



**Southwest Power Pool, Inc.**

**TRANSMISSION EXPANSION  
COST ALLOCATION PROPOSAL**

**November 12, 2004**



# **Transmission Expansion Cost Allocation in SPP**

## Summary of Recommendations

### **1. Overview**

The purpose of this paper is to summarize in one document the Cost Allocation Working Group's (CAWG) recommendations regarding the allocation of transmission expansion costs within the SPP region. The recommendations and the rationale behind them are a result of the many different discussions, papers, presentations and other documents that the CAWG has used during the past many months to evaluate the various aspects surrounding the transmission expansion cost allocation issues. Although not presented in this document, all of these supporting documents and presentations are posted on the SPP website.

### **2. Types of Transmission Expansion Projects**

The paper is organized by the four different types of transmission expansion projects:

1. Base Funded Upgrades
2. Economic Upgrades
3. Requested Upgrades
4. Generator Interconnection Upgrades

Each section begins with a brief definition of the upgrade type and then summarizes the CAWG's recommendations for allocating costs associated with the specific upgrade type.

### **3. Base Funded Upgrades**

Base Plan Upgrades are those additions and upgrades identified in the SPP transmission plan to ensure the continued reliability of the SPP transmission system, taking into account:

- Existing long-term network transmission service;
- Long-term firm point-to-point transmission service, including those with rollover rights;
- Load growth; and
- New or changed Designated Network Resources that qualify for Base Plan funding

SPP evaluates the transmission system's ability to meet these requirements as part of its biennial planning process. In doing so, the SPP Base Plan must meet the SPP Criteria and NERC Reliability Standards and provide acceptable thermal capability, stability response, short circuit capability and system voltage levels. SPP will identify the upgrades necessary to ensure these standards are met and it is these upgrades that are subject to the Base Plan funding proposal summarized below.

### 3.1 Recommended Approach for Allocating Base Plan Upgrade Costs

After weighing the different approaches, the CAWG has developed a recommended approach for allocating costs for base plan upgrades defined by the elements in the table below:

(i) Element	Recommended Approach
<b>Regional allocation factor</b>	X = 33% meaning that 33% of the base plan upgrade costs will be included in an SPP region wide rate.
<b>Allocation of (100%-X) costs to zones</b>	Use the SPP incremental MW Mile approach to identify zones that benefit from the upgrade and allocate the remaining costs of approved base plan upgrades to these zones.
<b>Conditions on including future designated network resources in base plan</b>	
a. Commitment required before upgrades associated with requests to change DNRs are eligible for base funding approach	5 years, meaning transmission customers would have to demonstrate a firm commitment to a resource for at least 5 years before any associated upgrade costs would be eligible to be included in base plan funding.
b. Maximum reserve margin	125% of peak load will be used as an initial limit. Requests that exceed this limit will be subject to a reasonability check by SPP before being approved and included in the base plan.
c. Safe harbor provision for associated network upgrade costs	\$180,000/MW <sup>1</sup> , meaning that if upgrade costs are less than this figure, they may be included in the base plan if they meet provisions a and b. If the upgrade costs exceed the safe harbor amount, the transmission customer must seek a waiver to have the additional costs eligible for base plan funding. In the absence of a waiver, these excess costs will be directly assigned to the requestor.
<b>Waivers</b>	See Waivers section below.
<b>Review of the Regional Allocation Factor</b>	Review required at least once every 5 years. SPP Board may elect to review more frequently if conditions warrant.

### 3.2 Safe Harbor Provision for Zonal Rate Impact

At its October 26<sup>th</sup> meeting, the RSC discussed the concept of including a zonal rate impact safe harbor provision in the base plan funding proposal and directed the CAWG to investigate this concept. The CAWG evaluated the proposal and recommended to the RSC that this component

<sup>1</sup> This figure was calculated as the average of the transmission investment throughout the region using each transmission owner's annual revenue requirements and fixed charge rate. Hence, a transmission customer requesting to add or change a DNR for 100 MW of service would have a safe harbor limit of \$18M in transmission upgrade costs (\$180,000/MW \* 100 MW).

not be included in the proposal because the analysis showed that there may be unintended consequences that outweighed the potential benefits of such provision. The CAWG recommendation to eliminate this provision from the base funding proposal was discussed and endorsed by the RSC members on the November 10, 2004 conference call.

### 3.3 Waivers

The CAWG recognized that any plan must have sufficient flexibility built in to it so that it is both practical and does not create any undesirable barriers to the competitive market place. Hence, the CAWG recommends including certain waiver provisions that could be used to qualify an expansion project associated with a designated network resource for base funding treatment even if it does not meet the initial conditions specified in the proposal.

