



February 21, 2024

California Energy Commission (CEC)
Docket Unit, MS-4
Docket No. 21-OIR-01
715 P Street, Sacramento, California 95814

RE: COMMENTS OF CENTER FOR RESOURCE SOLUTIONS (CRS) ON PRE-RULEMAKING AMMENDMENTS TO THE POWER SOURCE DISCLOSURE (PSD) PROGRAM. DOCKET NO. 21-OIR-01.

Dear CEC Staff:

CRS appreciates this opportunity to submit comments in response to the Draft of the Pre-Rulemaking Amendments to the Power Source Disclosure Program (hereafter "Draft"). Our comments pertain specifically to replacing loss-adjusted load with retail sales, renewable energy certificate (REC) retirement for annual and hourly reporting, use of the term "avoided emissions," and the emission factors assigned to unspecified power and hourly claimed renewable generation.

BACKGROUND ON CRS AND GREEN-E®

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy and has been providing renewable energy and carbon policy analysis and technical assistance to policymakers and other stakeholders in California for over 25 years. CRS also administers the Greene® programs. For over 25 years, the Green-e® program has been the leading independent certification for voluntary renewable electricity products in North America. In 2021, the Green-e® Energy program certified retail sales of over 114 million megawatt-hours (MWh), serving over 1.3 million retail purchasers of Green-e® certified renewable energy, including over 314,000 businesses.¹

CRS COMMENTS

1. CRS recommends that:
 - a. For annual accounting, retail sales be used to represent load, instead of loss-adjusted load.
 - b. Disclosure be added to the PCL stating that the "Total Power Content" column represents all power sources and associated emissions that a retail supplier used to

¹ See the 2023 (2022 Data) Green-e® Verification Report (soon to be published) here for more information: <https://www.green-e.org/verification-reports>

cover its total annual loss-adjusted load and is not representative of a specific portfolio which represents delivered retail supply to a customer.

The Draft attempts to reconcile losses and variations between generation and load by inflating all suppliers' load, known as loss-adjusted load. However, this method results in a misrepresentation of the percentages reported to customers, failing to accurately reflect the actual resources purchased by suppliers to fulfill retail sales.

For instance, consider the scenario if annual retail sales amount to 100 MWh, *but* loss-adjusted load is 105 MWh. If specified sales break down as 40 MWh renewable and 50 MWh gas, the difference between total retail and specified sales is 10 MWh. If loss-adjusted load is used, then 15 MWh get labeled as unspecified power. This would inaccurately increase the amount of unspecified power represented in this portfolio, as that power does not reflect the electricity customers purchase. A feasible solution involves using retail sales, rather than loss-adjusted load, to represent load during annual accounting. Line losses and other generation that is not used for retail sales is important potentially information for customers that should be included in the "Total Power Content" column, which represents an LSE's total portfolio, but is not included in a specific portfolio that was delivered to customers.

Alternatively, as illustrated in regions with all-generation tracking, a better solution involves calculating a residual mix. This approach assumes all unclaimed generation as unspecified and assigns it a residual mix, which is then averaged and allocated to unfulfilled supplier retail load. This method effectively accounts for all generation and differences between total generation and consumption without artificially inflating load or distorting percentages. However, it's crucial to note that implementing this residual mix calculation requires all-generation tracking (see recommendation 6). Therefore, it's imperative to consider alternative recommendations in regions lacking such tracking capabilities.

2. CRS recommends clarifying at Section 1392(c)(8) that individual renewable megawatt-hours (MWh) cannot be double-counted across multiple hours and that RECs should still be retired pursuant to 1392(a)(5).

CRS has provided technical assistance to utilities to develop accounting methodologies for hourly emission disclosures. While the approach of treating hours as over or under-supplied and using emissions from over-supplied hours to determine the emissions from under-supplied hours is an acceptable practice, it is important that the zero-emissions value of renewable energy not be counted for multiple MWhs. E.g., if a renewable MWh has an annual claim on the REC that is not associated with the specific portfolio of that retail product, that MWh cannot be treated as renewable. Renewable MWhs must be associated with a specific portfolio. The current Draft addressed this by adding in an emissions value for renewables that are oversupplied in a specific hour but which the certificates are retired for an annual claim.

