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CTC Global Comments on May 25th Workshop

Additional submitted attachment is included below.

June 3, 2016

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Docket No. 16-IEPR-03 Environmental Performance of Electricity Generation System

RE: CTC Global Corporation comments following May 25th workshop

Dear Commissioner Douglas,

The workshop on May 25th provided a wealth of information about emerging offshore technologies, research laboratories to access the performance and effects of these technologies, as well as cautions from several groups about the impact that these technologies may have on offshore fish, marine, and bird populations. The broader topic for this docket included emerging technologies for generation and the delivery system (the grid). CTC Global Corporation comments that every transmission connection from the generation systems, once on land, should use modern, high performance transmission conductors (HPTC) to connect to the grid versus the inefficient, old conductor technology that is currently in use in the transmission grid. Using HPTC technology, on land-based overhead transmission, to connect any new renewable generation technology projects enables the resulting transmission feeder to carry more capacity (MW), to be more efficient (deliver more MWH), to have a lower environmental footprint (fewer and smaller towers), and to be more cost effective than the conventional, lower efficiency conductor technology. More efficient transmission conductor delivers more renewable energy to the grid (fewer losses). One objective should be that the grid performance be improved with each transmission investment. All studies and scenarios should be reflecting the use of these HPTC technologies (including their higher efficiency – lower losses) instead of the conventional conductor technology.

Background:

CTC Global Corporation is a Irvine, California headquartered company that invented and makes available ACCC[®](Aluminum Conductor Composite Core) transmission conductor; one technology within the class of High Performance Transmission Conductor (HPTC) technologies.

The globally-patented and trademark-registered ACCC conductor, manufactured in association with 24 cable companies worldwide, uses fully annealed, trapezoidal shaped aluminum strands that offer improved conductivity compared to any other aluminum currently in use today.

Coupled with the light-weight carbon composite core, the ACCC conductor offers an increased aluminum content of as much as 30% without a weight penalty. The added aluminum content and quality increase the conductor's ampacity - or current carrying capability - to about twice that of a conventional conductor, as well as significantly reducing line losses compared to any other conductor on the market today. Line loss reductions versus convention conductor can range from 25 to 40% or more depending on load level. The improved efficiency of the ACCC conductor along with its ability to carry twice the current of a conventional conductor- without



excessive sag - offers huge advantages. To date, more than 150 utilities worldwide have begun to take advantage of the ACCC conductor's numerous attributes. Its rapid adoption has been based on three factors: Performance, Reliability and Cost.

Other technologies within the HPTC class of conductor offer different levels of increased capacity, higher efficiency, reliability, and cost effectiveness, but each has some level of superior performance versus the conventional technology. This class of technology should be used for all new renewable feeder connections to the land-based transmission grid and the studies should reflect its use by reflecting the higher performance and lower life-cycle cost.

Thank-you for the opportunity to comment on using HPTC technology to connect the exciting offshore generation technology developments with the land-based transmission grid.

/s/ David Townley

CTC Global Corporation
Director of Public Affairs