

Transmission Planning Attachment K Public Input Meeting

FERC Order 1000, Quarter One Meeting

March 10, 2016

Agenda

Pacific Time	Topic	Presenter
9:00 – 10:15	<ul style="list-style-type: none"> • Greetings and Introductions • Explain the Planning Process <ul style="list-style-type: none"> ➤ Discuss data collected and adequacy of data, as well as additional data required; ➤ Discuss economic congestion study requests ➤ Discuss creation, scope and membership of local area focus groups 	Jamie Austin
9:15 – 9:30	<ul style="list-style-type: none"> • Explain proposed planning goals <ul style="list-style-type: none"> ➤ Annual TPL Reliability Assessment Studies ➤ Five Year Area Studies 	Robyn Kara Kevin Putnam
9:30 – 9:45	<ul style="list-style-type: none"> • Upcoming Area Studies 	Mark Adams \ Kevin Putnam
9:45 – 10:00	<ul style="list-style-type: none"> • Pendleton Study and the Dal Reed Study kickoff 	Peter Jones

The Planning Process

Jamie Austin

FERC Order 1000

Attachment K , “local” planning process

- ❑ This is the start of a new biennial transmission planning cycle at PacifiCorp, for the period 2016-2017.
- ❑ Consistent with FERC Order 1000 requirements for Attachment K local transmission planning, the transmission system plan covering (2014-15) with public input is posted on the OASIS.

What changed under FERC Order 1000?

- ❑ FERC Order 1000 builds on FERC Orders 888, 889, 890.
 - Issued May 17, 2013; Accepted - October 1, 2013 (effective date)
 - Addresses transmission planning and cost allocation
 - Requires cost allocation to beneficiaries
 - 10 year planning horizon, planning timeline
- ❑ Planning Requirements
 - Open to “ALL” stakeholders
 - Transparent transmission planning process
 - Requires stakeholder input and review of transmission planning and plans
 - May include representatives from other utilities, state energy offices, resource and transmission development interests, environmental groups.
 - Requires regional and interregional planning coordination
 - Quarterly stakeholder meetings.

FERC Order 1000

Planning Goals

- Consistent with FERC Order 890, continue to solicit involvement and constructive participation in the local transmission planning process. Involve qualified customers and stakeholders in the data collection and formulating study assumptions covering...
 - System reliability studies
 - Process consolidation
 - Economic congestion studies

Economic Congestion Study Requests; cluster, prioritize

Background

□ Economic Congestion Studies

- Model the ability of a specific upgrade or other investment to the Local Transmission System.
- Reduce the cost of reliably serving the TP forecasted needs.
- Study enhancements that could alleviate congestion to integrate new resources or loads without having to submit a specific request for service.
- Eligible Customers or Stakeholders may submit requests in Q1 & Q5; none have been received to date.

□ Cluster & Prioritize

- Will cluster, prioritize consistent with posted guidelines.

Local Participation

Focus Groups

- ❑ **The Transmission Provider (TP), PacifiCorp, may at its discretion but with stakeholder input, establish focus groups during Quarter 1, to address specific, identified area planning issues**
- ❑ **The TP, at its discretion, may establish additional focus groups at anytime during the planning process to address significant legislative or regulatory changes affecting either the stakeholders or the TP**
 - The focus group will review available data and the impact of any previous Transmission System Plan (TSP) on Transmission Service to the identified area, and provide recommendations to the TP to be considered for incorporation into the planning assumptions and/or final TSP.
 - Membership to the focus groups will be open to all stakeholders, Network Customers, and Eligible Customers.
 - The Transmission Provider will act as the facilitator for the focus group.
 - The focus group shall address as many issues as possible via email and teleconference.
 - Each focus group shall select a chairperson to set the timeline for discussion and developing recommendations within the scope of 8 Quarter Planning Cycle.
 - All recommendations of the focus group must be based on the consensus of the focus group.
 - Not required to implement recommendations.

Transmission Planning NERC Study Process

Robyn Kara, Manager Area/Transmission Planning
PacifiCorp East Area

One “new” TPL Transmission Planning Standard

- A. TPL-001-4 – (Effective 1/1/16) Combines the previous TPL-001 – 004 standards into one: Transmission System Planning Performance Requirements
- B. Introduces additional planning requirements, e.g., outage of shunt devices, non-redundant relay protection outages, multiple contingency elements, spare equipment analysis
- C. TPL Assessments must be performed annually (summer 2016)

Purpose: System simulations and associated assessments are needed periodically to ensure that reliable systems are developed that meet specified performance requirements, with sufficient lead time and continue to be modified or upgraded as necessary to meet present and future System needs.

