

ColumbiaGrid Update for WUTC

September 14, 2015

Topics (Suggested)

- Corporate Update
- Transmission Expansion Planning
- Order 1000
- Western Planning Regions Coordination
(ColumbiaGrid, CAISO, NTTG, WestConnect)

Members and Planning Participants



- Avista Corporation
- Bonneville Power Administration
- Chelan County PUD
- Cowlitz County PUD*
- Douglas County PUD*
- MATL (formerly Enbridge)*
- Grant County PUD
- Puget Sound Energy
- Seattle City Light
- Snohomish County PUD
- Tacoma Power

* Non-Member PEFA Planning Participants

Corporate Update

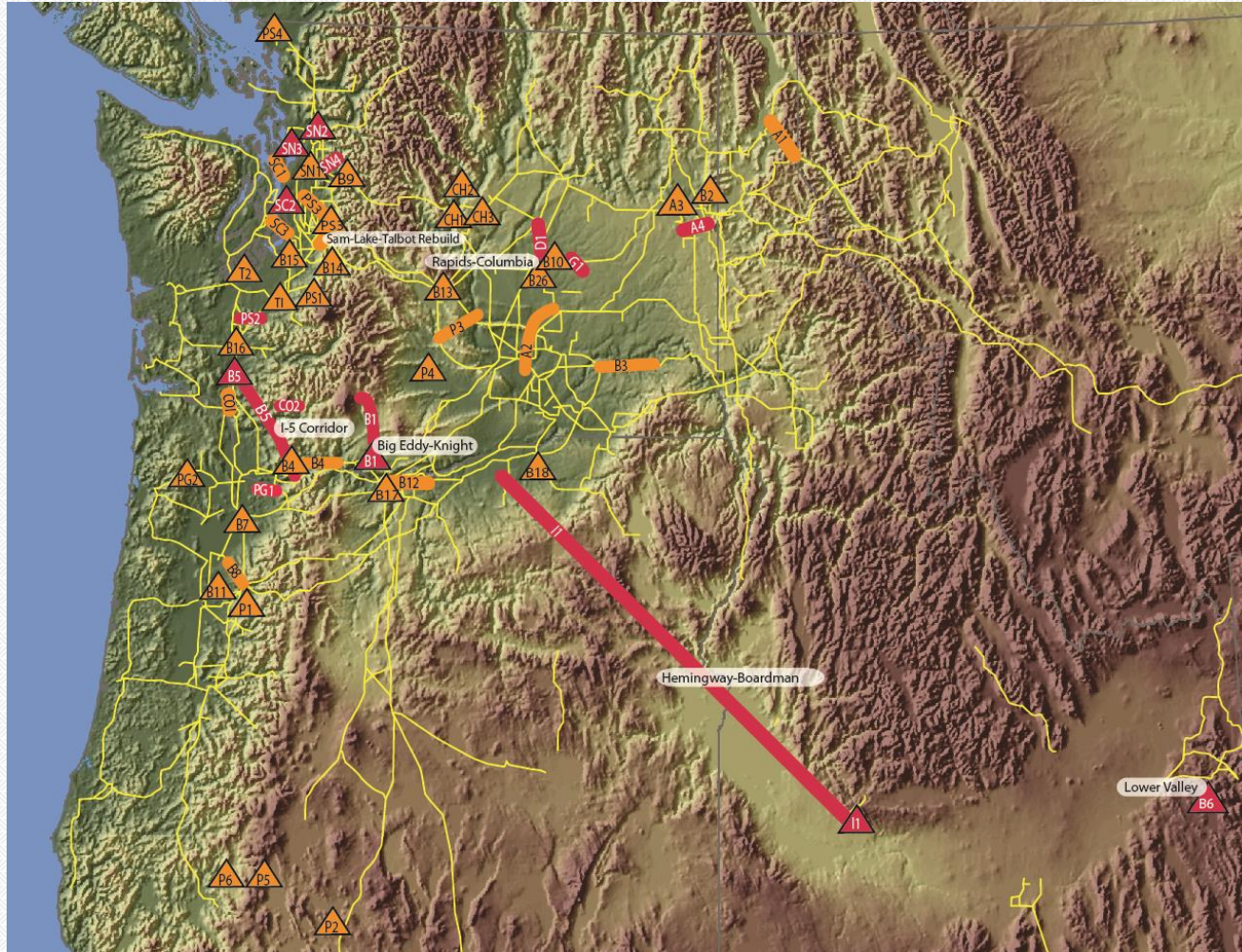
- Grid Planning Excellence – cost-effective grid planning
- New Services – Grow Leveraging Core Strengths
- Regional Planning Efficiency, Cooperation, and Coordination

