



**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

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Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for the California Solar
Initiative, the Self-Generation Incentive Program and
Other Distributed Generation Issues.

Rulemaking 12-11-005
(Filed November 8, 2012)

**SIERRA CLUB OPENING COMMENTS ON PROPOSED DECISION
REVISING THE GREENHOUSE GAS EMISSION FACTOR TO DETERMINE
ELIGIBILITY TO PARTICIPATE IN THE SELF-GENERATION INCENTIVE
PROGRAM PURSUANT TO PUBLIC UTILITIES CODE SECTION 379.6(b)(2)
AS AMENDED BY SENATE BILL 861**

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Pursuant to Rule 14.3 of the Commission Rules of Practice and Procedure, Sierra Club submits the following Opening Comments on the Proposed Decision Revising Greenhouse Gas Emission Factor to Determine Eligibility in the Self-Generation Incentive Program (“Proposed Decision”).

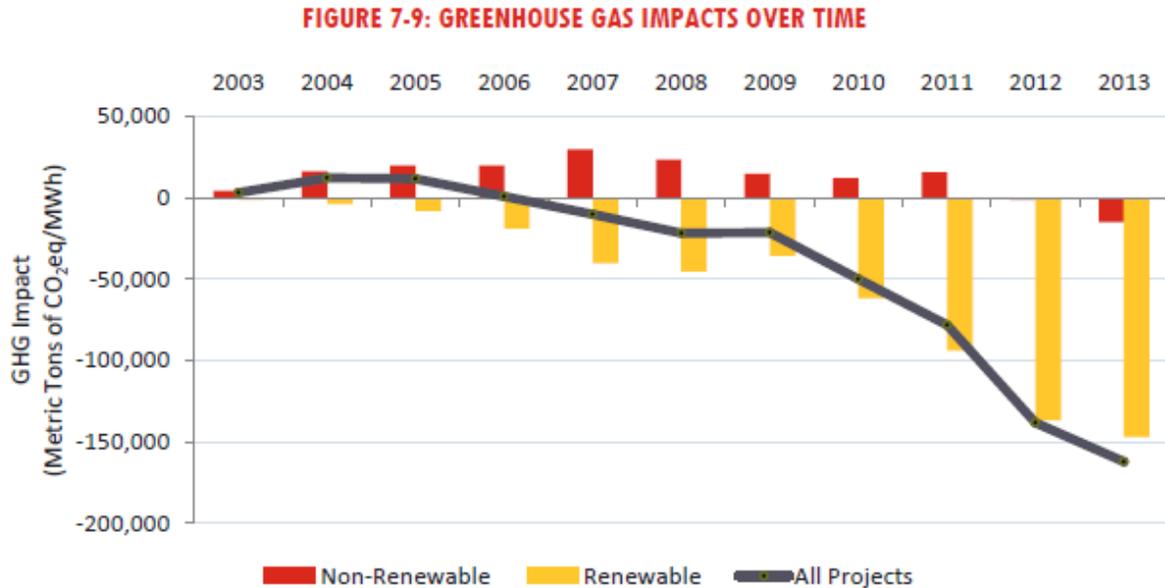
I. INTRODCUTION

The Self-Generation Incentive Program (“SGIP”) has progressed from its origins during the energy crisis as a program to incentivize distributed generation to one focused on achieving meaningful reductions in greenhouse gas pollution. In 2009, the Legislature passed Senate Bill 412 amending SGIP to limit eligibility to resources that “will achieve reductions of greenhouse gas emissions pursuant to the California Global Warming Solutions Act” (AB 32).¹ In implementing this requirement, the Commission determined in D.11-09-015 that eligible technologies “must generate electricity at an emission rate lower than the emission rate of electricity purchased from the grid over a ten-year time-span” and set a qualifying emissions factor based on baseline grid emissions.² In allowing resources with emissions only incrementally less than the grid average to qualify for SGIP incentives, SGIP frequently functioned to heavily subsidize fossil-fuel dependent technologies with little, if any, environmental benefit. A 2013 evaluation of SGIP by Itron found that greenhouse gas emission

¹ SB 412 (2009), adding Pub. Util. Code § 379.6(b)(1).

² D.11-09-015 pp. 13-14.

reductions from the SGIP program were almost entirely driven by renewable sources like wind turbines and biogas projects, rather than non-renewable projects like the natural gas fuel cells that are awarded a significant fraction of SGIP funding.³



To address this shortcoming, the Legislature passed Senate Bill 861 in 2014 to further emphasize greenhouse gas reduction, finding that the success of SGIP is based not simply on whether a resource would reduce greenhouse gases, but on “the *amount* of reductions.”⁴ Accordingly, in updating the greenhouse gas emissions factor for SGIP eligibility, the Commission should ensure SGIP is directed toward resources that represent a significant improvement from the grid average. California’s target of reducing greenhouse gas pollution to 40 percent below 1990 levels by 2030 is both urgently needed and extremely aggressive. We simply do not have the luxury of squandering limited incentive funding on counterproductive subsidization of polluting resources at the expense of the much cleaner technologies critical to achievement of California’s climate goals.