1. Lack of competitive alternatives – it may be appropriate to approve a project as a base funded project if there are no competitive alternatives for (one or a group) of transmission customers.
2. Dollar magnitude – there may be a *de minimus* standard that is appropriate for small projects in terms of dollar amounts that provide significant value to the region.
3. Fuel diversity – to the extent a proposed project would benefit the region’s fuel diversity, it may be appropriate to allow certain upgrade costs to be eligible for base funding.
4. Upgrade costs in excess of safe harbor limit – to the extent a transmission customer’s request to change a designated resource has network upgrade costs that exceed the agreed safe harbor amount (i.e., \$180,000/MW), the customer may be required to demonstrate commitment beyond the minimum five-year commitment before such costs would be eligible for base plan funding.<sup>2</sup>
5. Commitment period waiver – it may be appropriate to grant a waiver for requests that do not meet the five-year commitment period if conditions such as the following are met:
  - a. Transmission upgrades associated with the request that cost less than the \$180,000/MW safe harbor amount may justify approving the upgrade even if it doesn’t meet the minimum period commitment.<sup>3</sup>
  - b. Cost-benefit – facilities with a very short payback period<sup>4</sup> may be eligible for flexibility in the minimum period commitment.

### 3.4 Review of the Regional Allocation Factor

The CAWG discussed the question as to how often the regional allocation factor (e.g., 33%) and the zonal allocation methodology (e.g., SPP MW-mile) should be reviewed and updated. The discussion focused primarily on whether the allocation factor and methodology should be: (1) updated on a regular basis (e.g., every planning cycle); (2) tied to the commitment level for the resources (e.g., the 3 year or five year term); or (3) fixed for a minimum period of time. The consensus position developed was that regional allocation factor should be reviewed at least once every 5 years. The SPP Board and RSC could review this more frequently if circumstances

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<sup>2</sup> For example, a project that requires \$20M in upgrade costs for 100 MW of a requested designated network resource (i.e., \$200,000/MW) but has a ten-year commitment may qualify as a base funded project even though it exceeds the safe harbor limit of \$180,000/MW.

<sup>3</sup> For example, a project that costs \$8M in upgrades costs for 100 MW of a requested designated network resource (i.e., \$80,000/MW) and has only a three-year commitment may qualify as a based funded project even though it is below the five-year minimum to qualify as a designated network resource in the base plan.

<sup>4</sup> The payback period is the amount of time that is required for the economic benefits from upgrades associated with a designated network resource to cover the cost of the project. For example, if the payback period is 3 years or less, a project with a three-year commitment may qualify as a base funded project.

warranted. However, the SPP should review the reasonability of this factor under any circumstances at least once every five years.

#### 4. Economic Upgrades

The SPP planning process consists of two phases where the Base Plan Upgrades are defined in the first phase. During the second phase of the planning process, SPP will focus on potential opportunities for economic upgrades. Economic upgrades are defined as projects that are not required in the Base Plan. These projects are economic expansion facilities evaluated as part of the biennial SPP Regional Transmission Expansion Planning Process. By definition, Economic Upgrades are not required to meet NERC or SPP reliability criteria. However, there may be circumstances where an Economic Upgrade may displace or defer one or more Base Plan Upgrade projects. Either transmission customers or SPP may identify proposed Economic Upgrade projects.

##### 4.1 Recommended Approach for Allocating Economic Upgrade Costs

The CAWG has developed a recommended approach for allocating costs for Economic Upgrades defined by the elements in the table below.

<b>Element</b>	<b>Recommended Approach</b>
<b>Mandatory vs. voluntary</b>	Voluntary. SPP may identify potential economic upgrade projects but these would not be built unless one or more parties (the Project Sponsors) agreed to fund the project.
<b>Method for identifying beneficiaries</b>	Generally, this evaluation is up to the Project Sponsors. SPP may identify the potential beneficiaries for a proposed project; however, it would be for information purposes only and would not be binding on any of the parties.
<b>Regional contribution</b>	To the extent an Economic Upgrade project defers or displaces the need for an approved Base Plan Upgrade, the Economic Upgrade project will be eligible to receive a regional contribution that is capped at the avoided base plan costs. This proposal is discussed further in the section below.
<b>Net benefit threshold</b>	There is not explicit net benefit threshold proposed. The Project Sponsors must make the decision as to whether an Economic Upgrade's benefits exceed its costs.
<b>Transmission credits and rights</b>	Transmission revenue credits will be given to the Project Sponsors in accordance with the mechanisms proposed under Attachment Z.

