

Priority Project Criteria

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Introduction

By recommendation of the Synergistic Planning Project Team (SPPT), SPP staff was asked to develop a new process for transmission planning with the goal of creating a robust, flexible, and cost-effective transmission system. Staff, in conjunction with SPP stakeholders, is currently developing the Integrated Transmission Planning (ITP) process to meet this goal through integration of the EHV Overlay, Balanced Portfolio, and Reliability Assessment processes.

Significant time is required to fully develop the ITP and integrate the existing transmission planning processes. In order to prevent the loss of near-term opportunities during the transition, the SPPT also directed staff to develop a list of Priority Projects that continue to show up in multiple system evaluations as needed to relieve flowgate congestion and to tie the eastern and western sections of the region together. SPP Staff has also requested Priority Project submissions from stakeholders for consideration. The final list of Priority Projects will be presented to the BOD for approval in October of 2009.

Inclusion Criteria

Projects included in the Priority Project list will need to meet one or more of a set of criteria for consideration. Projects must demonstrate a near-term need for inclusion in this list. The following criteria will be used for the selection of projects to be considered:

1. **Congestion Corridors** – Any project that is a fix to a known congestion corridor will be considered for inclusion. These projects will impact known top flowgates in the footprint as they are projected after the Balanced Portfolio.
2. **Transmission Service Requests** – Any project that repeatedly appears in the Aggregate Study process as a known and needed upgrade to deliver transmission service for multiple parties will be considered.
3. **GI Corridors** – Projects that show up as needed to implement the integration of cluster studies in the GI Interconnection process will be considered.
4. **Economic Projects** – Projects that provide a strong economic impact from past SPP studies as well as potential projects considered to be economic projects for the footprint.
5. **West – East Transfer Capability** – Much of the renewable resource supply for the SPP footprint is located in the western part of the region. These areas are not strongly connected to the rest of the system. Stronger

transmission connections to deliver these resources could provide significant benefit to the region and beyond.

Project Metrics

The Priority Project list will be ranked and developed such that the top projects will be considered for the final list. SPP stakeholders, working through the Economic Studies Working Group (ESWG) and Transmission Working Group (TWG), will assist in the development of the metrics in order to arrive at a consensus for the appropriate metrics.

The metrics being developed to assess the Priority Projects are:

- 1. Adjusted Production Cost (APC)** – Projects will be screened to determine their individual APC benefit for SPP. This benefit metric is typically simulated using a production cost modeling tool accounting for 8760 yearly hourly profiles of system wide commitment and dispatch modeling taken over the course of the study period.
- 2. Environmental Impacts** – SO₂, NO_x, CO₂, and mercury can be modeled for the fuel type used in the generating units for a study. The cost of emissions can be calculated for the units once a value per ton for the emission is determined by stakeholders. Transmission upgrades can then be used to determine the net impact on emission pricing.
- 3. Reliability Impact** – Economic transmission upgrades can have an impact on reliability. This benefit can be seen in the deferral or displacement of reliability projects through construction of more efficient, regional projects. Additionally, the advancement of reliability projects must also be considered for a total overall impact of a collection of economic expansions.
- 4. Deliverability of Capacity and Energy to Load** – Projects will be assessed on their ability to provide or act as enablers for power to be delivered from firm designated resources to respective loads. These projects are typically associated with transmission service requests for new designated resources, but can also be bulk EHV projects for regional transfer capability.
- 5. Impact on Losses** – Lower impedance transmission lines provide a loss savings to the transmission grid. The energy component of the loss savings can be captured as part of a production cost analysis tool. Capacity savings associated with a loss reduction can be determined by looking at select hourly models to determine loss reduction.

- 6. Local Economic Benefits** – Transmission construction provides local economic development and job creation benefits. This benefit will tend to reside in the state where each project will be constructed.

Each project considered will be ranked using the above metrics according to a weighted prioritization methodology. In coordination with stakeholders, each metric will be assigned a “weight” correlating to importance. Once set, the weight for each metric will not change and will be the same for all projects.

The “value” assigned to each metric will vary by project and be assigned by staff according to each project’s projected benefit for that metric. This benefit will be determined through a cost-benefit analysis. The following is an example of a project:

Project X

Metric	Value (0-3)	Weight (0-3)	Value * Weight
Adj. Production Cost	3	3	9
Environmental Impacts	2	3	6
Reliability Impact	1	2	2
Deliverability	2	1	2
Impact on Losses	1	1	1
Local Economic Benefits	0	2	0
Total	-	-	20

Example Generic Project

Conclusion

The Priority Project process is designed to identify the “low-hanging fruit” of transmission needs across the SPP footprint and to provide a systematic approach to prioritizing them. With stakeholder involvement and review, SPP staff will submit to the BOD a list of projects that effectively captures the near-term opportunities while transitioning to the ITP process. Once these projects are approved, staff will work with stakeholders in order to facilitate rapid construction.