³ Iron, Self-Generation Incentive Program 2013 Impact Evaluation Report (Apr. 2015) p. 7-12, http://www.cpuc.ca.gov/NR/rdonlyres/AC8308C0-7905-4ED8-933E-387991841F87/0/2013_SelfGen_Impact_Rpt_201504.pdf.

⁴ SB 861 (2014), adding Pub. Util. Code § 379.6(l) (emphasis added).

Unfortunately, the Proposed Decision falls far short of ensuring SGIP realizes its purpose of achieving meaningful reductions in greenhouse gas pollution. The PD's proposed 360 kgCO₂/MWh eligibility threshold allows projects with greenhouse gas emissions close to 20 percent *higher* than a modern combined cycle facility to qualify for SGIP incentive funding.⁵ At 360 kg CO₂/MWh, the "SGIP" acronym more aptly stands for Subsidizing Greenhouse gas Intensive Projects.

The PD's 360 kgCO₂/MWh eligibility threshold was derived through flawed application and overly conservative assumptions of the Renewables Portfolio Standard ("RPS"). To correct the PD and ensure SGIP aligns with California's climate objectives, the Commission should apply the RPS to both the build and operational emissions rate as done in D.11-09-015 and update the RPS assumption from 33 to 50 percent to reflect the reasonably foreseeable increase in state renewable requirements.

II. DISCUSSION

A. The RPS Adjustment Should Apply to the Entirety of the Emissions Factor Calculation Consistent with D.11-09-015 and the Supporting Staff Report.

In reaching its previous determination of the SGIP greenhouse gas eligibility threshold in D.11-09-015, the Commission used a weighted average of emissions from gas-fired generators online in California between 2002 and 2004, reduced this by 20 percent to account for the then 20 percent RPS, and then accounted for avoided transmission and distribution losses.⁶ In applying the RPS factor to the entire marginal emissions rate, the staff proposal that helped inform D.11-09-015 reasoned:

This "avoided emissions factor" represents the emissions produced when a MWh of electricity is consumed from the grid. This can also be thought of as the emissions that would be avoided when a MWh of electricity is generated by an alternative resource. For this analysis, staff considered the business as usual (BAU) avoided emissions factor used by ARB in the AB 32 Scoping Plan. ARB assumed an average avoided emissions factor of .437 TonneCO₂/MWh, which represents a weighted average of emissions rates from gas-fired generators online

⁵ The heat rate for a Siemens H-Class is 5687 Btu/kWh. http://www.energy.siemens.com/us/pool/hq/power-generation/gas-turbines/SGT5-8000H/downloads/SGT5-8000H_brochure.pdf. Applying a CO₂ conversion factor of 53.06 kgCO₂/mmBTU results in emissions of 302 kgCO₂/MWh.

⁶ D.11-09-015, Attachment A; R.10-05-004, SGIP Staff Proposal (Sept. 2010) p. 57, <http://docs.cpuc.ca.gov/PublishedDocs/EFILE/RULINGS/124214.PDF> ("SGIP 2010 Staff Proposal").

in California from 2002 to 2004. Although there are many different kinds of electricity generating resources in California, including nuclear and renewables, gas-fired generators are those most likely to be turned on or turned off on the margin. Therefore, when considering an appropriate emissions factor for emissions avoided by an alternative resource, the emissions profile of gas-fired generators is most appropriate.

However, this emissions factor does not necessarily apply when a MWh of electricity is generated by customers using self-generation to offset their own load. The reason for this has to do with the fact that California’s Renewables Portfolio Standard (RPS) requires utilities to generate 20% of the electricity required to serve customers with renewable power. When customers generate their own electricity, instead of purchasing that electricity from the utility, customers avoid a mix of gas-fired generation and zero emissions renewable generation that the utility would otherwise have to provide.⁷

Incorporating the reasoning of the staff proposal, the Commission concluded in D.11-09-015 that “[i]t is reasonable to adjust the CARB’s GHG factor by 20% to reflect the fact that DG displaces a mix of resources, including renewable resources as required by the RPS statute.”⁸

The PD errs by now only applying the RPS reduction to the build margin rather than both the build and operating margins. As a consequence, despite the fact that the PD assumes a 33 percent RPS rather than the 20 percent RPS used in D.11-09-015, the PD still only results in a 5 percent reduction in emissions eligibility, from 379 kgCO₂/MWh in D.11-09-015 to the proposed 360 kgCO₂/MWh. The PD’s belief that the RPS should not apply to the operating margin because SGIP projects would only displace gas resources is flawed and contrary to Commission precedent. SGIP projects displace a mix of resources, including renewable resources, because the reductions in retail load that result from deployment of SGIP projects avoid “the zero emissions renewable generation that the utility would otherwise have to provide.”⁹ Accordingly, the RPS should apply to the entire marginal emissions rate, not just the build margin. To fully restore the RPS in determining the emissions eligibility factor and apply it to both the build and operational margins, the PD’s equation should be modified as follows:

$$\text{GHG EF} = \frac{[1 - \text{RPS}\% * (1 - \text{LLF})] * [(0.5(\text{EROLF} * (1 - \text{WFP}) + \text{EROP} * \text{WFP}) + 0.5 * (1 - \text{RPS}\% * (1 - \text{LLF})) * (\text{ERBLF} * (1 - \text{WFP}) + \text{ERBP} * \text{WFP}))]}{(1 - \text{LLF})}$$

⁷ SGIP 2010 Staff Proposal pp. 56-57.

