

**Comments of the California Wind Energy Association on
CPUC and ISO 50% RPS Special Study for the
2016-2017 Transmission Planning Process**

July 5, 2015

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The California Wind Energy Association (CalWEA) recommends the following changes to the Special Study as described during the June 20, 2016, public call and related materials:

- The Special Study should model an optimum level of out-of-state wind resources delivering to California through new transmission build-out in place of the arbitrary portfolio of 4,000 MW of out-of-state wind resources; and
- The Special Study should model the available transmission capacity resulting from the retirement of over 6,000 MW of coal units that is scheduled to occur by 2024, which has been shown by WECC studies to enable approximately 3,500 MW of out-of-state wind resources and 1,800 MW of out-of-state solar resources to be accessed through dynamic transfer arrangements, minor transmission upgrades, or via expanded CAISO footprint into the CAISO.

We discuss these points below.

1. The Special Study Should Model Out-of-State Optimum Resources Delivering Through New Transmission Upgrades

The methodology for the Special Study currently assumes that out-of-state (OOS) resources must be delivered through new transmission facilities that directly interconnect these resources to the CAISO. The study arbitrarily selects a portfolio of 4,000 MW of OOS wind to be imported into California. CAISO and CPUC have the ability to optimize the level of OOS RPS resources that could be imported into California by balancing the cost of the new transmission required to bring the resources' energy into California and the value that such resources bring to the state. In performing this analysis, CAISO should consider the added capacity of OOS resources that could be imported into California via existing and available transmission capacity between these resources' locations and the CAISO-controlled transmission grid.

2. The Special Study Should Model the Available Transmission Capacity Resulting from Retiring Coal Units or CAISO Footprint Expansion

A WECC case study – “PC-21: Coal Retirement”¹ -- shows that little or no congestion occurs with coal-plant retirements and significant renewable energy additions across the WECC footprint mainly for

¹ An October 2015 WECC presentation that reports on three case studies that were conducted at this time can be found here: http://westernenergyboard.org/wp-content/uploads/2015/10/10-29-15_CREPC-SPSC-WIRAB_woertz_WECC_reliability_study_requests.pdf.

import into California. (See PC-21 slide reproduced below.) Specifically, the following can be gleaned from PC-21:²

- The retirement of over 6,000 MW of coal units that are already scheduled to occur by 2024 will enable approximately 3,500 MW of wind energy and 1,800 MW of solar to be accessed through dynamic transfer (DT) arrangements with the CAISO (or via an expanded CAISO) without any transmission upgrades.³
- The retirement of 16,000 MW of coal capacity (about half that now operating) would enable 9,600 MW of wind and 4,800 MW of solar to be dynamically scheduled with very modest transmission upgrades.⁴

This WECC case was not necessarily an optimal one; it was constructed in a certain way for whatever reasons that are not explained on the slides. As part of the Special Study, CAISO and CPUC should develop an optimal level of WECC renewables that considers WECC coal plant retirements and the ability to dynamically schedule renewables into the CAISO, or directly interconnect these renewables in an expanded CAISO.

The RPS statute provides for RPS “product content category 1” status for projects delivering through a dynamic transfer (DT) agreement with the CAISO and the project’s host transmission provider. As the CAISO is aware, such arrangements put the project under direct CAISO control as if it were physically located within the CAISO’s balancing area. Within the last year, four contracts totaling over 700 MW of OOS wind energy have been signed with two California utilities that will utilize dynamic scheduling and out-of-state transmission service using existing transmission lines.⁵

The Special Study should recognize this resource potential, which depends only upon the availability of firm transmission service. Such service will become increasingly available as coal plants retire across the West. Presently, at least 6,157 MW of U.S. coal plant retirements within the WECC are

² The following MW figures were calculated from the TWh figures in the WECC slides. The figures assume the following capacity factors: 45% for wind, 25% for solar, and 85% for coal.

