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Comments on RETI 2.0 Transmission Capability and Requirements Report

Additional submitted attachment is included below.

November 7, 2016

California Energy Commission
Dockets Office, MS-4
Docket No. 15-RETI-02
1516 Ninth Street
Sacramento, CA 95814-5512

RE: RETI 2.0 Transmission Capability and Requirements Report-Final

Dear Commissioners,

The Transmission Capability and Requirements Report – Final has been posted and contributes useful information on the capabilities of the California transmission system as part of the RETI 2.0. process. CTC Global, a California company headquartered in Irvine, applauds the release of this important document, but would like to express disappointment that the document overlooks and fails to mention the enormous untapped potential for *improving the efficiency* and *increasing the capacity* of California's high voltage network – improvements that directly support the State's goals for CO² reduction and the need to connect large amounts of Renewable Energy to the electric system. As we mentioned in our comments of August 24th, there is a commercially available class of High Performance Transmission Conductors (HPTC), which includes CTC Global's ACCC[®], that substantially reduces line losses while increasing transfer capacity. Several products in this class of conductor have been and continue to be selected for their ability to eliminate line clearance (sag) issues. Increasingly, the products are being selected for their ability to add capacity to existing rights-of-way (ROW) in a re-conductoring strategy that uses existing towers.

Energy Efficiency of HPTC is not being adequately considered

Some products in this HPTC class of conductor are more efficient (or even much more efficient) than the traditional conductor and will reduce line losses and the associated GHG emissions as well as provide the capacity and line clearance benefits. CTC believes that this ability to increase the efficiency of the transmission system is not being adequately considered in the transmission planning process. For example, when a ROW corridor requires capacity expansion beyond the ability of a direct conductor replacement on existing towers, this class of high performance conductor is increasingly being considered for its added capacity benefits, relative to the traditional conductor. But, the reduced line losses AND reduced associated GHG emissions add direct economic and environmental benefits to the choice of the HPTC in lieu of the traditional

conductor. CTC believes these increased system efficiency benefits are not being adequately valued.

ACCC® becomes first HPTC to receive 3rd party certification for efficiency

On Friday November 4th, SCS Global Services (SCS), based in the San Francisco Bay Area and a global leader in independent environmental assessments, certifications and standards development, released its certification assessment report of the ACCC® product in 5 scenarios and concluded:

- SCS certifies that use of the ACCC® technology in lieu of ACSR will reduce line losses and associated CO2 emissions by 27-31% over the following range of parameters:
 - Line length: 20 to 60 miles
 - Diameter: 0.7 to 1.3 inches
 - Voltage: 110 to 400 kV
 - Peak operating amps: 650 to 2700 amps
- SCS confirms, and has no reason to doubt, that use of the ACCC® technology in lieu of ACSR will reduce line losses and associated CO2 emissions in general applications.

While this is the first HPTC to be certified for its line loss and CO2 reductions, others in the HPTC class could also certify efficiency improvements versus the traditional (ACSR) conductor.

Recommended Action: Increase visibility of this class of conductor for policy-makers

The Transmission Capability and Requirements Report-Final included a small section on Advanced Transmission Technologies (Section 2.5.5), but HPTCs were not mentioned. While that document has been finalized, the Plenary Report can still mention this class of conductors and the benefits of increased capacity, reduced line losses, reduced GHG emissions, system resiliency, and increased reliability that products in this HPTC class can provide. Importantly, increase the visibility to policy-makers of the benefits from this class conductor, especially increased capacity, reduced line losses, and reduced GHG emissions that use of HPTC in lieu of traditional ACSR conductor can bring. California can increase the efficiency of the electric system using these HPTC products.

CTC Global thanks the Commission for the opportunity to provide comments to the RETI 2.0 process.

Thank-you,

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