

CEERT Comments on GHG Target Setting

The Center for Energy Efficiency and Renewable Technologies (CEERT) is supportive of the allocation methodology proposed by the California Air Resources Board (ARB), but urges the ARB to include a process and metrics for effective and consistent utilization of the target range. This should include standards for resources types to be accounted for in electric sector planning and validation of modelling used.

In order to ensure the GHG targets set are effectively and consistently utilized in the California Public Utilities Commission (CPUC) reference system plan development process and in Load Serving Entity/Publicly Owned Utility Integrated Resource Plans (IRPs), the ARB should create standards and assumptions around what resources are included in the sector, what the baseline GHG emissions level is and a requirement for reasonably calibrating any modelling used with the baseline GHG emissions level to the extent feasible.

Not using and ensuring an appropriate baseline emission level is used in modelling results in an underdevelopment of resources needed to reach the sector-wide greenhouse gas (GHG) target. This can be seen in the adopted Reference System Plan in the CPUC IRP proceeding (docket R.16.02.007). Table below illustrates the GHG trajectory, the actual emissions, and the modelled emissions for the California Independent System Operator (CAISO) footprint¹:

Year	Trajectory (MMT)	Actual (MMT)	Modelled
2016	59.5	58.1	--
2017	57.9	52.4	--
2018	55.2	--	42

The actual emissions as reported by the CAISO are slightly ahead of the trajectory to a 40% reduction from 1990 levels.² The modelled GHG emissions from 2018 however, are significantly below the trajectory. This indicates that either there is a discrepancy in what resources are included in the model's reported emissions and/or the model does not accurately represent the CAISO dispatch. The CPUC clarified that combined heat and power (CHP) emissions are not included in GHG emission accounting and thus 4 MMT should be added to match up with the ARB Scoping Plan electric sector definition. Even with CHP included, the modelled emissions are still 4-8 MMT below what can be expected to be emitted from the CAISO footprint in 2018.³

¹ CAISO Actual Emissions: <http://www.caiso.com/Documents/GreenhouseGasEmissions-TrackingReport-Dec2017.pdf> Trajectory and Modelled Emissions are based on the RESOLVE documentation included in the the Sept 19, 2017 Administrative Law Judge's Ruling Seeking Comment on Proposed Reference System Plan And Related Policy Actions: <http://cpuc.ca.gov/irp/proposedrsp/>

² Some of the reduction in GHG emissions from 2016 to 2017 can be attributed to the differences in hydro generation from 2016, a "low hydro" or dry year, and 2017, a "high hydro" or wet year and some to an increase of renewables on the grid. If both years were "average hydro" years as is typically modelled, the GHG emissions from 2016 would be slightly lower and the GHG emissions from 2017 would be slightly higher.

³ Differences in reporting of generation between the modelling outputs and CAISO (e.g. whether out-of-state renewables are "renewables" or "imports") make it impossible to assess whether the differences are in actual

Given the significant differences in renewable buildout between the 30, 42, and 52 MMT targets, this difference will have a significant impact on the electric sector's ability reach the needed sector GHG target. The adopted Reference System Plan, once adjusted for CHP and calibrated to actual emissions from the CAISO footprint, is based on a target at the very high end of the Scoping Plan range, despite assuming "average" load projections and hydro generation. Should load grow faster than mid-level projections and California suffers another multi-year drought, the electric sector would well exceed the Scoping Plan range with a build-out consistent with the Reference System Plan.

Although the IRP processes have already begun to be established at the CPUC and California Energy Commission without formal input from the ARB as required by statute, the ARB's expertise and legal oversight of GHG emission reduction programs are essential to ensuring electric sector planning is effective in setting up the State electric sector and economy GHG reduction goals are met.

generation or assumptions around emissions intensities without greater levels of data transparency than currently available.