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California Energy Commission
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Docket No. 16-OIR-05: Comments of Center for Resource Solutions (CRS) on proposed Pre-Rulemaking Updates to Power Source Disclosure (PSD) Regulations, released February 21, 2017

Mr. Scavo:

CRS appreciates this opportunity to submit responses to the Preliminary Scoping Questions for the February 21 Workshop on Pre-Rulemaking Updates to PSD Regulations. Please find our responses below.

Introduction to CRS & Green-e®

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy. CRS has broad expertise in renewable energy policy design and implementation, electricity product disclosures and consumer protection, and greenhouse gas (GHG) reporting and accounting. CRS administers the Green-e programs. Green-e Energy is the leading certification program for voluntary renewable electricity products in North America. For over 20 years, Green-e staff have worked with independent third-party auditors to annually verify renewable energy purchases in the voluntary market and ensure purchasers receive full environmental benefits and sole ownership of each megawatt-hour (MWh) of renewable energy they purchase. Verification procedures ensure there is no double counting between voluntary and compliance (RPS) markets, and that other renewable energy or carbon policies do not claim any of the environmental benefits of certified renewable energy. In 2015, Green-e Energy certified retail sales of over 44 million MWh, representing over 1.2% of the total U.S. electricity mix. In 2015, there were over 827,000 retail purchasers of Green-e certified renewable energy, including 36,000 businesses.

Responses to Scoping Questions

Annual Sales

1. What should be the programmatic definition of “annual sales”?

CAL. PUB. UTIL. CODE § 398.5(a)(3) specifies that retail suppliers report the kilowatt-hours sold at retail for each electricity offering. This is also consistent with § 394.4(k)(1), (2)(B), and (2)(F)(i).

Furthermore, PSD must reflect delivered electricity—the generation attributes, including resource type and associated emissions, that get delivered to and used by retail customers. Commission Staff confirmed at the January 6, 2016 workshop on proposed modifications to the PSD program (“the
January 6th workshop”), that PSD does not only reflect purchases, but rather, purchases that are used to meet retail load.1

Any emissions information included with PSD, as required by AB 1110, must also represent the emissions associated with delivered electricity. For example, PG&E produces a GHG emissions factor information sheet that is “intended to help Pacific Gas and Electric Company (PG&E) customers understand the different greenhouse gas (GHG) emission factors they may use to estimate GHG emissions.” PG&E repeatedly describes these specifically as “GHG emissions factors for delivered electricity” or “electricity delivered during [a] specific year.”2

2. **What should be the programmatic definition of “electricity portfolio”?**

CAL. PUB. UTIL. CODE § 398.4(d) and (k)(1) more accurately require disclosure for “each portfolio offering” and of “electricity portfolio offered,” respectively. This clarification is important in that electricity portfolio, in this context, is used equivalent to electricity offering or product (see below for further clarification). An electricity portfolio, in this context, is not a supplier’s owned or contracted resources, but rather a single mix of facilities supplying generation that has been sold to retail customers.

3. **What should be the programmatic definition of “electricity offering”?**

Electricity offering, in this context, is a single mix resource electricity product, for which all customers of the product receive one unique combination of resource types and proportion of each resource type.

**Renewable Energy Credits**

1. **Should retail suppliers be required to report the purchase of eligible renewable energy resources based on the year that the renewable electricity was generated or based on the year that the REC is retired, if the two years differ?**

To avoid double counting and violation of federal rules on environmental marketing claims3, renewable energy must not be included in a supplier’s power content label (PCL) and therefore reported as delivered to retail customers unless and until the RECs associated with that renewable energy have been retired on behalf of those retail customers. Accordingly, suppliers should be required to report renewable energy only for which the RECs have been retired for their retail customers receiving that electricity offering in that annual reporting period.

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Double counting may occur where retail suppliers are allowed to report renewable energy delivered to retail customers through the PSD program based on the date of generation without demonstrating retirement of the RECs from the same generation, which may be sold off and used for other state RPS programs or for other retail product claims in California or another state. Since RECs are issued at generation, the date of generation will always precede the date of REC retirement. Reporting based on the date of generation, even where REC retirement is required, therefore allows reporting before retirement, increasing the risk of double counting.

