May 30, 2018

Clerk of the Board

California Air Resources Board
1001 I Street

Sacramento, California 95814

**RE: Draft Staff Report: Senate Bill 350 Integrated Resource Planning Electricity Sector Greenhouse Gas Planning Targets**

Dear Board Members,

The GHG reduction targets for the electric sector proposed in the “Draft Staff Report: Senate Bill 350 Integrated Resource Planning Electricity Sector Greenhouse Gas Planning Targets” appear to be reasonable and result from a thoughtful and purposeful process by the California Air Resources Board (CARB). However, consistent with its comments in the 2016 and 2017 California Energy Commission (CEC) Integrated Energy Resource Plan (IERP) processes, CTC Global Corpration, a California company headquartered in Irvine, would like to focus attention on an area in the electric sector that is “overlooked” for the purpose of energy efficiency gains and that could provide a substantial contribution to the CARB goals for CO2 reduction in the electric sector: the Transmission and Distribution (T&D) System.

**A 30% reduction in T&D losses contributes almost 1 MMT CO2 reduction per year**

According to the EIA State Electricity Profile for California Table 10 (Sources and Disposition) and Table 7 (Emissions), 2016 T&D losses within California are 13,405,104 MWh. With focused attention on increased energy efficiency for the T&D system, a 30% reduction in T&D losses would result in 4,021,531 MWh per year energy savings. With the 2016 emission rate (525 lbs/MWh), this energy savings would result in 957,671 Metric Tons CO2 annual reduction; almost 1 million tons of CO2 per year reduction or about 1.5% of the total 2030 mid-target range reduction required of the Electric Sector. Of course, this energy saving would also reduce the MW of renewable energy capacity required to serve the loads, as well as provide additional savings for other criteria pollutant emission reductions and water use reductions.

**Utilities should get credit for the GHG emission reductions from T&D energy efficiency investments**

Currently it appears that a utility that makes an investment in the T&D system that increases efficiency does NOT receive recognition for reduced GHG emission. The ARB working with CAISO, CEC, and CPUC should bring incentives / directives to the utility actions that increase T&D energy efficiency (reduce line and other delivery losses) and enable the utility to receive recognition / credit toward its GHG target reductions for its investments. The same is already done for utility end-use energy efficiency programs and for investments at power plants that reduce emissions / improve efficiency.

**ARB should bring attention to increasing the efficiency of the T&D system**

Significant, cost-effective energy savings and CO2 reductions can be “harvested” from the T&D system. ARB attention through directives, incentives, and/or programs that measure and verify energy savings from utility investment in T&D equipment that is more efficient than what is currently installed can make this happen. There are many ways that the ARB and the CEC/CPUC could bring attention to “harvesting” GHG reduction from the T&D system: use of high-efficiency, advanced conductor; conductor efficiency standards; investment guidance for energy efficiency improvements; CO2 specified value for cost-benefit analysis; program objectives; and other means. The important steps for the ARB are: incentivizing and/or directing utility investment in increased T&D efficiency; and correcting / changing certain rules and procedures to allow a utility to claim the measurable GHG reductions enabled by the investment.

CTC Global appreciates the opportunity to comment on this important effort by the CARB.

Thank-you,

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