ColumbiaGrid – Grid Planning



- Independent staff
- Open stakeholder process
- Develops Biennial Transmission Expansion Plan & Annual System Assessments
- Conducts studies focused on specific issues
- Planning and Expansion Functional Agreement (PEFA) and Order 1000 Agreement (O1K)

ColumbiaGrid Ten-Year Plan



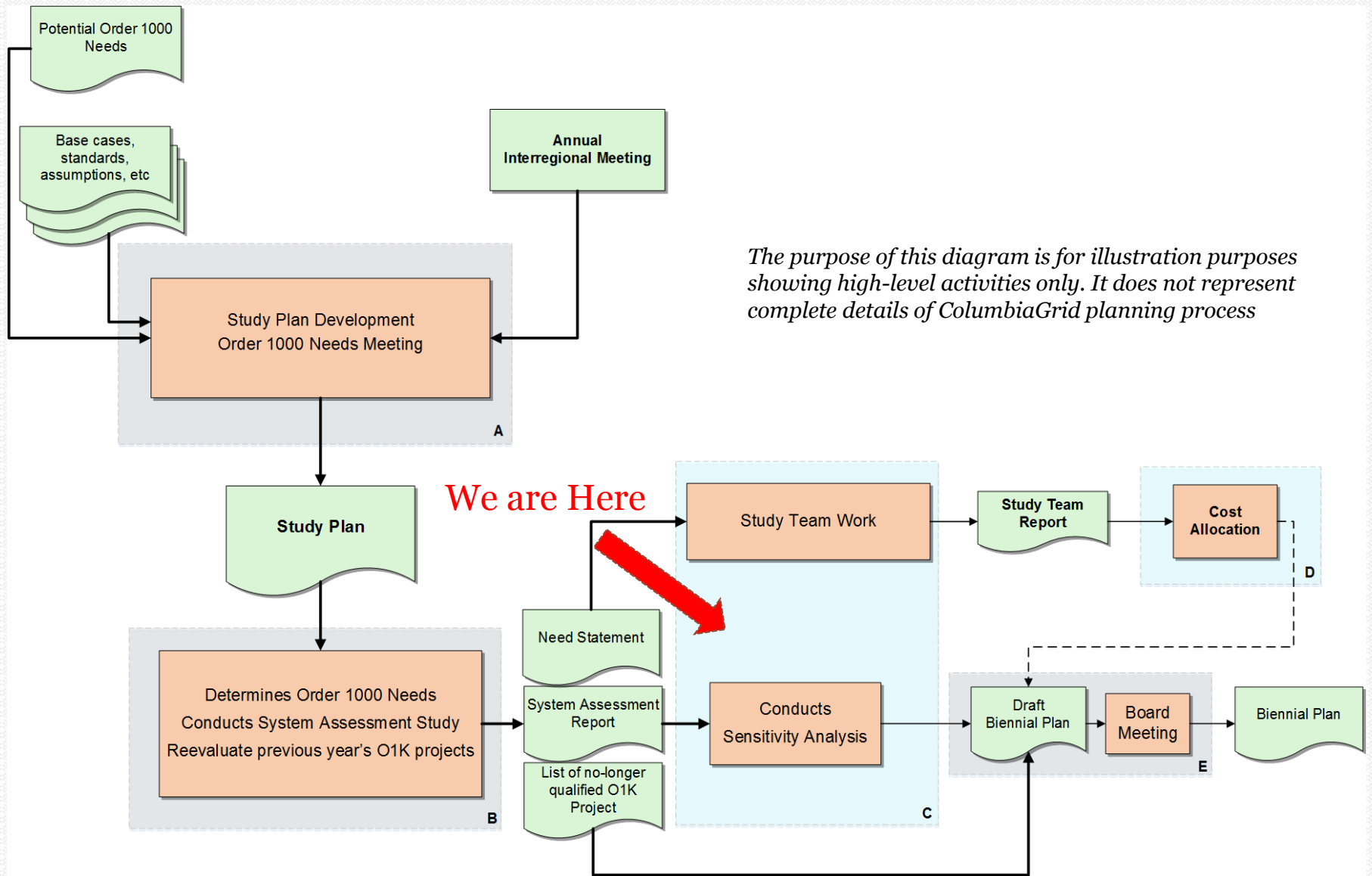
2015-2016 Planning Process: Status

- **Started in January 2015**
 - First year of Order 1000 implementation
 - Single planning process, satisfies both PEFA/O1K
 - Added new components i.e. suggested O1K potential needs, Cost Allocation, Interregional Transmission Project (ITP) etc.
- **Currently, 2015 System Assessment has been completed**
 - Annual assessment of capability of participant systems
 - Also includes new contents under O1K
 - Final System Assessment report has been published

2015-2016 Planning Process: Status

- Ongoing activities
 - Sensitivity studies
 - Study team works
 - Economic Planning and other special studies
 - Interregional coordination
- Anticipated completion of the updated 2015 Biennial Plan in Feb 2016

2015-2016 Planning Process Status: Where we are today?



Focused Studies

- 2015 System Assessment
- 2015 Sensitivity Studies
- Puget Sound Area
- Othello Area
- Economic Planning
- Variable Transfer Limit (VTL)
- WECC Project Coordination
- FERC Order 1000
- Regional Planning Coordination

Focused Study: 2015 System Assessment

- Current status: Complete
- Include the contents that satisfy both PEFA and O1K requirements
- Major components
 - Reliability Assessment
 - Order 1000 Potential Needs
 - Re-evaluation of Order 1000 Projects
 - Updates on ongoing studies

Focused Study: 2015 Sensitivity Studies

- **Special studies**
 - Each year's study scope is defined by planning parties
- **Anticipated completion: October 2015**
- **Four studies are ongoing**
 - N-1-1
 - Transient Stability
 - Extra-Heavy Winter Case