The definitions of “purchases of electricity from specified sources” and “electricity from unspecified sources” in the PSD statute require the retirement of RECs to substantiate any renewable energy reported as specific purchases to retail customers in PSD, and likewise require the reporting of renewable energy without REC retirement as unspecified. RECs must be retired in order for renewable energy to be reported as a specified purchase by this definition, otherwise it is not traceable and there is no verification that it has been sold only once. Without an explicit requirement for REC retirement in the PSD regulations, there are no enforceable requirements to verify conformance with these definitions or CAL. PUB. UTIL. CODE § 398.4(i).

There appears to be broad consensus among stakeholders that participated in 2016 PSD rulemakings on both the importance of REC retirement for specified renewables included in PSD and that renewable energy purchases should be included in PSD in the year the REC is retired.

In the case of bundled renewable energy purchases where the REC is retired in a different calendar year, the REC is effectively unbundled, meaning the electricity should be reported as unspecified in the year of purchase, and the REC is paired with a MWh of unspecified power and reported as specified renewable (re-bundled) in the year that it is retired. Retail sellers will therefore wait to report renewable energy on PCLs until RECs have been issued and retired.

2. How should firmed and shaped electricity products be categorized for the power-mix percentage calculations? Specifically, should these products be categorized based on the fuel-type of their REC or the fuel-type of their substitute electricity?

To avoid double counting, firmed and shaped electricity products should be categorized based on the fuel type of their REC—that is, they must be reported as renewable. In California, the REC alone contains and conveys all renewable and environmental attributes associated with the production of electricity from the eligible renewable energy resource (including fuel type and emissions information), and each REC shall be counted only once, either for compliance with the renewables portfolio standard (RPS) of

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4 See CAL. PUB. UTIL. CODE § 399.21(a)(2). See § 398.4(k)(2)(E) of AB 1110.
5 CAL. PUB. UTIL. CODE § 398.2, modified by AB 1110. Previous to AB 1110, these were the definitions of “specified purchases” and “unspecified sources of power.”
7 The language at CAL. PUB. UTIL. CODE § 399.12 (h)(2) excluding “emissions reduction credits” from the attributes included in a REC is intended to prevent disruption of existing air regulations in California and is not related to the direct GHG emissions factor attribute of renewable energy contained in the REC or general grid GHG reduction claims. See CPUC Decision 08-08-028: http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/86954.pdf. See the final order (p.44-46) as well as sections 4.1.2.3.2 (conclusions on p.22-27) and 4.2.
this state or any other state, or for verifying retail product claims in this state or any other state.\(^8\) Furthermore, failing to treat these products as renewable based on the REC would create an important inconsistency with the RPS, in which they are counted as renewable.

A firmed and shaped electricity product, as described, is a regionally-sourced bundled electricity product that is RECs plus system power. Since there is no way to physically deliver electricity from a specified source to a particular customer on the grid, sourcing electricity and RECs from the same region is functionally equivalent to sourcing electricity and RECs from a single grid-connected facility. In both cases, the customer can claim to be powered with renewable energy, and in neither case are the electrons physically powering their home necessarily originating from a renewable facility. Therefore, it is not necessary to require unbundled REC disclosure in this case to explain that the RECs and electricity were not procured bundled.

This may be different than how these products are categorized under the RPS, e.g. as portfolio content category (“bucket”) 3 procurements, though they are still renewable. Alignment of PSD and the RPS in this case is not necessary since the RPS buckets pertain to the form of the procurement contract and CAL. PUB. UTIL. CODE § 398.4(h)(7) of the PSD statute requires disclosure for the portion of annual sales derived from unbundled RECs. Firmed and shaped products are delivered as bundled renewable energy. However, if the Commission decides to categorize these products as unbundled, they must still be reported as renewable based on their RECs, but in this case, they could be included in the separate disclosure on unbundled RECs.