3. CRS recommends using a different term for “avoided emission” factor, such as “Hourly Emissions Reassigned to Renewables” or “Hourly Null Power from Renewables,”

The current Draft calls the emissions assigned to renewables in over-supplied hours “avoided emissions”² and assigns it the default emissions factor for unspecified power as provided in section 95111(b)(1) of the MRR,³ which is a default rate of a gas-fired generator. Avoided emissions is not the appropriate term to use for this value. Rather, avoided emissions⁴ is a commonly used term in GHG accounting used to represent the net change in emissions on the grid due to generation and are a result of a consequential accounting methodology, meaning they measure the systemic emissions impact or consequences of producing electricity. Avoided emissions of generation are typically calculated as the difference between the direct emissions of the generation likely displaced by renewable energy generation (usually generation from marginal or non-baseload resources) and the direct emissions of the generation. A more appropriate term for emissions assigned to renewables in oversupplied hours would be “Hourly Emissions Reassigned to Renewables” or “Hourly Null Power from Renewables.”

4. In addition, CRS recommends that the “avoided emissions” factor be based on a retailer’s unclaimed resources in an hour, rather than assigned a fixed rate.

The MWhs that are assigned an “avoided emissions” factor should be given an emissions factor that represents all unclaimed resources in that hour. This can be done by using the average of the two other categories of supply that make up the hourly unspecified power emissions factor:⁵ unclaimed in-state natural gas and excess electricity from oversupplied retail suppliers. If there is other unclaimed generation not included in those categories, it should be added. This would support the goal of the PSD program to “provide consumers a detailed view into the sources of energy and associated greenhouse gas emissions their retail suppliers used to power their homes and businesses.”⁶

This approach ensures that the emissions rate accurately reflects the composition of unclaimed or publicly shared generation and attributes within the retailer’s portfolio on an hourly basis, rather than a default unspecified rate.

5. CRS recommends using a residual mix emissions factor, or selecting a factor from the hierarchy outlined below, to accurately reflect the emissions associated with both hourly and annual unspecified electricity imports.

² Draft Pre-Rulemaking Amendments to the Power Source Disclosure Program. Section 1392(c)(8) Available at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?doctetnumber=21-OIR-01>

³ MRR Section 95111 (b)(2)

⁴ See Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator’s Guide. (pg.4). Available at: <https://resource-solutions.org/learn/policy-solutions/>

⁵ Draft Pre-Rulemaking Amendments to the Power Source Disclosure Program. Section 1392(c)(7) Available at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?doctetnumber=21-OIR-01>

⁶ PSD. Available at: <https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure-program>

The emissions factor for hourly and annual unspecified purchases should depict the electricity delivered at the retail level. Unspecified power should be representative of its originating market, reflecting the electricity utilized for retail delivery rather than simply assuming the resource running on the margins. In cases where specific supplier information regarding the unspecified purchase is unavailable, utilizing a regional residual mix becomes necessary. This mix should encompass all unclaimed generation/attributes within the organized wholesale market or eGRID subregion from which the electricity is imported or where the purchase is made.

In instances where regional residual mixes are not accessible, the following hierarchy of data should be employed as an alternative:

Data	Source	Description
Type A Residual Mix	Regional generation attribute tracking systems, federal databases (e.g., eGRID, EIA)	Most accurate, all specified transactions removed
Regional fossil-only resource mixes and emissions factors	Federal databases (e.g., eGRID, EIA)	Most conservative, all renewables and other clean energy assumed to be transacted and removed
Regional voluntary-only residual mixes (e.g., Green-e® Residual Mixes)	Green-e® program	Incomplete, only removes voluntary specified transactions, double counts non-voluntary specified transactions
Regional generation adjusted for imports and exports	Federal databases (e.g., eGRID, EIA)	Double counts specified transactions, reflects regional imports and exports to approximate areas of consumption
Regional grid average	Federal databases (e.g., eGRID, EIA)	Double counts specified transactions, does not represent consumption

6. CRS recommends that the CEC request that WREGIS expand to track all generation, to calculate a regional residual mix, and track more granularly.