##### 4.2 Regional Contribution for Economic Upgrades

The CAWG considered a number of different approaches to funding economic upgrades, and in particular considered the appropriateness of a regional contribution to these types of projects. The recommendation is that a regional contribution would be appropriate in those instances

where a proposed Economic Upgrade project would allow an approved Base Plan Upgrade to either be deferred or totally displaced. The process would work as follows:

- SPP will develop the Base Plan and identify all required Base Plan Upgrades
- For each proposed Economic Upgrade, SPP will evaluate if the proposed upgrade can either displace or defer an approved Base Plan Upgrade.
- If the Economic Upgrade project will does not eliminate or delay the need for a Base Plan project, the Project Sponsors will pay 100% of the costs for the Economic Upgrade project.
- If an approved Base Plan project can be displaced or deferred, SPP will calculate the Base Plan Avoided Costs that are achievable due to the Economic Upgrade project. These costs are capped at the original project costs for the approved Base Plan Upgrade.<sup>5</sup>
- The Base Plan Avoided Costs will be allocated as follows:
  - 33% of the Base Plan Avoided Costs will be allocated to SPP region-wide rate
  - The remaining 67% of the Base Plan Avoided Costs will be allocated to the zones that would have benefited from the Base Plan Upgrade project(s) that are being deferred or displaced. These zones are identified using the same SPP MW-Mile approach.
  - The Project Sponsors will pay the net of the total Economic Upgrade costs less the Base Plan Avoided Costs.
- The Project Sponsors will receive transmission revenue credits up to the amount of the Economic Upgrade project costs they fund directly. Hence, this value will be up to the total project costs in the case where the Economic Upgrade project does not have any impact on the approved Base Plan upgrades. In the case where there are Base Plan Avoided Costs, the Project Sponsors will receive credits up to the net value they fund.

There may be circumstances where an Economic Upgrade Project defers or eliminates the need for a Base Plan Project that also involved the direct assignment of a portion of the Base Plan Upgrade costs. This situation can only arise in relation to Base Plan Upgrades associated with Designated Network Resources and only if the costs exceed the safe harbor limit. Consider for instance a situation where a proposed Economic Upgrade can displace an approved Base Plan Upgrade whose costs were \$300,000/MW. Under the Base Plan Funding proposal, the \$120,000/MW of costs in excess of the \$180,000/MW safe harbor limit would be directly assigned to the transmission customer requesting these upgrades. However, the Economic Upgrade project eliminates the needs for these costs and hence these costs will not be incurred. There are two questions that arise in this situation:

- Should these “excess costs” be included in the calculation of the Base Plan Avoided Costs?
- Should these “excess costs” continue to be directly assigned even though they will not actually be incurred unless or until the associated Base Plan Upgrades are actually built?

The CAWG recommends the answer to both of these questions simply be no. Particularly in the case where a Base Plan Project is being eliminated entirely, this answer makes sense because the costs will never actually be incurred. If these excess costs were to continue to be directly assigned to the original requestors, it would effectively mean that these entities would be

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<sup>5</sup> For example, assume the approved Base Plan includes Project A at a cost of \$2M; The proposed economic upgrade project total cost is \$10M but would also eliminate the need to build Project A; only \$2M of the proposed economic upgrade costs would be eligible to be base funded.

specifically subsidizing the economic upgrades. Hence, by not continuing the direct assignment, the main implication is that the Base Plan Avoided Costs will be capped at the \$180,000/MW limit.

### **5. Requested Upgrades**

The CAWG is not recommending any changes to the cost allocation for transmission system upgrades associated with approval of routine transmission service requests (“Requested Upgrades”) made in the course of SPP administering its OATT on a day-to-day basis. That is, Requested Upgrades are not associated with projects that are proposed and evaluated as part of the SPP Transmission Expansion Planning Process. Requested Upgrades are projects that are requested and evaluated as part of the transmission service request queue (i.e. the current process for evaluating requests or the Attachment Z process, if approved by FERC). The upgrade costs for these Requested Upgrade projects are not eligible for the proposed economic upgrade funding and will continue to be assigned per the SPP OATT.

### **6. Generator Interconnection Upgrades**

The CAWG is not recommending any changes to the cost allocation for transmission system upgrades associated with generator interconnections. Such upgrades will continue to be evaluated and the associated costs will be allocated per SPP’s implementation of Order 2003-A.