Southwest Power Pool

CAWG MEETING
July 25, 2007
Marriott Country Club Plaza
Kansas City, MO
11:00 am – 5:00 pm

AGENDA

1.	Introductions	11:00 - 11:10
2.	STEP Screen to Portfolio Transition Discussion lead by Charles Cates	11:10 – 12:00
3.	Lunch Break	12:00 – 1:00
4.	Off Ramp Facilities Discussion lead by Raj Rana	1:00 – 2:00
5.	ASITF Update Discussion lead by Jason Atwood	2:00 – 2:45
6.	15 minute break	2:45 – 3:00
8.	Early Buy-In for Economic Upgrades Discussion lead by Mike Proctor	3:00 – 4:30
9.	Plans for next meetings	4:30– 5:00

SPP Southwest Power Pool

Helping our members work together to keep the lights on... today & in the future

SPP Southwest Power Pool

2007 STEP Screen to Economic Portfolio Transition

A discussion on the transition from the 2007 SPP Transmission Expansion Plan (STEP) Economic Screen into the CAWG Economic Portfolio

Disclaimer

- **Material in this presentation is preliminary and not considered final. Material is provided for discussion purposes only.**

2007 STEP Screen

- **2007 STEP Screen considers 41 Economic Projects to be screened for potential benefit**
- **Projects are taken from the 2006 STEP Screen, Stakeholder and SPP Staff recommendations and the WFLR Process from the EHV Overlay Study**
  - **2006 STEP – 16 projects**
  - **Stakeholder – 21 projects**
  - **WFLR – 4 projects**

2007 STEP Screen Details

- **2007 STEP Screen developed using Global Energy Decision's (GED) MarketSym software package**
- **Economic Screen considers benefits of projects during 2012 Summer**
- **Benefits are calculated for one typical week month and extrapolated to yearly results by:**
  - **Year = 2 x Summer Benefit**
- **10 Year Benefits calculated at an 8% discount rate**

Projects (Previous STEP)

From Previous STEP
SWPS-Battlefield 161 kV
Cleveland-Sooner 345 kV
Monett 345/161 kV XFer
Iatan - Nashua 345 kV
Tuco-Tolk-Potter 345 kV
Fair Port-Sibley 345 kV
Tolk-Potter 345 kV
East Centerton - Beaver 345 kV
Pittsburg - Ft Smith 345 kV
Midland - Pentagon 230 kV Rebuild
Iatan - Nashua - Thomas Hill 345 kV
Messick 500/230 kV XFer
Tulsa East 345 kV Switching Station
East Centerton - ISES 345 kV
Redbud - Horseshoe Lake 345 kV
Morgan - Montrose - Pleasant Hill 345 kV

Projects (Stakeholder and Staff)

TO and Staff recommendations
Redbud - Cleveland 345 kV
Northwest 345/138 kV XFer (400 MVA)
Arcadia 345/138 kV XFer (400 MVA)
Sunnyside 345/138 kV XFer (400 MVA)
Anadarko 345/138 kV XFer
Swissvale - Stilwell tap @ West Gardner 345 kV
Spearville - Wichita 345 kV
Spearville - Knoll - Axtell 345 kV
Redbud - Sooner 345 kV
Pleasant Hill - Morgan 345 kV
Lang - Wolf Creek 345 kV
JEC - Swissvale 345 kV
Spearville - Viola 345 kV
Stranger - W. Gardner 345 kV
Chesapeake 345/161 kV XFer
Turk - McNeil 500 kV
Ft Smith - Tontitown 500 kV
McDowell 345/230 kV XFer
E. Centeron - E. Rogers 345 kV
Eldorado - Longwood 345 kV (series compensation)
Finney - Potter 345 kV (remove reactors)

Projects (WFLR Process)

From WFLR Process
Swissvale - Wolf Creek 345 kV
Arcadia - Cimarron 345 kV
Brookline - Huben 345 kV
Reno Co. - Auburn Rd 345 kV

- **Projects taken from the WFLR Process represent only a few of the top projects from this process**
- **Many of the projects derived by the WFLR Process are already represented on the project list**