3. **How should greenhouse gas emissions intensities be calculated for firmed and shaped electricity products? Specifically, should the greenhouse gas emissions intensity for these products be calculated based on the emissions profile associated with the generation source of their REC or based on the emissions profile of their substitute electricity?**

There should be no difference between treatment of firmed and shaped electricity products in the power-mix percentage calculations and GHG emissions factor calculations. Fuel type and direct GHG emissions are both attributes of generation that are exclusively contained and conveyed in the REC. See above. Since they must be considered renewable based on the REC, to avoid double counting and to be consistent with the RPS and federal guidance, they must also be assigned the renewable emissions factor.

The use of RECs as the basis for customer GHG claims for purchased renewable electricity in the United States, and the lack of distinction between unbundled REC purchases and bundled renewable electricity purchases with respect to Scope 2 accounting, is consistent with best practices for market-based Scope 2 emissions calculations and reporting, which are set internationally by The Greenhouse Gas Protocol, a joint initiative of the World Resources Institute (WRI) and the World Business Council on Sustainable Development (WBCSD).\(^9\) The updated GHG Protocol Scope 2 Guidance was finalized in January 2015 after a four-year long technical working group and multi-stakeholder engagement process involving hundreds of stakeholders from 23 countries, in which CRS was an active participant.

The final Scope 2 guidance says:

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\(^8\) CAL. PUB. UTIL. CODE § 399.12 (h)(2) and 399.21 (a)(2).

“Utility-specific emission factors shall be calculated based on delivered electricity, incorporating certificates sourced and retired on behalf of its customers. Electricity from renewable facilities for which the attributes have been sold off (via contracts or certificates) shall be characterized as having the GHG attributes of the residual mix in the utility or supplier-specific emission factor;”10

and,

“When using a supplier-specific emission factor, companies should seek to ensure that: [...] the utility or supplier discloses whether and how certificates are used in the emission factor calculation, unless there is third-party certification of the utility product. In particular, companies should seek to ensure that if the supplier has a differentiated product (e.g. a renewable energy product or tariff), the certificates or other contracts used for that product should be used only for that product and not counted in the standard product offer. [And] That the supplier-specific emission factor includes emissions from all the energy delivered by the utility, not just the generation assets owned by the supplier (e.g. what is required by some fuel mix disclosure rules). Many suppliers purchase significant portions of their energy from other generators via contracts, or through the spot market. The emission factor should reflect the emissions from all of these purchases. A supplier-specific emission rate can also reflect certificates retired for compliance purposes (such as U.S. state RPS programs) which also convey attributes for public benefit and claims.”11

These rules have been used by thousands of companies, organizations, governmental agencies, and municipalities reporting their emissions associated with purchased electricity. This guidance has been implemented by GHG inventory and reporting systems like The Climate Registry (TCR)12—who has carried on the work of the former California Climate Action Registry (CCAR), which was created by the State of California in 2001. TCR’s guidance for developing utility-specific delivery metrics can be found in Chapter 19 of its Electric Power Sector (EPS) Protocol.13 After TCR members have reported and verified this information, their utility-specific emission factors are published on the TCR website.14

For example, PG&E uses TCR EPS protocols for its GHG emissions factors for delivered electricity: “As a charter member of the California Climate Action Registry which later grew into The Climate Registry, PG&E has voluntarily registered and publicly reported its third-party verified GHG inventory every year since 2003.”15

4. **Should unbundled RECs (PCC 3) be reflected in the power mix or disclosed separately on the Power Content Label? What factors should be considered in making this determination?**

Purchases of unbundled RECs must be included and reflected in the power mix on the PCL. The Commission’s methodology should strive for completeness and transparency of information. To that end, the most complete and accurate power source and emissions disclosure reflects all purchases

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10 *Ibid.* Section 7.1, Table 7.1, pg. 60.
made by suppliers to serve retail load, including out-of-state and unbundled RECs, since unbundled RECs are a legitimate means of delivering and consuming renewable energy. There is no difference to the customer in terms of claiming usage of renewable energy between bundled and unbundled renewable energy.

Unbundled RECs are not merely a compliance mechanism. For retail customers in California, the REC represents the attributes of renewable generation (including emissions), proof of renewable generation that has been added to the grid within Western power grid, and exclusive claim to the delivery and ultimate use of renewable generation. Attributes that are delivered with electricity (“bundled”) and attributes that are delivered separate from electricity (“unbundled”) are contractually and functionally equivalent with respect to a customer’s claim to receipt of those attributes and use of that specified generation source, which is precisely what is being communicated in PSD. For the proportion of purchases where the form of contract is unbundled RECs, this will be disclosed per AB 1110.

