



PUBLIC UTILITIES COMMISSION
STATE OF CALIFORNIA
505 VAN NESS AVENUE
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LIANE M. RANDOLPH
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March 27, 2018

Mary D. Nichols, Chair
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Dear Chair Nichols,

With this letter I am pleased to transmit to you the California Public Utilities Commission's recommendation for establishing 2030 electric sector greenhouse gas emissions targets to use in the State's integrated resource planning process.

On February 13, 2018, the California Public Utilities Commission (CPUC) issued Decision (D.) 18-02-018, which sets requirements for load serving entities to file integrated resource plans. This decision fulfills the initial phase of the CPUC's responsibilities under Senate Bill 350 (De Leon, Chapter 547, Statutes of 2015) to identify an optimal portfolio of resources to achieve the State's long-term greenhouse gas (GHG) reduction goals, and to create a process for all electric load-serving entities to file integrated resource plans. This decision is the culmination of two years of staff work, including 13 webinars, 8 workshops, 11 staff proposals, review of thousands of pages of public comment from over 50 parties, and close coordination with staff from the Air Resources Board and the California Energy Commission.¹

Under SB 350, the Air Resources Board (ARB) has a responsibility to establish GHG emission reduction targets for the electricity sector and for each load serving entity in coordination with the CPUC and the California Energy Commission. In D.18-02-018 the CPUC recommends that ARB establish a GHG planning target of 42 million metric tons (MMT) by 2030 for the electric sector to use in the State's integrated resource planning process.² To arrive at this target, the CPUC modeled three different electric sector greenhouse gas planning targets for 2030 that each fall within the range of emissions for the electric sector that is reflected in ARB's 2017

¹ The CPUC's entire procedural record for the Integrated Resource Planning Rulemaking (R.16-02-007) is available at https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R1602007

² D.18-02-018, Conclusion of Law (COL) 12.



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Climate Change Scoping Plan.³ Based on this modeling, the CPUC found that a statewide electric sector GHG planning target of 42 MMT by 2030 represents an increase in momentum relative to current policies and is not so burdensome as to discourage electrification of transportation and natural gas end uses that would benefit the state as a whole.⁴ The CPUC is aware that ARB may decide to establish a range for the electric sector GHG planning target. If ARB establishes a planning target range, the CPUC recommends that this range encompass 42 MMT by 2030.

The CPUC's integrated resource planning process will occur over a two-year period, with each planning cycle commencing in an odd-numbered calendar year. In odd-numbered years, the CPUC will analyze and adopt an optimal system-wide electric resource portfolio for its load-serving entities and recommend a GHG planning target for the electric sector in California to ARB.⁵ Although the CPUC currently recommends an electric sector GHG planning target of 42 MMT by 2030 for use in integrated resource planning, the CPUC will evaluate the appropriateness of this target in each integrated resource planning cycle, and it may propose a different target in the future.

In order to conduct modeling to identify the optimum portfolio of energy resources capable of meeting the electric sector GHG planning target, grid reliability needs, and other State goals at least cost, the CPUC first needed to determine what portion of the statewide electric sector target applies to its jurisdictional entities. Based on the methodology ARB uses to allocate Cap-and-Trade allowances to electric utilities, the CPUC determined that entities subject to its jurisdiction should have collective responsibility for 76.9 percent of the electric sector GHG planning target.⁶ The CPUC reflected these aggregate emissions in its modeling.

The CPUC adopted an optimal Reference System Portfolio of energy resources to meet the 2030 GHG planning target, which includes an expected need among its jurisdictional entities for approximately 10,200 megawatts of new supply-side renewable energy resources and 2,000 megawatts of new battery storage resources by 2030. The marginal cost of GHG abatement associated with the Reference System Portfolio is \$150 per metric ton of carbon dioxide equivalent in 2030, which the CPUC refers to as the GHG Planning Price. Both the Reference

³ Note that due to differences in how ARB and the CPUC account for GHG emissions from combined heat and power facilities cited at industrial facilities, the CPUC's recommended 42 MMT planning target equates to 46 MMT in ARB's Climate Change Scoping Plan.

⁴ *Id.* at Finding of Fact (FOF) 4.

⁵ *Id.* at Ordering Paragraph (OP) 4.

⁶ *Id.* at FOF 13.



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System Plan and its associated GHG Planning Price may change in each integrated resource planning cycle as the electric grid, market conditions and technologies change.

Under the CPUC's integrated resource planning process, load serving entities can demonstrate conformance with the Reference System Portfolio in one of two ways: load serving entities can use either the GHG Planning Price or use a CPUC-assigned GHG Emissions Benchmark,⁷ which the CPUC defined based on the relative load share of each load serving entity. These GHG Emission Benchmarks exist as a planning instrument, not as a compliance obligation. The CPUC may modify these benchmarks at any time in response to new information about load serving entities' load forecasts.⁸

Supporting Documents

As ARB conducts its process to establish GHG targets for the State's integrated resource planning process, the CPUC recommends that ARB take notice of two principal CPUC documents listed below (and associated attachments). The September 19, 2017, Administrative Law Judge ruling includes the bulk of the analytical work that underlies D.18-02-018.

1. Final Commission Decision (D.18-02-018) - *Decision Setting Requirements for Load Serving Entities Filing Integrated Resource Plans*:
<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M209/K771/209771632.PDF>
2. *September 19, 2017, Administrative Law Judge's Ruling Seeking Comment on Proposed Reference System Plan and Related Commission Policy Actions*:
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M195/K910/195910921.PDF>
 - Attachment A: *CPUC Energy Division Proposed Reference System Plan*:
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M195/K910/195910807.PDF>
 - Attachment B: *RESOLVE Documentation: CPUC 2017 IRP Inputs & Assumptions*:
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M195/K910/195910712.PDF>
 - Attachment C: *Summary of RESOLVE Inputs and Outputs*:
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M195/K910/195910922.PDF>

⁷ *Id.* at FOF 14 and COL 27.

⁸ *Id.* at FOF 17, and COLs 25, 26 and 27.



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- Attachment D: *Summary of Sensitivity Analyses Conducted by Staff in Response to Party Comments:*
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M195/K910/195910606.PDF>
- Attachment E: Energy Division Staff Proposal on *Production Cost Modeling Process to Review Integrated Resource Plan Portfolios:*
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M195/K910/195910808.PDF>

I appreciate the time and effort ARB staff has dedicated over the last two years to coordinate with CPUC staff in establishing an integrated resource planning process and GHG emissions targets, and I look forward to continuing to work with you and your staff as ARB completes its further work in the implementation of the integrated resource planning provisions of SB 350.

Best regards,

A handwritten signature in black ink, appearing to read "Liane M. Randolph".

Liane M. Randolph
Commissioner
California Public Utilities Commission