interregional Projects.
  - iii. Determine the appropriate updates to the regional models to be used in the evaluation of proposed Interregional Projects.
  - iv. Quantify the benefits of each proposed Interregional Project using the Transmission Provider’s regional benefit metrics consistent with Section III.6 of this Attachment O.

d) For an Interregional Project that is reviewed pursuant to the Regional Review Methodology, the Transmission Provider shall perform the following types of transmission planning studies:

- i. Projects Addressing Reliability Issues Description of 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 determined to be needed by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze transmission reliability issues.
- ii. Projects Addressing Economic Issues Description of Analyses: The analyses that will be performed will be based on the benefit metrics that will be used as determined by the Transmission Provider, in consultation with the stakeholder working group assigned to analyze economic issues. At a minimum a security constrained unit commitment /security constrained economic

dispatch analysis will be utilized for the calculation of adjusted production cost. Additional analyses will be included in the scope as determined by the Transmission Provider, in consultation with the stakeholder working groups, on what metrics to utilize.

iii. Projects Addressing Public Policy Issues 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 efficient or cost effective than regional solutions. The analysis will use a security constrained economic dispatch and unit commitment model to perform a curtailment and dispatch study. Additional analyses performed in the latest ITP10 may also be utilized as determined by the Transmission Provider, in consultation with the applicable stakeholder working groups.

de) For each regional review of a proposed Interregional Project, the Transmission Provider shall publish a report which includes, but is not limited to, the following:

- i. The results of the regional review analysis and a comparison to the results contained in the CSP report;
- ii. The study input assumptions and criteria used to assess the proposed Interregional Project;
- iii. The proposed Interregional Project's reliability impacts on the Transmission Provider's system and impacts on third parties not participating in the applicable Interregional Planning Process;
- iv. Any expected benefits of the proposed Interregional Project; and
- v. The Transmission Provider shall make a recommendation whether to approve the proposed Interregional Project and the allocation of proposed Interregional Project costs between the Interregional Planning Regions.

ef) The Transmission Provider's report shall be posted on the Transmission Provider's website. If the Transmission Provider's report contains confidential information in accordance with the provisions of the Tariff, the SPP Membership Agreement, or CEII requirements the report will be password protected to preserve the confidentiality of information and a redacted version of the report shall be posted on the Transmission Provider's website. The redacted version shall include instructions for acquiring the complete version of the report.

- | ~~fg~~) The Transmission Provider's report shall be reviewed by the appropriate stakeholder group(s) in accordance with the provisions of Section II of Attachment O. The stakeholder group(s) and the Transmission Provider will each provide a recommendation to the Markets and Operations Policy Committee. The Markets and Operations Policy Committee shall make a recommendation to the SPP Board of Directors regarding the approval of a proposed Interregional Project.
  
- | ~~gh~~) The SPP Board of Directors shall review all reports and recommendations related to the regional review of the proposed Interregional Project.
  - i. The SPP Board of Directors may approve a proposed Interregional Project only where the benefits equal or exceed the costs for the SPP Region.
  - ii. The Transmission Provider shall notify the applicable interregional joint planning committee whether a proposed Interregional Project has been approved by the SPP Board of Directors.
  
- | ~~hi~~) To qualify as an approved Interregional Project, the proposed Interregional Project must be approved by the SPP Board of Directors and the corresponding Interregional Planning Region in accordance with the applicable Interregional Planning Process.
  
- | ~~ij~~) Upon approval by the corresponding Interregional Planning Region and the SPP Board of Directors, the Transmission Provider's portion of the approved Interregional Project will be constructed in accordance with Section VI of this Attachment O.