Transitioning into Economic Portfolio

- SPP Staff intends to take the top projects from the 2007 STEP Economic Screen to use as considerations for the Economic Portfolio
- SPP will perform more robust analysis on top candidates

PROMOD Development

- The New Energy Associates (NEA) PROMOD software package was delivered to SPP at the beginning of July
- SPP is in the process of developing working models to be used in the Economic Portfolio analysis
- Economic Portfolio will be developed using both MarketSym and PROMOD software packages in order to provide checks and balances

Economic Portfolio Results

- **SPP intends to deliver results for the Economic Portfolio to the CAWG by August**
- **Further analysis using the PROMOD tool will need to be assessed to refine the final list of projects**

Questions?

SPP Southwest Power Pool

Charles Cates
Planning Engineer
501-614-3551
ccates@spp.org

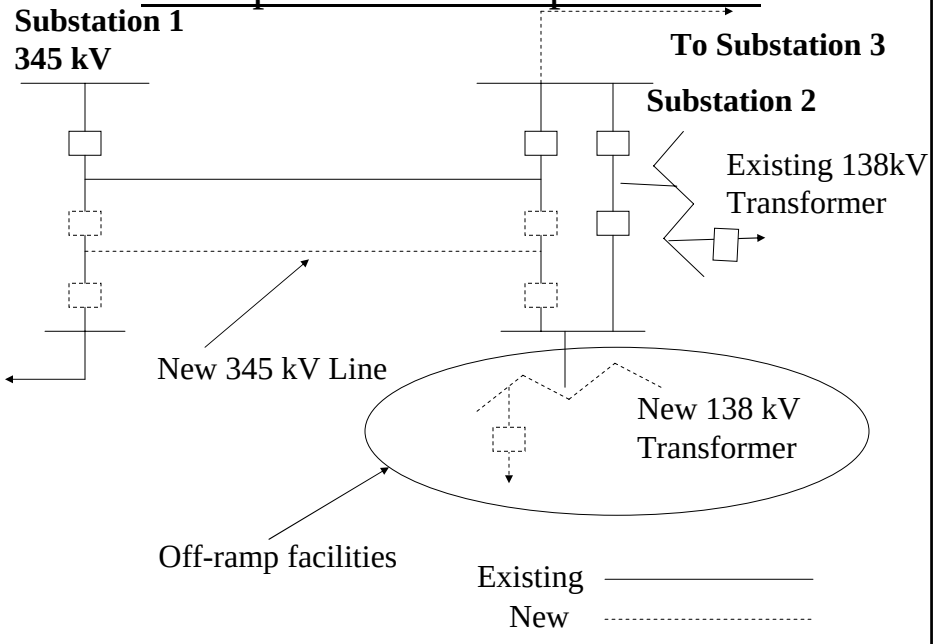
Off-ramp Facilities and Integrating Facilities

Off- Ramp Facilities

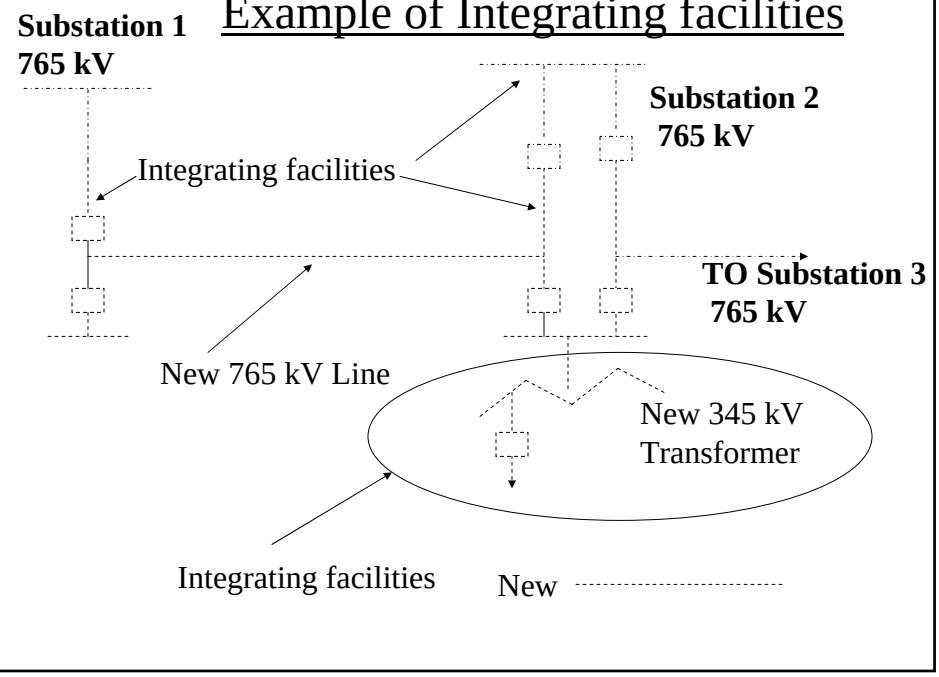
- Off ramp facilities are those, which are required to “tap” a new 765, 500, or 345 kV line or add a 138 kV or a lower voltage step-down transformer and associated station facilities and lines at a new 765, 500, or 345 kV station to support the zonal needs