 - Inductor Switching

Focused Study: Economic Planning

- New technical study adopted by ColumbiaGrid in 2013
- Purpose: Enhance capability to investigate impacts from arising issues such as intermittent resources or policies (e.g. GHG, Electric Vehicles etc)
- Utilize Production Cost Simulation tool
- Has the ability to simulate hourly conditions e.g. flow, congestions, prices of electricity market
- ColumbiaGrid is conducting the 3rd round of this study
 - Round 1 study focused on 2010 Backcast
 - Round 2 study focused on potential impacts from coal replacement

Focused Study: WECC Project Coordination

- **Pacific DC Intertie (Phase I - 2013)**
 - Celilo terminal being replaced
 - Capability could initially increase from 3100 MW to 3220 MW
 - Completed
- **Central Ferry-Lower Monumental project (2014)**
 - Accommodate the construction of this project
 - Completed
- **Pacific DC Intertie (Phase II - Ongoing)**
 - Just started
 - Capability could initially increase to as high as 3800 MW
 - WECC Path Rating – Phase II

Focused Study: 2015 System Assessment

- **Order 1000 Potential Needs**
 - A notification (request suggestions for Order 1000 Potential Needs) was sent to stakeholders on Jan 8, 2015
 - Opportunity to discuss each suggestion in Feb 5 Meeting
 - No suggestion was submitted
- **Re-evaluation of Order 1000 Projects**
 - First year of implementation
 - No Order 1000 project from previous year

FERC Order 1000: Status

- FERC Order 1000: Two main components
 - Regional process: For ColumbiaGrid footprint
 - Interregional process: For the coordination among 4 Western Planning Regions
- ColumbiaGrid has implemented Order 1000 planning as of Jan 1, 2015
- West-wide implementation of O1K will start on Oct 1, 2015
 - ColumbiaGrid, CAISO, NTTG, and WestConnect
- Currently, the four Western Planning Regions are working together toward this implementation
 - Interregional Coordination

