

## DOCKETED

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<b>Filer:</b>	Stephanie Bailey
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# 2018 IEPR Lead Commissioner Workshop Update on Informational Study of Increased Capabilities for Transfers of Low Carbon Electricity between the Pacific Northwest and California

*California Energy Commission – Joint Agency Workshop,  
At South Coast Air Quality Management District  
Diamond Bar, CA  
May 8, 2018*

Neil Millar  
Executive Director, Infrastructure Development

## Background and Objective:

- CEC and CPUC requested the study through a letter to ISO on February 15, 2018\*
- A informational special study has been included in the 2018-2019 transmission planning process, to:
  - Evaluate options to increase transfer of low carbon electricity between the Pacific Northwest and California
  - Assess what role AC and DC interties can play in displacing generation whose reliability is tied to Aliso Canyon.

\* <http://www.caiso.com/Documents/CPUCandCECLettertoISO-Feb152018.pdf>

## Study Scope:

- The impact of the following on Increased Capabilities for Transfers of Low Carbon Electricity between the Pacific Northwest and California, will be evaluated:
  - Increase transfer capacity of AC and DC interties
  - Increase dynamic transfer limit on AC interties
  - Automating manual controls on key BPA infrastructure
  - Assigning Resource Adequacy value to firm zero-carbon imports or transfers

## The study plan is in the process of being finalized:

- The ISO has been coordinating with the facility owners inside and outside of the ISO footprint
- A public stakeholder call reviewing the draft scope has been held, and comments received on April 26.
- The study plan addresses
  - Study horizon
  - Assumptions
  - Study methodologies
  - Scenarios (both north to south and south to north considerations)

## Increase the Capacity of AC and DC Interties

- Review Common Corridor Contingency on COI. Conditionally credible P7 contingency versus P6 contingency.
- Review existing congestion due to physical or market limitation (Day Ahead vs. Real Time)
- In the short term
  - Utilizing favorable conditions in PNW by increasing COI limit to around 5100 MW in the N-S direction
  - Addressing PDCI operational limits in the S-N direction
- In the long term (If production simulation indicated increased intertie capacity was required)
  - Increase PDCI rating
  - Increasing AC intertie capability, such as greenfield projects

# Increase Dynamic Transfer Capability (DTC)

- DTC is the amount of within-hour change in power flows a system can tolerate over short periods of time (i.e. five minute) without causing an unacceptable voltage excursion or some other adverse system condition.\*
  - BPA currently limits the DTC on COI to 400 MW. The limit may increase in near future to 600 MW.
- Identify market needs for increased DTC
- Develop and assess alternatives to increase the DTC
  - Leveraging real-time voltage stability analysis
  - Adding voltage support
  - Assess impact and use of BPA synchrophasor RAS

\* [https://www.bpa.gov/Finance/RateCases/BP-18/Meetings/BP-18\\_TxRateCaseWorkshop\\_20160713.pdf](https://www.bpa.gov/Finance/RateCases/BP-18/Meetings/BP-18_TxRateCaseWorkshop_20160713.pdf)

## Control Automation on PDCI

- Determine the market needs and the potential reliability and ramping benefits of the intra-hour scheduling on PDCI
- Determine the required MW of intra-hour scheduling
- Discussions with facility owners to determine the control upgrades/automation required to facilitate intra-hour scheduling on PDCI.
- Evaluate if there are any reinforcements required in the rest of the system to accommodate intra-hour scheduling on PDCI.



## Assigning Resource Adequacy Value to Import

- Discussions with CEC/CPUC is underway to further define the scope
- Explore the maximum annual expected Northwest hydro import capability of the California ISO grid to estimate an upper bound on avoided GHG emissions assuming that RA/RPS counting criteria are not limiting
- Extent to which system capacity and flexibility needs can be met by increased utilization of existing capability and potential increased capability
- Explore if this changes gas retirement headroom

## Schedule

- Final scope targeted to be posted in early May
  - Exact timing uncertain due to range and volume of comments received on draft scope.
- Preliminary results presentation: November 16, 2018.
- Final results: January 31, 2019
- Final results presentation: February 2019 stakeholder meeting
- Final report: March 2019 final approved 2018-2019 Transmission Plan