Any new facilities added below 345 kV to support the zonal needs

Example of Off-Ramp Facilities



Example of Integrating facilities



Cost Allocation For Off- Ramp Facilities

- Costs for off-ramp facilities should be allocated to the benefiting zone(s) using the existing MW-Mile method

Cost Allocation For Integrating Facilities

- Costs for integrating a new 345 kV or higher voltage project should be regionalized
  - Integrating facilities to include:
    - Station facilities to terminate the new project, such as breakers, switches and step down transformers with lower voltage at 345 kV or above, such as a 765-500/345 kV transformer
    - Underlying facility upgrades due to a new project, such as:
      - A 138 kV line requiring an upgrade because of a thermal overload associated with the new 765, 500, or 345 kV project
      - A 138 kV circuit breaker replacement due to short circuit duty imposed by the new 765, 500, or 345 kV project

Questions?

Aggregate Study Improvement Task Force

CAWG Meeting UPDATE July 25, 2007

Introduction

General:

- **Team was formed on Monday, June 18th**
- **7 Members and 2 Observers**
  - **3 Transmission Owners**
  - **3 Transmission Dependent Utilities**
  - **1 Independent Power Producer**
  - **1 FERC Staff and 1 State Commission Staff**

Activity

- 1st Meeting on June 26th
  - Meeting involved Members and Observers only with purpose to elect officers and have a high level discussion regarding issues with current methodology and potential solutions to improve the process.
- Meetings held on July 3rd, July 12th and July 20th
  - Open to all interested parties
  - Continued discussion on issues and solutions

Goal

- Based on the MOPC meeting July 10-11, 2007
- MOPC directs the ASITF to present a report (and if possible, in working with the RTWG, provide tariff language) of potential Aggregate Study revisions prior to the October 16 MOPC meeting.

MOPC Discussion

- MOPC discussed the need for a screening process to augment the Aggregate study process
- MOPC discussed the need to keep the four month process for the Aggregate study
- The ASITF has also discussed these two items during the meetings and agrees with the MOPC.

ASITF Decisions based on first four meetings

- ASITF agreed to remove SIS from the Aggregate study process. This will require tariff changes.
- ASITF agreed to include the 15 day tariff required execution of the study agreement in the 4 month open window or the Transmission Customer will be placed in the subsequent Aggregate study. All required documents including OASIS reservation entry, NITS application update (if applicable), study deposit (if applicable) and study agreement will be in place by the end of the 4 month window. Failure of the Transmission Customer to provide all of the required documents would require the customer's reservation to be placed in the subsequent Aggregate study.

Questions?

Jason Atwood
Kelson Energy
281-482-3007
jason.atwood@kelsonenergy.com

John Mills
SPP
501 614-3356
jmills@spp.org

Early Buy-In for Economic Upgrades

CAWG

July 25, 2007

What Is Early Buy-In?

