

On Page 107 of 199: Criteria pollutants were counted from generation within California only, and not from unspecified imports.

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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Continue Electric Integrated Resource
Planning and Related Procurement
Processes.

Rulemaking 20-05-003

DECISION ADOPTING 2021 PREFERRED SYSTEM PLAN

compared to its equivalent RESOLVE result in prior IRP analyses. The differences between RESOLVE and SERVM modeled GHG emissions in 2026 and 2030 also within this range of difference. Two model differences that contribute to the GHG emissions results difference between the models are:

SERVVM's 20-year historical year average wind capacity factor is lower than RESOLVE's three-year historical year average, so wind generation in SERVM is less than in RESOLVE for the same installed capacity;

SERVVM imposed a storage discharge cap that tends to limit the amount of solar generation that can be stored for use during the evening peak. With the cap in place, curtailment, imports, and exports increased while storage round-trip losses decreased. In-state gas generation stayed about the same. The net effect is increased emissions from higher imports.

Commission staff also estimated criteria pollutant emission using the proposed PSP portfolio. Staff estimated total nitrous oxide, sulfur dioxide, and particulate matter emissions. Staff used fuel burn, number and type of starts, and generation output from SERVM and applied appropriate emissions factors to calculate emissions. Emissions were counted from all emitting generation in California by CARB air basin for more locational granularity, and where

available, using plant-specific criteria pollutant emissions factors. **Criteria pollutants were counted from generation within California only, and not from unspecified imports.** Then, emissions were grouped into two simplified

categories: those from generating units located in disadvantaged communities, as defined by the California Environmental Protection Agency and in D.18-02-018 (even if emissions may migrate beyond the disadvantaged community) and those from generators not located in disadvantaged communities (even if emissions may migrate into such communities).

- And significantly, the bureaucratic gimmick on the previous page.

SERVIM results indicate a downward trend for criteria pollutants, with total pollutants decreasing about 7 percent between 2026 and 2032 due to a shift from fossil generation to geothermal and other renewable resources. More detailed information about the SERVIM analysis conducted to support this decision is available on the Commission's web site.⁸

Also posted is the RESOLVE analysis package developed by Commission staff that includes more detailed inputs and results for the 38 MMT Core with 2020 IEPR Demand and High EV Penetration scenario. The package also contains a sensitivity scenario based on the 30 MMT Core portfolio, updated with the 2020 IEPR assumptions and using the 2020 IEPR High EV penetration assumptions. All scenario assumptions in the sensitivity align with the 38 MMT Core with the 2020 IEPR High EV scenario assumptions, except that it has a lower GHG target. This sensitivity was developed to better understand the incremental buildout that would be needed if the GHG target was lowered below 38 MMT in a subsequent cycle.

On the basis of these results, we conclude that the portfolio described in Table 6 and Table 7 above meets the reliability standards we have set, with a LOLE result of under 0.1 in all study years.

We will adopt this portfolio as the PSP portfolio, and its associated 38 MMT GHG target by 2030 (and 35 MMT by 2032) as the state's electric sector planning target, for several important reasons. First, the portfolio starts with an aggregation of the actual procurement plans of the LSEs subject to our IRP requirements, and is then augmented with the MTR requirements adopted in D.21-06-035. Thus, it should reflect a realistic representation of the actual

⁸ <https://www.cpuc.ca.gov/industries-and-topics/electric-energy/electric-power-procurement/long-term-procurement-planning/2019-20-irp-events-and-materials>