4. Applicability:

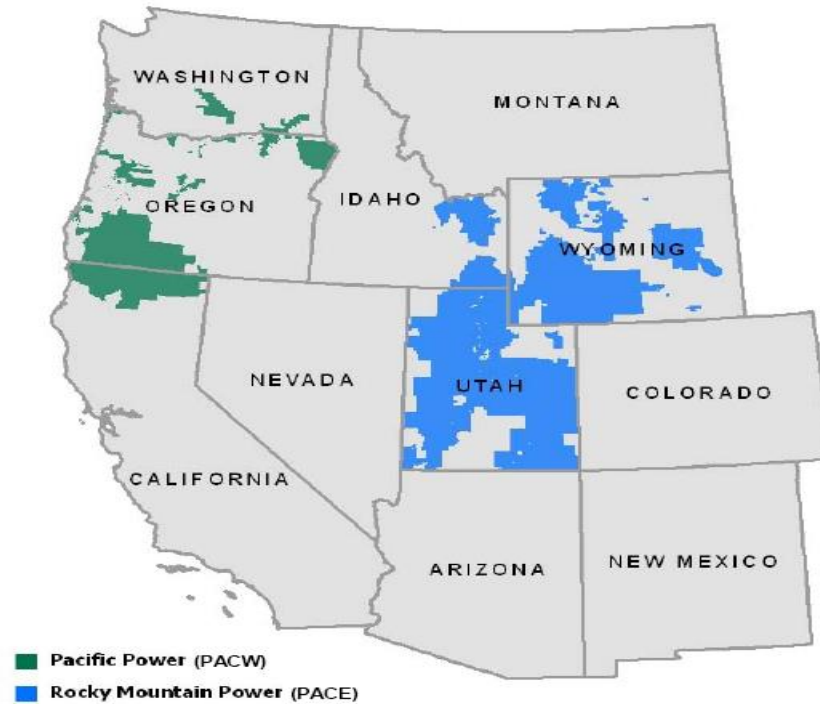
4.1. Planning Coordinator

4.2. Transmission Planner

Separate TPL Studies Performed for PACW And PACE



Service Area



Number of Planning Events Studied in Steady-State Analysis – PACW

Planning Event Description	Category	Near-Term				Long-Term	Total
		2017lsp	2017hs	2020hs	2021hw	2025hs	
P1: Loss of the following:							
1. Generator	P1-1	14	14	14	14	14	70
2. Transmission Circuit	P1-2	108	108	115	115	115	561
3. Transformer	P1-3	28	29	31	31	31	150
4. Shunt Device	P1-4	20	20	20	20	20	100
5. Single Pole of a DC line	P1-5	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵
P2:							
1. Opening of a line section w/o fault	P2-1	57	57	58	58	57	287
2. Bus Section Fault	P2-2	27	27	25	25	25	129
3. Internal Breaker Fault (non-Bus-tie)	P2-3	153	167	173	173	173	839
4. Internal Breaker Fault (Bus-tie)	P2-4	N/A ⁶	N/A ⁶	N/A ⁶	N/A ⁶	N/A ⁶	N/A ⁶
P3, P6 (N-1-1)	P3, P6	8,095	8,136	9,226	9,226	9,226	43,909
Total:		8,519	8,573	9,675	9,675	9,674	46,116

Number of Planning Events Studied in Steady-State Analysis – PACE

Planning Event Description	Category	Near-Term			Long-Term	Total
		2016-17lw	2017hs	2020hs	2025hs	
P1: Loss of the following:						
1. Generator	P1-1	80	80	80	80	320
2. Transmission Circuit	P1-2	295	295	297	300	1187
3. Transformer	P1-3	56	56	56	58	226
4. Shunt Device	P1-4	70	70	70	70	280
5. Single Pole of a DC line	P1-5	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵	N/A ⁵
P2:						
1. Opening of a line section w/o fault	P2-1	45	45	45	45	180
2. Bus Section Fault	P2-2	70	70	70	70	280
3. Internal Breaker Fault (non-Bus-tie)	P2-3	31	31	31	31	124
4. Internal Breaker Fault (Bus-tie)	P2-4	13	13	13	13	52
P3, P6 (N-1-1)	P3, P6	109,216	109,216	116,086	127,452	461,970
Total:		110,041	110,041	116,913	128,284	465,279

2015 TPL Summary of Study Results

Steady-state Analysis

31 (18 PACE, 13 PACW) unique contingencies from planning events were identified in the cases studied which resulted in 37 (34 PACE, 3 PACW) new projects.