The following two concepts related to early buy-in are discussed:

- State approval of economic projects.
- Rules for cancelling approved economic projects.

2

State Approvals: Economic Criteria

- Qualifications required by TO's proposal:
  - Portfolio B/C > 1.25
  - Project B/C ≥ 1?
  - Zones B/C ≥ 1
- Problem may occur if project or zone has B/C < 1
  - Certain states expressed doubt about giving state approval for such projects.
  - Assume that B/C ≥ α, where $\alpha \leq 1$.

3

State Approval Process

- Before any project is started, it must first receive all pre-approvals required by state law.
- State pre-approval is not required in all of the SPP states.
  - Currently in Missouri, state pre-approval is required only when transmission facilities are built by a utility outside of its service territory within the state of Missouri.
  - Some states apparently do have a pre-approval process
    - Arkansas
    - Kansas
    - Oklahoma
    - Texas
    - Louisiana
    - New Mexico

4

What Does B/C > 1 Imply?

- If benefits are measured by adjusted production costs, having a B/C > 1 implies that the net revenue requirement impact of the upgrade is to reduce rates.
- When longer term benefits are added, then the impact should be the same, but on a net present value basis rather than on an immediate basis.

5

If B/C>1, What's The Problem?

- The projects in the portfolio will require a time lag for implementation. For example, assume a lag of 3 years from approval to final implementation.
- During this 3-year implementation period, economic projects should be re-evaluated with respect to changes in conditions assumed for the initial evaluation.

6

Proposed Evaluation for Project Cancellation

- Any project in process has two categories of costs:
  1. Sunk Costs: Expenditures already incurred to implement the project.
  2. Projected Completion Costs: Expenditures not yet incurred but are expected at a future date in order to complete the implementation of the project.
- Ongoing evaluation of approved projects should only treat the second category of costs as relevant.

7

Projected Completion Costs Compared to Benefits

- The criteria for stopping a project that is partially completed is that the net present value of the revenue requirements associated with the project completion costs exceed α * (net present value of the benefits expected from the project).
  - Notice that the further into the project, the lower will be the project completion costs, and the less likely the cancellation of the project.
  - Also, this means projects with the longest lead time are more susceptible to cancellation.

8

Early Buy In Defined

- The quid pro quo is that sunk costs incurred for approved projects that were subsequently cancelled should be recoverable.

9

What Are The Risks?

1. With the cancellation of a project, the portfolio is unlikely to remain reasonably balanced – i.e., it is likely that some zone(s) may end up with B/C < 1 because of a cancelled project.
2. It could be argued that the sunk costs of an abandoned project are not used and useful and therefore not recoverable from rate payers.

10

1. Unbalanced Portfolio

Unbalanced portfolio risk can be addressed in at least two ways:

1. Find substitute projects to replace the cancelled project and restore balance to the portfolio.
2. Provide an adjustment to the postage stamp rate design for unbalanced portfolios.

11

2. Used and Useful

- For states having pre-approval, used and useful should not be a problem. It is likely that a state giving pre-approval would condition that pre-approval on the authority to review any cancellation of a project.
- For states not having pre-approval, there is a risk that recovery of the costs from cancelled projects might not be approved. However, these costs would go through SPP as a FERC approved rate, and would not be included as an addition to rate base in the state's cost of service case
  - Where additions to rate base occur, then revenues received from SPP are used as offsets to revenue requirements.
  - In this case, there is no addition to rate base, but there would be an SPP related charge for the cost of a cancelled project.

12

Summary

Two key components – Action Items for August CAWG meeting.

1. Project Completion Costs compared to benefits – criteria for cancellation should be equivalent to B/C criteria for inclusion of a project.
   - Where should we recommend setting α?
2. Proposed modifications to postage stamp rate design for an unbalanced portfolio.
   - Backup formula rate: If the B/C < 1 for a zone, what form of rate adjustment should be made to restore that zone to a B/C = 1 and ensure that all other zones have B/C ≥ 1?

13

Further Discussion?

- Does some form of cancellation policy make sense?
- Does the use of projected completion costs make sense?
- Can the risks of having a cancellation policy be managed?

14