Disclosure related to unbundled RECs, as required by CAL. PUB. UTIL. CODE § 398.4(h)(7), should be provided outside of the fuel-type percentages since unbundled RECs do not represent a fuel type. To avoid customer confusion, we recommend that succinct, consistent descriptive language accompany disclosure of the portion derived from unbundled RECs, such as the following: “Renewable energy credits (RECs) are used to track ownership of clean energy generation from renewable resources such as wind, solar, hydropower and biomass. Unbundled RECs are delivered separate from your electricity.”

5. How should null power be categorized for the power-mix percentage calculations? How should the greenhouse gas intensity of null power be calculated?

CAL. PUB. UTIL. CODE § 398.2(e) requires that null power (specified renewables without RECs) must be reported as unspecified: “Electricity from unspecified sources” means electricity that is not traceable to specific generation sources by any auditable contract trail or equivalent, including a tradable commodity system, that provides commercial verification that the electricity source claimed has been sold once, and only once, to a retail consumer.”

The U.S. Federal Trade Commission (FTC) also provides specific guidance on the topic of null power claims:

“[T]he operation of the renewable energy market relies heavily on the expectation of all market participants that these certificates have not been counted or claimed twice (i.e., double counted). Such double-counting can occur, for instance, through [...] renewable energy claims made by a company that already sold the RECs for its renewable generation. [...] Such double counting, in turn, not only risks deceiving consumers but also threatens the integrity of the entire REC market. By selling RECs, a company has transferred its right to characterize its electricity as renewable. Accordingly, the FTC's Green Guides advise that, if 'a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be

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16 CAL. PUB. UTIL. CODE § 399.12(h). Also see Western Electricity Coordinating Council, WREGIS Operating Rules (July 15, 2013). Section 2, pg. 2, 4-5.


The GHG emissions intensity of null power should be calculated as having the GHG attributes of the “residual mix:” the regional emissions rate left after specified power and REC purchases (for example voluntary green power products and RPS procurement) are removed from the system—in other words, the emissions from all untracked and unclaimed energy.

**GHG Intensity Factor Data and Calculations**

1. **AB 1110 defines “greenhouse gas emissions intensity” as the “sum of all annual emissions of greenhouse gases associated with a generation source divided by the annual production of electricity from the generation source.” Are there any reasons to consider calculating GHG emissions intensities using greenhouse gases other than those accounted for in both MRR and the EPA’s Greenhouse Gas Reporting Program?**

Calculations of GHG emissions including CO$_2$, CH$_4$, and N$_2$O are sufficient where emissions of Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur hexafluoride (SF6) are not significant with respect to a calculation in terms of carbon-dioxide–equivalent.

2. **What are the concerns, limitations, and benefits of relying on GHG emissions reported to the MRR program for the development of GHG emissions intensities for in-state and out-of-state facilities?**

Though the information reported to the MRR program may be used for the development of GHG emissions intensities for facilities whose emissions are reported under that program, the collection of information reported to the MRR program by cap-and-trade compliance entities is not equivalent to the information required to calculate the GHG emissions intensity factors for each purchase of electricity by a retail supplier to serve retail load, as required under AB 1110. Neither are the total annual GHG emissions reported under the MRR program (i.e. from owned assets and imported power) of retail electricity suppliers that are also subject to PSD equivalent to the total annual GHG emissions associated with their delivered electricity, which are divided by annual production from the sources of that supply to produce the emissions intensities required by AB 1110.

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In other words, the MRR cannot be adopted wholesale as the methodology that must be adopted by the Commission per AB 1110 because the MRR is not the appropriate methodology for calculating the emissions associated with deliveries to retail customers. California’s MRR is not for reporting for retail product claims. It is not used for tracking and determining emissions delivered to consumers, nor is it appropriate as such a protocol. Rather, the MRR is used for accounting of electricity generated in-state or directly delivered to support compliance for wholesale power generation. ARB is not concerned with tracking renewable energy or GHG emissions to consumers.