⁸ D.11-09-015 p. 68 (Conclusion of Law 2).

⁹ R.10-05-004, SGIP Staff Proposal (Sept. 2010) p. 57,

<http://docs.cpuc.ca.gov/PublishedDocs/EFILE/RULINGS/124214.PDF>.

Application of the RPS to all marginal emissions would result in an emissions eligibility of 295 kgCO₂/MWh. A 295 kgCO₂/MWh standard is less than the emissions of modern combined cycle facilities and would help ensure SGIP incentives are directed at legitimately low emissions technologies that meaningfully further California’s climate objectives.

B. The PD Errs in Making “Conservative” Assumptions on Achievement of California’s Decarbonization Trajectory and a Higher RPS.

The Proposed Decision comes at a time when California is taking aggressive steps to continue to decarbonize the energy sector, with Governor Brown calling for increasing the energy derived from renewable sources from 33 to 50 percent and issuing a target of reducing greenhouse gas pollution to 40 percent below 1990 levels within the same period.¹⁰ The Air Resources Board Update to the AB 32 Scoping Plan Update is clear that achieving a low-carbon future “will require that the pace of GHG emission reductions in California *accelerate* significantly. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.”¹¹ As emphasized in the Scoping Plan Update:

Appropriate action on climate change requires a continuum of action to capture cost-effective reduction opportunities whenever possible, on an ongoing basis. We need to meet strict, science-based targets not just in 2020 and 2050, but at every point in between, as well. California’s leadership will be defined not just by its emissions level in 2050, but also by the pathway it takes to get there.¹²

The SGIP projects approved in the wake of this Decision will begin to come online toward the end of the decade and are assumed to have a 10-year lifespan. Yet, despite the aggressive carbon reduction targets and 50 percent RPS goal California has set for 2030, the PD makes the “rather conservative” assumption that the RPS remains at 33 percent for purposes of determining project emissions eligibility.¹³ By assuming no growth in the RPS after 2020, the PD is squarely at odds with California climate policy. Perversely, the PD’s “conservative” RPS

¹⁰ CA.gov, Governor Brown Sworn In, Delivers Inaugural Address, Jan 4, 2015, available at <http://gov.ca.gov/news.php?id=18828>; Executive Order B-30-15. SB 350, legislation codifying the 50 percent renewable requirement, has now passed the State Senate. See http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0301-0350/sb_350_bill_20150604_history.html

¹¹ Scoping Plan Update at 33.

¹² *Id.* at 34.

¹³ PD p. 13.

assumption also functions to undercut achievement of California's low-carbon future. By not accounting for the increased renewable requirements that are part of a decarbonization pathway, the PD's eligibility criteria allow more polluting generation to qualify for incentives, thereby reducing deployment of cleaner resources and the resulting reductions in greenhouse gas pollution that would have occurred were eligibility criteria more stringent. By assuming a future where California does not continue along its greenhouse gas reduction trajectory, the PD makes realization of that future more likely. Accordingly, the PD should be revised to assume a 50 percent RPS by 2030, or in the alternative, a 40 percent RPS by 2024. As the Commission has required consideration of the 40 percent RPS by 2024 in the RPS and LTPP proceedings, there is no legitimate reason it cannot also be incorporated here.¹⁴

To the extent the Commission feels compelled to wait for legislative enactment of higher RPS requirements prior to incorporation into SGIP eligibility, the PD should be revised to trigger an automatic update of the emissions eligibility standard to account for a higher RPS upon enactment of RPS legislation. Given that a higher RPS can simply be plugged into the formula to determine emissions eligibility to yield a new emissions factor, awaiting a new proceeding to incorporate new RPS requirements is unnecessary and would result in needless delay. Indeed, although California's 33 percent RPS legislation passed in 2011, it is only now being incorporated into SGIP eligibility requirements through the instant rulemaking. An automatic update to the emissions factor upon enactment of RPS legislation will ensure prompt integration of new RPS requirements into this important Commission program.

III. CONCLUSION

For the reasons set forth above, Sierra Club respectfully requests the Commission amend the PD to apply RPS assumptions to both the build and operating margins, and to increase the RPS assumptions used to determine emissions eligibility.

Respectfully,

/s/ MATTHEW VESPA

¹⁴ See, e.g., R.15-02-020, Assigned Commissioner's Revised Ruling Identifying Issues and Schedule of Review for 2015 Renewables Portfolio Standard Procurement Plans (May 28, 2015), <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M152/K045/152045579.PDF>

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