

**Benefit-Cost Analysis Scope for the Interim Report for
The Empire District Electric Company
Participation in the Southwest Power Pool**

The Empire District Electric Company (Empire) proposes to implement the following approach in order to address the requirements of the current SPP membership stipulation (Case No. EO-2006-0141) in collaboration with the Missouri Public Service Commission Staff and Office of Public Council:

Develop a benefit-cost analysis with a scope beyond a historical analysis of the Energy Imbalance Service (EIS) market based on:

- 1) An evaluation of estimated net savings or benefits that have accrued to Empire retail customers during the first three years of the Southwest Power Pool (“SPP”) Energy Imbalance Services (“EIS”) market that was completed and submitted to the Arkansas Public Service Commission (APSC) on or about June 1, 2011 in Docket No. 04-137-U. Future related submittals to the APSC will also be provided to the MOPSC and stakeholders.
- 2) Structure the analysis to include a broad array of factors that impact the benefits and costs associated with SPP participation.
- 3) Control the cost of the analysis by using existing studies where available, participate in and submit to the MOPSC any future SPP related studies or updates, and develop estimates internally, where necessary, for the remaining components of the analysis.

This methodology not only broadens the required analysis, but also enables Empire to avoid the cost associated with the performance of special third party consultant studies. In addition, it will allow the use of information specific to Empire, where helpful and practical.

The following are the basic elements associated with Empire’s analysis of the estimated benefits and costs of SPP membership:

Reliability Services

Reliability Coordination

Reserve Sharing

Energy Markets

Energy Imbalance Service Operational Benefits and Costs

Day-Ahead and Ancillary Services Operational Benefits and Costs

Balancing Authority Consolidation

Market Operation Costs—Both Internal and External

Incremental Impact of Transmission Charges

Incremental Impact of Lower Priority Transmission Service on Power Transactions

Transmission Upgrades

Benefits of Transmission Upgrades

Costs of Transmission Upgrades

SPP Exit FeesAdditional Cost Applicable to the Stand-Alone CaseAdministrative Costs

Transmission Planning
 Tariff Administration and FERC Regulatory Services
 Scheduling, Dispatch, and System Control
 FERC and NERC Compliance
 Settlements

Plum Point Power Station RTO Related Issues

The above factors will be analyzed from an SPP membership perspective and an Empire stand-alone case. The benefits and costs of these elements will be accumulated for the SPP case and for the stand-alone case to create a total value comparison of each alternative.

Where needed, a range of values will be used to reflect the significant uncertainty behind the estimates. The time horizon of the historical analysis will be for 2007 through 2010 and from a forward perspective using 2014 through 2017 to capture the expected completion of the SPP Priority Projects.

Reliability Services Analysis

The estimated value of reliability coordination services can be taken from existing studies of these services and supplemented with Empire specific information, as appropriate. In the case of reserve sharing services, the incremental cost in the stand-alone case likely will be only the cost of transmission service necessary for reserve sharing support.

Energy Markets Analysis

- 1) For the energy markets analysis, existing studies can be utilized to a large extent. There are two different analyses that looked at the EIS market specifically—the study that was performed by CRA International prior to market start in February 2007, and a study that was completed by SPP and Boston Pacific after the first year of market operations. The CRA study produced more detailed results. The Boston Pacific post implementation review produced results on a regional basis only. However, this study had the advantages of being of more recent vintage and being tied to actual market results. In addition, the gas prices underlying the two studies are somewhat different—prices in the later study were about 20 percent higher than the earlier study. These two studies will be referenced in a complementary fashion, perhaps to create an estimated range of benefits associated with the EIS market. In addition, an analysis will be provided by Empire to estimate system production costs both with and without the EIS market based on estimated net savings or benefits that have accrued to Missouri ratepayers during the first three years of the Southwest Power Pool (“SPP”) Energy Imbalance Services (“EIS”) market that was completed and submitted to the Arkansas Public Service Commission on or about June 1, 2010 in Docket No. 04-137-U. This study will cover the scope detailed in the Stipulation and Agreement by analyzing a recent 12-month period.

