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Thomas Carr Western Interstate Energy Board

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> RETI 2 Joint Agency Workshop August 15, 2016 Sacramento, CA



RETI 2.0 Western Outreach Project

Request:

 RETI 2.0 Western Outreach Project is being conducted by the Western Interstate Energy Board (WIEB) and National Association of State Energy Officials (NASEO) at the request of the California Natural Resources Agency

• Purpose:

 Gather stakeholder input from across the Western Interconnection regarding the availability of renewable energy and electric transmission that could contribute to meeting California's renewable energy and greenhouse gas (GHG) objectives by 2030

Outreach audience

 Western state leaders, regulators, utilities, system operators, renewable and transmission developers, and environmental, land use, and consumer advocates.



- Western Interstate Energy Board (WIEB)
 - Organization of 11 western states and 3 western Canadian provinces; members appointed by governors and premiers
 - Promotes energy policy collaboration across western states, provinces and the federal government
 - WIEB's Committee on Regional Electric Power Cooperation (CREPC)
 engages governor's energy advisors, energy offices, public utility
 commissions in the Western Interconnection
- National Association of State Energy Officials (NASEO)
 - National organization of energy officials from states and territories
 - Serves as a resource for and advocate of state energy offices
- Energy Strategies LLC
 - Consultant based in Salt Lake City; providing technical support on the RETI 2 Western Outreach project



Project Overview

- Project Steering Committee includes representatives from AZ, CO, MT, NV and WA
- Two workshops:
 - Portland Northwest focus on August 12
 - Las Vegas Southwest focus on September 1
- Focus questions identify key topics of interest for stakeholders and provide framework for workshop panels
- Stakeholder feedback
 - Workshop presentations, Q&A, public comment
 - Written comments submitted up to September 8
 - Submitted to Tom Carr at <u>tcarr@westernenergyboard.org</u>
- Review and processing of stakeholder input culminates in final report at the end of September



Focus Question #1

Setting the Stage: The Future of Renewable Markets in the West

Renewable demand

 How much additional renewable energy development in the West is likely?

Renewable supply

 Where, and in which technologies, is development of renewable energy most likely to occur in the next 15 years?

Patterns of trade

• How will the future mix of renewable energy change the historic pattern of daily or seasonal power flows in the Western Interconnection? What load areas in the West could potentially import surplus generation from California on a daily or seasonal basis?



Focus Question #2

Today's Grid: Existing Capacity, Constraints, and Current Trends

Existing transmission capacity and known constraints

- What is the existing transmission capacity to deliver power from high-quality renewable energy areas to California load centers?
- Where are there known constraints that limit additional deliveries?
 What is the capacity or constraints to delivering California surplus renewables to potential out-of-state markets?

Generation fleet trends

- How will the current or potential coal plant closures affect the availability of transmission capacity for renewables to California?
- Will changes to northwest hydro utilization affect transmission?

Institutional changes

 How could increased use of dynamic scheduling, conditional firm, "energy-only", and other renewables procurement arrangements affect transmission availability and need?



Focus Question #3

Future Expansion: Examining New Transmission to Access High-quality Renewables

Current expansion proposals

• Is the RETI 2.0 list of regional transmission project proposals complete? Is the WECC Common Case Transmission Assumptions accurate? Are the CPUC out-of-state cost assumptions correct?

Costs and benefits of transmission expansion options

- What are the pros and cons of different configurations of transmission expansion?
- How would different expansion options affect deliverability to and from California?

Next steps

What additional planning initiatives could California pursue?