Comments of Nexans on the Draft 2014-2015 Transmission Planning Process Unified Planning Assumptions and Study Plan

March 13, 2014

Nexans welcomes the opportunity to provide comments on the Draft CAISO 2014-2015 Transmission Planning Process Study Plan. In particular, these comments address Section 8, the Economic Planning Study.

Nexans recommends that the CAISO model the value of incremental increases in capacity for constraints due to thermal limitations of overhead transmission lines. Binding constraints that cause significant congestion costs may be alleviated through the addition of small (5%-10%) amounts of capacity. New technologies such as Dynamic Line Ratings typically provide this amount of capacity over 90% of the time.[1] While reliability applications require deterministically available capacity, economic applications can make use of probabilistically available capacity. One possible modeling method is to add a new line parallel to the constrained line; the new line could be rated at 5% of the capacity of the original line and have a forced outage probability of 10%.

For a preliminary cost estimate for the purposes of a cost-benefit calculation, other RTO documents have listed indicative costs.[2] To determine how quickly the additional capacity can be brought online, DLR installation times range in the order of months. For example, ERCOT identified a need in January 2013, and new DLR systems were in place by May 2013, in time for the summer peak. [3]

A fully integrated DLR system, where dynamic ratings are integrated into the real time security-constrained economic dispatch, has been implemented elsewhere.[4] While DLR systems are not currently operational within the CAISO footprint, they are in use within the future EIM footprint.[5] Development of an estimation methodology for the benefits of incremental capacity may facilitate future inter-regional planning efforts.

Nexans believes that modeling the value of incremental thermal capacity will reveal many areas where new technologies can provide immediate and significant customer benefits.

Sincerely,

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[1] Oncor, Oncor Electric Delivery Smart Grid Program Final Report, August 2013, pg. 56
[2] For example, see: PJM, P30 – Bellefonte-N. Proctorville Generation Interconnection Impact Study, July 2007
[3] ERCOT, Update on Transmission Planning for West Texas Congestion, May 2013
[4] Oncor, Oncor Electric Delivery Smart Grid Program Final Report, August 2013, pg. 33. Also see remarks from Tip Goodwin, Deriving Operational Value from Dynamic Line Ratings, Webinar, March 13, 2014
[5] Pacificorp, 2013 Integrated Resource Plan – Transmission Planning and Investment, October 2012, pg. 7