³ This result can be inferred by scaling down the assumed 16,626 MW of coal retirements in PC-21 by the amount of announced coal retirements (which total 6,157 MW by 2024). Because congestion was found to be very limited under PC-21 assumptions, it is reasonable to assume that scaling down the assumptions by 63% would produce no congestion. This transmission capacity can be utilized for the purpose dynamic scheduling resources into the CAISO.

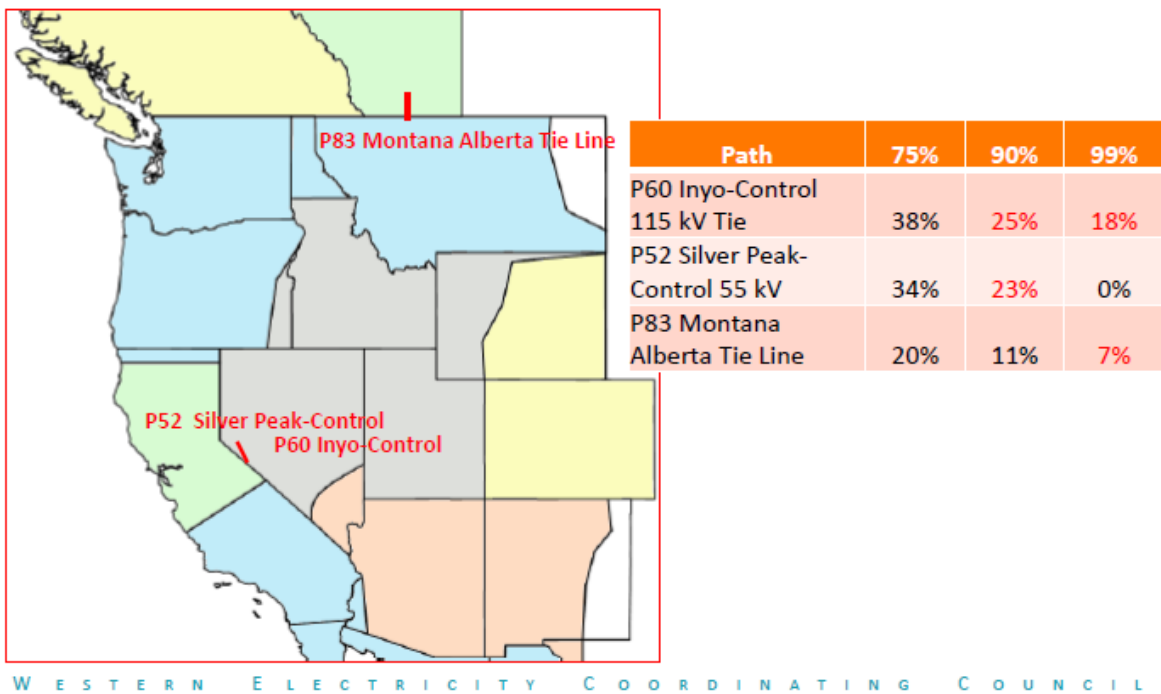
⁴ Slide 11 from the October 2015 WECC presentation shows that just three transmission paths become constrained under PC-21; CalWEA believes these paths can be relatively easily and cheaply upgraded.

⁵ See October 27, 2015, SCE Advice Letter 3299-E (Broadview Energy Contracts for 324 MW), and February 9, 2016, SCE Advice Letter 3360-E (El Cabo Contract for 298 MW). In addition, SMUD has signed a contract for 200 MW from the Broadview project.

scheduled to occur by 2024.⁶ The Special Study should determine where firm transmission service may be available to access high-quality wind resources across the WECC.

Such a study would also roughly approximate a scenario under which the CAISO footprint is expanded and more efficient transmission capacity utilization protocols would allow the import of wind generation resources without the need for transmission upgrades.

PC-21 Heavily Utilized Paths



Source: WECC (see footnote 1).

⁶ See e.g., WECC, “[EPA Clean Power Plan: Phase I – Preliminary Technical Report](#),” (September 19, 2014).