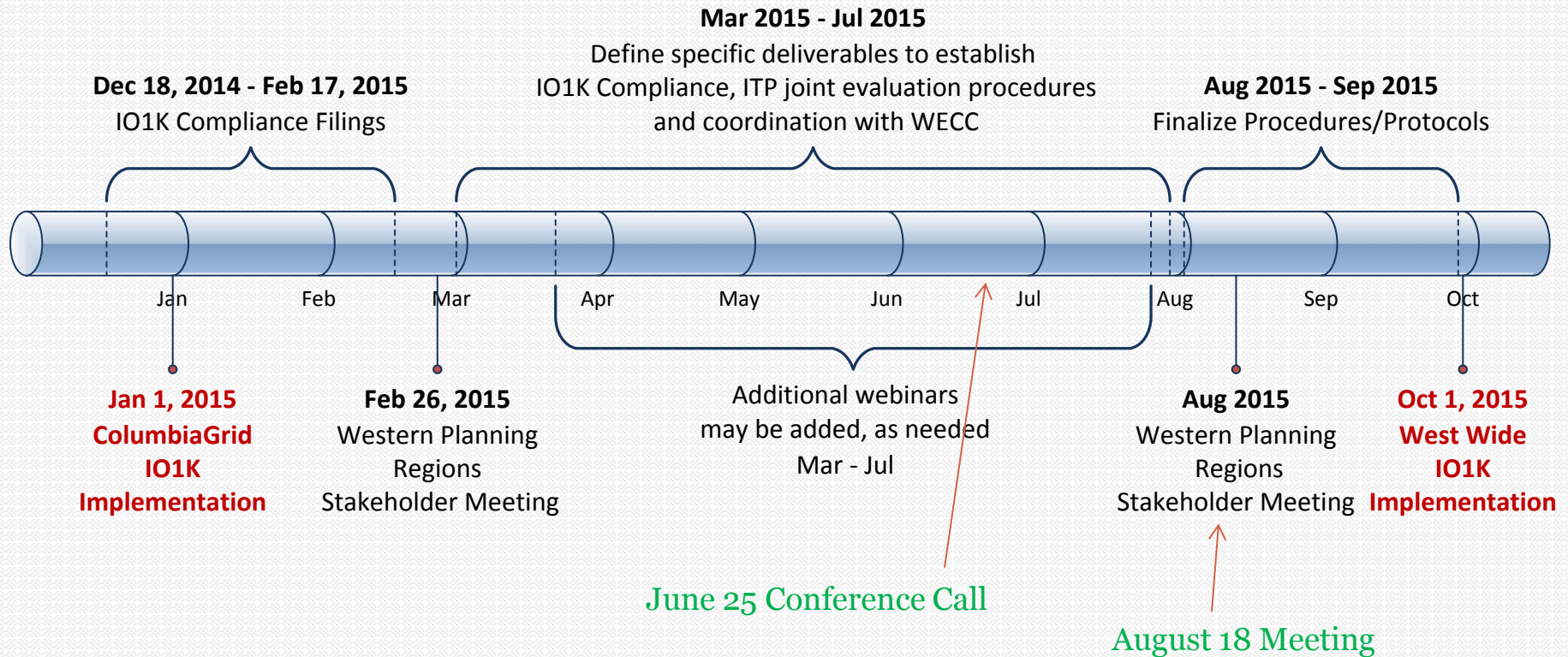
Interregional Coordination: Background

- Development of a procedure that explains interregional coordination is being developed
 - Common Tariff Language developed and filed in 2013
- This document typically addresses several key issues
 - Data exchange among regions
 - Potential inter-regional coordination
 - Stakeholder meetings & interactions
 - Other issues as required by the Order
- Anticipated completion: By October 2015

Order 1000 Interregional Coordination:

- June 25, 2015 Conference Call
 - First updates since the meeting in February
- August 18, 2015 Meeting
 - At Tri-State Offices in Westminster, CO
 - Attempt to address the remaining issues
- ColumbiaGrid developing interregional coordination ‘information package’
- Other regions developing a ‘process narrative’
- All regions will implement the Common Tariff Language

Interregional Coordination Updates (Cont)





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