



# SYSTEM OPERATIONAL AND RELIABILITY BENEFITS TOOL ("SBT")

**SBT Workgroup – Workshop #3**

**November 20, 2013**

**Portland, Oregon and Salt Lake City, Utah**



*Let's turn the answers on.*

# Agenda (MT)

---

- 10:00-10:15 – Welcome / Introductions / Overview
- 10:15-11:00 – Operational Cost Savings & Improved Gen Dispatch
- 11:00-11:30 – Segment Line Loss Savings (energy & capacity)
- 11:30-12:15 – Customer & Regulatory

-----

- 12:15 –1:00 – Lunch

-----

- 1:00-1:30 – System Reliability
- 1:30-2:00 – Avoided Capital Costs
- 2:00-2:45 – Wheeling Revenues / Other Items
- 2:45-3:00 – Wrap-Up

# SBT Workgroup Objective and How it Was Met

---

- Objective:
  - Establish a stakeholder workgroup and schedule workshops to further review the SBT
- How the objective was met:
  - Established SBT workgroup following “kick-off” webinar in July 2013
  - Held SBT workgroup workshops August 2013 through November 2013
  - Walked through each SBT benefit category and provided detail of the calculations and methodology
  - Solicited feedback and comments following each workshop
  - Responded to feedback and comments at each workshop

# SBT Benefit Categories

---

- Seven benefit categories assessed by the SBT:
    - Operational cost savings (economic driven)
    - Improved generation dispatch (reliability driven)
    - Segment loss savings (energy and capacity)
    - System reliability
    - Customer and regulatory
    - Avoided capital cost
    - Wheeling revenue opportunity
  - “Wrap-Up” Workgroup Workshop #3
    - Comments, feedback, and wrap-up
- Focus of SBT Workgroup Workshop #1 and “Make-Up” Webinar; as available, response to comments or requests for more information following “Kick-Off” Webinar
- Focus of SBT Workgroup Workshop #2; as available, response to comments or requests for more information following Workshop #1
- Focus of SBT Workgroup Workshop #3; as available, response to comments or requests for more information following Workshop #2

## Recap - Workgroup “Is” and “Isn’t”

---

- The SBT workgroup is an opportunity to:
  - Deepen technical understanding of the SBT
  - Provide input to improve and refine SBT metrics
  - Collaborate with the company and stakeholders
- The SBT workgroup is not a forum for:
  - Challenging assumptions or analysis produced in the 2013 Integrated Resource Plan (IRP)
  - Re-running models used in the IRP process
  - Obtaining information beyond the scope necessary for improving the SBT

# SBT Workgroup Participants

---

Organizations represented:

- Blue Castle Project
- *Citizens Utility Board*
- Idaho Public Utilities Commission
- NW Energy Coalition
- Oregon Department of Energy
- *Oregon Public Utility Commission*
- Utah Association of Energy Users
- Utah Clean Energy
- Utah Office of Consumer Services
- *Utah Division of Public Utilities*
- Washington Utilities and Transportation Commission
- Wyoming Industrial Energy Consumers
- Wyoming Public Service Commission, Office of Consumer Advocate

*- Additional SBT workgroup members following Workshop #1*

# Comments Following SBT Workgroup Workshop #2

---

- Following SBT Workgroup Workshop #2 written comments were received October 18, 2013 from the following workgroup participants:
  - Utah Association of Energy Users (UAE)
  - Utah Office of Consumer Services (OCS)
  - Utah Public Service Commission (UPSC)
  - Washington Utilities and Transportation Commission (WUTC)
  - Wyoming Industrial Energy Consumers (WIEC)
- Comments received at [TransmissionSBT@PacifiCorp.com](mailto:TransmissionSBT@PacifiCorp.com) were emailed to SBT workgroup participants on October 22, 2013
- Summarize comments and clarification requests received

# Modeling of Operational Cost Savings in SO and PaR

---

- Parties requested more detailed information from the studies, such as:
  - Breakout of operational cost savings by category, by type and location
  - Additional information on the dispatch of resources before and after Segment D is added
  - Clarification whether the \$511m savings is from the SO or PaR model
- Parties recommended and encouraged the Company to look for alternative ways to model cost savings, especially to reduce additional dispatch and resource avoidance related modeling outside the System Optimizer (SO) and Planning and Risk (PaR) models, such as:
  - Modeling stochastic wind generation in the PaR model
  - Modeling savings from avoided energy loss in the PaR model
  - Modeling savings from avoided/deferred capacity investments in the SO and PaR models

# Segment Loss Savings - Energy

---

- Parties encouraged the company to explore ways to incorporate this benefit category into PaR modeling efforts as described on the earlier modeling slides
- Parties requested clarifying information including:
  - Recalculate energy loss savings for subparts of Segment D to reflect existing 230 kV facilities
  - Provide the year-by-year differences between the Palo Verde prices used in the energy loss savings benefit calculation for the SBT workgroup vs. the IRP