Stability Analysis

One (0 PACE, 1 PACW) category planning event was identified in the cases studied which resulted in one (0 PACE, 1 PACW) new project.

Planning Goals

- Data & assumptions
 - Loads,
 - Resources,
 - Load growth expectations
 - Network customers, Point-to-Point customers
 - Interconnection Customers concerning existing and planned Demand Resources and their impacts on demand and peak demand.

- Case selection
 - (Peak Hour) Summer, Winter

Local Area Studies Update - PACW

Kevin Putnam

Five Year Area Studies

Planning Goals

- Data & assumptions
 - Loads,
 - Resources,
 - Load growth expectations
 - Network customer, Point-to-Point customers
 - Interconnection Customers concerning existing and planned Demand Resources and their impacts on demand and peak demand.

- Case selection
 - (Peak Hour) Summer, Winter

Time-line

5-yr studies – West

Study Area	State	Existing Study Completion Date	Update Study Status	Comments
Crescent City	CA	Dec-08	70%	Expected completion in May
Grants Pass	OR	Dec-15		
Hood River	OR	Nov-15		
Pendleton/Hermiston/Enterprise	OR	Oct-09	0%	kick-off March 2016
Walla Walla/Wallula	WA	Dec-09		
Roseburg	OR	Sep-10		
Portland	OR	Mar-11		
Dalreed/Arlington/Sherman Co	OR	Mar-11	0%	kick-off March 2016
Klamath Falls	OR	May-11		
Lakeview/Alturas	OR	May-11		
Coos Bay	OR	Aug-11		
North Oregon Coast	OR	Dec-11		
Yakima	WA	Dec-11	5%	
Medford	OR	Sep-12		
Willamette Valley	OR	Dec-12		
Junction City/Cottage Grove	OR	Dec-12		
Central Oregon	OR	Mar-13		
Yreka	CA	Dec-14		

Local Area Studies Update - PACE

Mark Adams

Time-line

5-yrs studies – East

Study Area	State	Last Studied	Update
Park City/Midway	UT	Dec-12	
North Salt Lake	UT	Feb 13	
Tooele	UT	Mar-13	
Big Horn	WY	Sep-13	
Wyoming (West)	WY	Oct-13	
Salt Lake Valley	UT	July -14	
Ogden	UT	July 14	
Nebo	UT	Oct-14	
Utah (Southwest)	UT	Dec-14	
Pavant	UT	Feb 15	
Goshen	ID	Aug 15	
Powder River	WY	Nov 15	
Honeyville/Malad	UT	Jun -10	1st Q 2016 – 95% Complete (under management review)
Montpelier	ID	Jun-10	1st Q 2016 – 95% Complete (under management review)
Utah Valley	UT	Dec-09	2nd Q 2016 – 85% complete
Grace	ID	Aug-11	2nd Q 2016 – 25% complete
Smithfield	ID	Dec-10	2nd Q 2016 – 20% complete
Sigurd	UT	Dec-11	Scheduled for 2016
Wyoming (Southern)	WY	Aug -11	
Price	UT	Dec- 11	
Utah (Southeast)	UT	Dec-11	
Yampa	UT	Dec-11	

Transmission Planning Studies:

- Pendleton/Hermiston Study Results
- Dal Reed/Sherman County Study Kickoff

Peter Jones

Q & A Session

Contact Information – Link to PacifiCorp OASIS:
<http://www.oasis.pacifiCorp.com/oasis/ppw/main.htmlx>

For Attachment K related comments\questions,
address your requests to:

TransmissionPlanningProposal@PacifiCorp.com

Attachment K

2014-15 Biennial Planning Cycle

Q2 Public Meeting

Late June, 2014

PacifiCorp

Questions / Comments?