- 2) The day-ahead and ancillary service market impacts for all companies in the region were analyzed in a 2009 Ventyx study. The base case in this study is the EIS market, with the change cases looking at different combinations and timing of day-ahead and ancillary service markets. Change Case IIA, with the start date moved to 2014, is the most appropriate scenario to use because it corresponds to SPP's current plans for future markets. This study's results may be supplemented in the near future with analysis to quantify the potential impact of gas price changes/volatility. The Ventyx study results are available for Empire, and any future SPP developed sensitivity analysis related to gas prices will be provided to the MOPSC and stakeholders. The Ventyx market benefits can be added to those resulting from the EIS studies mentioned above to create an estimate of the total benefits related to the future markets planned by SPP.
- 3) The SPP consolidated balancing authority (CBA) has the potential to reduce costs as compared to the current framework of individual balancing authority areas. SPP has developed estimates of this potential cost savings, which is available for inclusion in Empire's analysis.

Other Energy Market Factors

In addition to the existing market operations studies, other factors need to be considered to provide a valid comparison between the SPP case and the stand-alone case:

- A. Current estimates of both internal and external costs to implement the SPP day-ahead and ancillary service markets and the consolidated balancing authority will be added to the cost side of the SPP case. Potentially offsetting a portion of those new market costs, the stand-alone case may include additional administrative costs to manage interfaces between the companies and multiple RTO markets and 3rd party transmission providers;
- B. Stand-alone operations would involve significant incremental transmission charges because of the need to cross tariff boundaries for the purpose of importing power to and exporting power from the Empire transmission system. These costs will be added to the stand-alone case to the extent they are not already incorporated in the EIS study; and,
- C. Transmission service priority can have a material impact on market operations. Potential counterparties are less likely to enter into transactions with Empire when the transmission path crosses a tariff boundary because of the inability to secure a path that is as firm as they could obtain if transacting with another party in the SPP footprint.
- D. Possible impacts involving Empire's Plum Point Power Station resource as it relates to continued membership in SPP and Entergy Arkansas, Inc.'s possible integration into the Midwest Independent System Operator (MISO) RTO.

Transmission Upgrades Analysis

The work performed by the Regional State Committee's Rate Impact Task Force (RITF) can serve as a key component of this analysis because it reflects projected costs of projects in the 2010 SPP Transmission Expansion Plan (SPP Board approved in early 2011). It also reflects the benefits of such projects, but only to the extent those benefits have been quantified by SPP studies (i.e., only Balanced Portfolio and Priority Project benefits).

Corresponding projections will be needed for a stand-alone case in order to compare to the SPP case represented by the RITF estimates. This will involve developing projections of the transmission upgrades and transmission service charges that would be incurred as a result of operating stand-alone. The stand-alone requirements would be driven primarily by the need to provide reliable transmission service to Empire customers under NERC and Regional Entity standards and to meet state-mandated renewable energy standards. However, economic upgrades also may be considered in the stand-alone scenario.

A key uncertainty in this area is whether and how cost impacts may be shifted or mitigated as a result of the policy provisions in the SPP Tariff, Attachment J, Section III.D (entitled "Review of Base Plan Allocation Methodology"). This important initiative is well underway within the SPP stakeholder process by Regional Allocation Review Task Force (RARTF) and relates to the development of the cost allocation reasonableness review method and possible remedies for long term member fairness and equity considerations. This key policy development effort may be documented as an important non-quantified factor in the analysis.

SPP Exit Fees Analysis

For the stand-alone case, an estimate of potential exit fees will be necessary. It is expected that the framework for such fees will soon be clarified by the SPP stakeholder discussions now addressing this issue. The cost assumptions underlying this component should be consistent with those in other sections of this study, such as cost assumption regarding transmission upgrades.

Administrative Costs Analysis

Projections of the fees under SPP Schedule 1-A will be compared to estimates of the costs that will be incurred by Empire if it is required to provide transmission planning, tariff administration, scheduling and system control, compliance work, and transmission settlements as a stand-alone entity. In developing these projections, estimates utilized in other forums will be reviewed, such as those in the SPP study by CRA and SPP finance and Board of Director meetings.

Factors Not Explicitly Quantified

Not all factors that have a bearing on the benefits and costs of RTO participation may be readily quantifiable. Where such factors are identified (such as the pending work of the RARTF and possible RTO related impacts of compliance with Environmental Protection Agency rules and regulations), but not included in the numeric analysis, will be identified as additional considerations with an indication of the potential impact and direction in which the results likely would be affected.