The CEC should consider requesting WREGIS to enhance its tracking capabilities to include all-generation data, with a more granular, hourly breakdown. This would greatly aid the CEC's PSD Program in assigning accurate emissions rates to unspecified power sources, e.g. a regional residual mix. By tracking generation on an hourly basis, the CEC could better balance out emissions associated with both oversupplied and undersupplied hours, thereby refining their methodology for hourly power source disclosure. This level of detail would not only improve transparency in understanding the environmental impacts of electricity generation but also facilitate more informed decision-making towards achieving California's ambitious emissions reduction goals.

7. CRS recommends additional disclosures under SB 1158⁷

To avoid consumer confusion and to enable electricity customers to understand the differences between different GHG emissions reporting in California and effectively use this information make decisions about their own use, including the time of use as well as choice of suppliers and retail product/portfolio (where available), the GHG reporting required by SB 1158 can be accompanied by the following information.

- a. An explanation of the differences between the following electricity and GHG emissions reporting/information in California:

Name	Agency	Timeframe	Historical/ projected	Scope	Generation included	Transactions included
<i>RPS RE percentage</i>	CPUC & CEC	<i>Multi-year</i>	<i>Historical</i>	<i>Supplier-specific</i>	<i>Percentage of the generation sold to retail customers</i>	<i>All transactions of power and generation attributes; includes firming and shaped RE and ≤ 10% unbundled REC procurements</i>
<i>IRP GHG targets</i>	CPUC & CEC	<i>Annual planning, Hourly accounting of emissions for IOUs</i>	<i>Projected based on utility modeling</i>	<i>Supplier-specific</i>	<i>GHG target for generation owned and purchased by suppliers to physically serve/support retail load</i>	<i>Transactions of power but not generation attributes</i>
<i>PSD GHG intensity</i>	CEC	<i>Annual</i>	<i>Historical</i>	<i>Retail Product/Portfolio-specific</i>	<i>GHG emissions intensity/rate of</i>	<i>All transactions of power and generation attributes except</i>

⁷ Acronyms CARB: California Air Resources Board CEC: California Energy Commission CPUC: California Public Utilities Commission GHG: Greenhouse Gas IOU: Investor-owned Utility IRP: Integrated Resource Planning PSD: Power Source Disclosure MRR: Mandatory Reporting Regulation RE: Renewable Energy REC: Renewable Energy Certificate RPS: Renewable Portfolio Standard

					<i>generation sold to retail customers (contractual delivery to retail customers)</i>	<i>firmed and shaped RE and unbundled REC procurements</i>
<i>MRR GHG emissions</i>	<i>CARB</i>	<i>Annual</i>	<i>Historical</i>	<i>Generator /importer-specific and statewide</i>	<i>Source GHG emissions from in-state generators and out-of-state generation imported to physically serve/support state load</i>	<i>Transactions of power to the state but not generation attributes</i>

b. An explanation of how the GHG reporting required by this bill relates to the GHG emissions reporting above. For example:

This hourly GHG information is intended to be used by customers differently than other GHG information provided by the state, which helps explain the hourly format. Customers can use this new information to help make hourly load management decisions, e.g., shifting electricity consumption to a different time of day, when to charge an electric vehicle, to create emissions benefits. Customers should use RPS and PSD information to make decisions regarding suppliers and the generation they purchase to create emissions benefits. Customers can use CARB's MRR statewide emissions information to evaluate emissions from the state's electricity sector overall.

Name	Agency	Timeframe	Historical/ projected	Scope	Generation included	Transactions included
<i>SB 1158 GHG emissions</i>	<i>CEC</i>	<i>Hourly</i>	<i>Historical</i>	<i>Supplier-specific</i>	<i>GHG emissions from generation used by suppliers to physically</i>	<i>Transactions of power but not attributes</i>

					serve/support retail load	
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c. Additional informational resources, including:

- i. The full methodologies and regulatory text for each emissions total/reporting above.
- ii. General information on different types of RE and GHG emissions accounting frameworks (CRS can contribute resources).

Sincerely,

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Lucas Grimes
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