First, there is data necessary for PSD that is not included in the MRR, including power bought out of the California Independent System Operator (ISO) market as well as unbundled REC purchases. Second, for the purposes of the Commission and PSD, retail suppliers must demonstrate a purchase and delivery to serve retail load. No such demonstration is required for reporting under the MRR. Among other things, in order for a retail supplier to report the emissions intensity of a purchase of specified renewable energy, they must have retired the REC. Likewise, in order to report the emissions intensity of a purchase or delivery of emitting power, that power must have been used to serve their retail load and not sold to a different party.

For example, PG&E explicitly distinguishes “GHG emissions factors for delivered electricity” from mandatory GHG reporting: “The information in this document is not to be used for mandatory GHG reporting, financial analysis, or regulatory compliance, and does not necessarily reflect the approaches taken by PG&E for its own regulatory compliance purposes.”

Though it can be broadly consistent, particularly in terms of the facility emissions factors used, we disagree that legislative intent compels the Commission’s methodology for calculating GHG emissions intensity factors for each purchase of electricity by a retail supplier to serve retail load to be the same as the MRR.

3. Should GHG emissions classified as non-covered or exempt under the Cap and Trade Program be included in PSD greenhouse gas intensity calculations?

Whether emissions that are classified as non-covered or exempt under cap-and-trade are included in PSD GHG intensity calculations depends on the reasons for their exemption and whether or not they also relevant to an exemption under PSD. In general, the emissions associated with all supply/purchases used to serve retail load should be included in the GHG intensity calculations for PSD.

4. Should the Power Disclosure Program adopt ARB’s default factor as the greenhouse gas intensity for unspecified power?

The GHG intensity for unspecified power used for PSD should reflect what has already been bought and sold and should therefore be calculated as having the GHG attributes of the “residual mix.” See above.

5. Energy procured through the Energy Imbalance Market (EIM) is reported under the MRR program as specified electricity. What greenhouse gas intensity factor should be assigned to

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Electricity procured through the EIM should be assigned a residual mix emissions factor (see above). It is not typical to assign losses or energy-related transmission services to retail disclosure. Those are usually captured in residual mix. States with the most well-developed PSD programs in the country, in NEPOOL and PJM-GATS, have used certificates to verify attributes for all specified claims, and everything else goes into the residual mix.

Electricity procured through the EIM may only be classified and reported as specified if it meets the definition of “Purchases of electricity from specified sources” at CAL. PUB. UTIL. CODE § 398.2(d): “electricity transactions that are traceable to specific generation sources by any auditable contract trail or equivalent, such as a tradable commodity system, that provides commercial verification that the electricity source claimed has been sold once and only once to a retail consumer. Retail suppliers may rely on annual data to determine whether a transaction meets this definition, rather than hour-by-hour matching of loads and resources.”

**POU GHG Intensity Adjustment**

1. **AB 1110 requires the Energy Commission to establish guidelines for adjustments to a GHG emissions intensity factor for a reporting year for any local publicly owned utility (POU) demonstrating generation of quantities of electricity in previous years in excess of its total retail sales and wholesale sales from specified sources that do not emit any GHGs. Adjustments authorized by the guidelines established by the Energy Commission shall not permit excess generation procured in a single year to be counted more than once or to be resold to another retail supplier as a specified source. What quantities of electricity have been generated in previous years that stakeholders believe would qualify for this adjustment?**

Where an adjustment to the GHG emissions intensity factor for a POU is required per CAL. PUB. UTIL. CODE § 398.4(k)(2)(D), the Commission must require that the POU retain the RECs or environmental attributes associated with the generation from non-emitting specified sources in previous years in order to receive the adjustment. The Commission should also set a timeframe by which those RECs/attributes must be used. Otherwise, if the POU does not retain the RECs or environmental attributes or if the timeframe for use of those RECs/attributes has been exceeded, the adjustment based on zero-emitting specified source generation in previous years should not be given and a residual mix emissions factor must be used for any unspecified purchases.

Please let me know if we can provide any further information or answer any other questions.

Sincerely,

Todd Jones
Senior Manager, Policy and Climate Change Programs