# Customer & Regulatory

---

- Parties recommended and encouraged the company to consider:
  - Presenting this category as having a range of benefits
  - Collecting customer-specific outage impact information (rather than relying on an industry study) to inform the benefit calculation
  - Not including the benefit category in the SBT as currently presented
- Responses:
  - As indicated in Workshop #2, PacifiCorp will separate the customer and regulatory benefit components and move the customer benefit component outside the cost/benefit ratio SBT calculation
  - PacifiCorp appreciates the stakeholder feedback and will continue to consider ways to refine this benefit category and quantify benefits based on customer-specific data

# Customer & Regulatory Cont'd

---

- Parties requested additional clarifying information:
  - Benefits identified under the regulatory portion should be identified separate from the contribution of improvements already made for Segment D
  - LBNL study points to weather as a contributor of major events in the past 10 years. Would like more information how new transmission helps if most events are related to weather
  - Requests more information regarding the assumption of one outage per customer over the next twenty years

# System Reliability

---

- Parties requested additional clarifying information:
  - Provide additional detail regarding how the system impact derate was calculated for use in this benefit category and in particular for the Bridger 345 kV system operating conditions.
  - Recommends planned outages not be included in the benefit calculation .
  - Request for further information regarding use of the Palo Verde price curve:
    - Explain why fixed coal costs in SBT are \$10.63 per MWh while the 2011 IRP shows \$22.81 per MWh (page 117)
    - O&M variable cost of \$1.27 per MWh (page 117 of the 2011 IRP) should be included in the benefit calculation
  - Suggests market price should be reduced by 13% assuming reserves provided with the Palo Verde market purchases.

# Avoided Capital Costs

---

- Parties' feedback suggests that, when applying this benefit category of the SBT, it should include:
  - A well-defined transmission project that has gone through some level of transmission planning analysis
  - A specific project that would not be needed if the proposed transmission investment is constructed
  - Evaluate if there are benefits that would offset the costs associated with the avoided capital cost of the project

The Brattle Group's 2013 report ***The Benefits of Electric Transmission: Identifying and Analyzing the Value of Investments*** suggests that any reduction in cost due to avoided or delayed transmission lines that would otherwise be required to address reliability needs can be considered an off-setting benefit for transmission projects which are proposed for economic or public policy reasons. As has been pointed out by workshop participants both during prior meetings as well as by written comments or questions, it can be difficult to parse the benefits of transmission lines in such a way that each component can be independently considered and compared.

# Avoided Capital Costs Cont'd

---

- Parties requested additional clarifying information:
  - Provide additional support for avoided capital costs (i.e., transmission studies, budgets, etc.)
  - Offset the avoided capital costs with avoided benefits of the avoided project, using the same SBT benefit categories
  - Provide more information on the need for the proxy project provided in this benefit calculation (i.e., Mustang-Freezeout 230 kV line)
  - If the project that would be built in lieu of Segment D is not the Mustang-Freezeout line, conduct a full detailed analysis of what would be built (WIEC)
  - For the Mustang-Freezeout line provide in-service dates if Segment D is constructed and if Segment D is not constructed and cost of the project (WIEC)
  - This benefit should be captured as a capital cost deferment in the NPV calculation for avoided capital costs rather than an avoidance of the capital cost (WIEC)

# Wheeling Revenues

---

- Parties encouraged the company to 1) provide a range of values for benefits under this category and 2) provide actual transmission service requests as support for the benefit amount or other support for interest in the capacity
- Parties requested clarifying information including:
  - Model benefit with a range of values (not assume a fixed value each year, every year) and base the amounts on actual transmission requests
  - Provide copies of OASIS requests supporting the 100 MW assumption
  - Identify the combined incremental capacity increase across TOT 4A/4B and more information regarding how the interaction would affect Segment D
  - Identify other areas on PacifiCorp's system where incremental revenues may be realized when Segment D is constructed
  - Further demonstrate / describe how the incremental wheeling revenue benefit resulting from increased transfer capability of the transmission investment is not being captured in other benefit categories

## Other Feedback

---

- Provide a range of values as possible for certain benefit categories including line loss benefits for situations where the transmission investment (Segment D) becomes fully utilized and scenarios where third party transmission is built and EPA regulations or retirement of units increases available transmission capacity
- As PacifiCorp pursues Energy Gateway projects that span multiple jurisdictions, the SBT should include a distributional component to measure where the projected benefits of the project would accrue

# Wrap Up

---

- PacifiCorp appreciates the direct involvement of workgroup participants in further review of the SBT
- Feedback collected throughout the SBT workgroup workshops will be considered in preparation for the 2015 IRP

**THANK YOU !**