

April 5, 2017

Ms. Rajinder Sahota, Branch Chief  
Climate Change Program Evaluation Branch  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

RE: 2017 Climate Change Scoping Plan Update

Dear Ms. Sahota,

CTC Global, a California company headquartered in Irvine, appreciates the opportunity to comment on the 2017 Climate Change Scoping Plan Update. The Scoping Plan document does a very good job of describing the objectives of the climate and legislative drivers as well as clearly and convincingly laying out why the Proposed Plan (continuing Cap & Trade with refinery and alternate transportation fuel programs) is the more certain pathway to meeting those emission objectives.

However, CTC wants to point out a missed opportunity in the Energy Sector discussion. A frequently overlooked source of emissions was not mentioned: electric grid losses. We recommended in our December 16, 2016 comments on the DRAFT Scoping Plan: Energy Sector that an additional item be listed under the Potential Additional Actions section: "Increase the efficiency of the electric transmission and distribution system". CTC requests again that this item be listed in the "Potential Additional Actions" on page 91 of this Scoping Plan Update. The document states that the actions listed in that section "have the potential to reduce GHGs and complement the measures and policies in Chapter II. These are included to spur thinking and exploration of innovation that may help the State achieve its long-term climate goals."

While one might suggest that this electric transmission and distribution (T&D) grid efficiency item could be included broadly in the Scoping Plan statements reflecting the required IRP process for load serving entities, CTC believes that there are questions to be explored regarding how a focus on increased electric T&D grid efficiency can be effectively implemented and the significant GHG emission reductions captured; questions that CARB, CEC, and CPUC should address together. For example, can investment in grid efficiency resulting in measurable reduced MWH losses between two points be monetized in a Cap & Trade system? Should specific guidance measures be developed by CEC/ARB/CPUC so that load serving entities know what is expected when proposing grid efficiency improvements in their IRPs? Is it better to just provide general guidance to the utilities that "grid efficiency improvements should be considered"? Parts of the electric grid may not be owned by a load serving entity, so it may not be able to include

grid efficiency improvements in an IRP. How best, then, to “harvest” electric grid loss reduction potential when a different entity (not a load serving entity) might be making the grid efficiency improvement investment? There are questions to explore and a process to establish so that the GHG reductions associated with increased efficiency of the transmission and distribution grid can be captured.

Line losses on the California electric T&D grid could cost effectively be reduced by 25% or more with currently available technologies. That means at least 1 – 2 MMT CO<sup>2</sup> per year<sup>1</sup> could be harvested by direct attention to improving grid efficiency. For example, the ACCC<sup>®</sup> conductor, developed by CTC Global and one in a class of High Performance Transmission Conductors (HPTCs) that is available today, can directly replace the existing inefficient conductor, using the same towers in a right-of-way, and immediately decrease losses by 25% or more. This is the reality today. Significant GHG emission reductions can be achieved with attention to a more efficient electric T&D system. Help raise the attention level by including the grid efficiency item explicitly in the “Potential Additional Actions” section and then by actively participating with CEC and CPUC in defining how this GHG emission reduction resource can be “harvested”.

CTC Global appreciates the opportunity to comment on this important 2017 Climate Change Scoping Plan Update and to raise the visibility of an often overlooked source for significant GHG emission reductions.

Thank-you,

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<sup>1</sup> 2014 Energy Information Administration (EIA) data for electric losses in California shows 7% transmission and distribution (T&D) losses. With total California 2014 generation (minus direct use) of 199,996,478 MWh, this equals about 13,999,753 MWh of T&D losses in the 2014 electric grid. 25% T&D loss reduction equals 3.5 million MWh that did not have to be generated which would save fuel costs to customers, free-up 500 MW of generating capacity, and reduce CO<sup>2</sup> emissions by more than 1.0 million tons per year (at 2014 California emission rate).