



**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)

**OPENING COMMENTS OF SOUTHERN CALIFORNIA GAS COMPANY
(U 904 G) ON THE PROPOSED DECISION REVISING THE SELF-GENERATION
INCENTIVE PROGRAM PURSUANT TO SENATE BILL 861, ASSEMBLY
BILL 1478, AND IMPLEMENTING OTHER CHANGES**

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Pursuant to Rule 14.3 of the Commission's (Commission) Rules of Practice and Procedure, Southern California Gas Company (SoCalGas) hereby submits its Opening Comments on the *Proposed Decision Revising the Self-Generation Incentive Program Pursuant to Senate Bill 861, Assembly Bill 1478, and Implementing Other Changes* issued May 16, 2016 (PD), which implements changes pursuant to statute, as required by Senate Bill (SB) 861 (2014) and Assembly Bill (AB) 1478 (2014), and makes other program changes to improve the Self-Generation Incentive Program's (SGIP) ability to achieve its goals.

I. INTRODUCTION AND SUMMARY OF RECOMMENDED CHANGES

SoCalGas commends the Energy Division and for its thoughtful consideration and the PD's subsequent adoption of many of the recommendations for improvement in response to the Staff Proposal for Program Modifications (Staff Proposal). However, SoCalGas is concerned that the proposed funding mechanism will produce unintended consequences and more importantly, result in unnecessary expenses. The February 23, 2016 solicitation is a realistic indication of future participation in SGIP, and it is therefore highly likely that enough applications will be received at the next program opening to fully subscribe the remaining authorized budget.¹ To better address this situation and its consequences, SoCalGas offers the following comments and recommendations and

¹ See D.14-12-033.

requests additional clarification regarding certain portions of the PD. SoCalGas provides the following summary and comments on the PD's major changes:

- **Funding Schedule** – SoCalGas supports the PD modifications to the primary program goals in response to SB 861 and party's comments to include: (1) Environmental; (2) Grid Support; and (3) Market Transformation. While SoCalGas agrees with the goals as proposed in the PD, shoehorning the California Solar Initiative's (CSI) policy into SGIP will have major consequences. By adopting CSI's funding schedule, the State may forgo greenhouse gas (GHG) reductions, Grid Support, and Market Transformation in future years;
- **Budget Allocation** – Dividing the incentive budgets between two broad categories: energy storage and generation is appropriate. However, in light of the proposed minimum biogas requirement, a more appropriate distribution is 50% to Advanced Energy Storage (AES) and 50 % for Generation Technology and Renewable Fuel;
 - SoCalGas Budget Allocation – As the budget allocations are shifted to fund more Electric Energy Storage, SoCalGas' ratepayer collections should shift to fund projects that reduce GHG emissions, improve grid reliability, and transform the market with the use of natural gas or biogas.
- **Incentive Rates** – New incentive levels for Energy Storage should be further reduced. The proposed rates are sufficiently lucrative to result in opening issues that are similar to those seen on February 23rd;
- **Renewable Fuel** – SoCalGas supports the requirement for generation technologies to use renewable fuel. However, to help create the appropriate policy, a full market analysis on the cost and availability of Renewable Natural Gas (RNG) for the use of Electric Generation should be commissioned. Additionally, a minimum of 50% of the budget should be allocated to the Generation budget category;
- **Application Process** – A tier generated lottery system with a pre-screening mechanism will best replace the first-come, first-served system; and
- **California Supplier Adder** – The eligibility screening for the California Supplier adder must be implemented prior to the next program opening.

II. DISCUSSION

A. SoCalGas' SB 861 and AB 1478 Comment History

Initially conceived as a generation program, SGIP has been modified many times over the last 16 years. Overall, the CPUC has done a fair job of providing incentives to technologies that can meet the eligibility standards. Recently, these standards appear insufficient, and as a result, additional eligibility requirements have been proposed. Many of these proposals have been

deliberated through multiple Assigned Commissioner’s Rulings (ACR).² SoCalGas provided input on the program modifications that focused on consistency with the intent of the program, practical considerations, timing, and cost-effectiveness.³ Throughout its comments, SoCalGas has remained technology neutral. Nevertheless, SoCalGas is concerned that the proposed modifications in the PD overestimate the benefits of AES and undervalue the benefits of renewables and generation technologies.

B. Program Goals

In general, SoCalGas agrees and supports the goals as identified in the PD. However, the goals of the program may be unintentionally impacted by the proposed funding schedule. Based on the participation levels seen during the February 23rd opening, it is quite unlikely that funding will be available beyond the next program opening. More specifically, a front loaded budget structure will allow funding to potentially be exhausted in less than one year. As an unintended consequence, the State may forgo future GHG reductions, true market transformation, and the emergence of cleaner technologies that could help provide grid support and reliability in the future. SoCalGas submits that the proposed funding schedule would be best supported by the many changes recommended in the Incentive Budget section of this document. Such changes will help achieve all program goals much more equitably without precluding emerging, cleaner technologies from participation.

C. Statutory Requirements

1. Reduce Ratepayer Costs

SoCalGas believes that Staff’s proposal to reduce incentive rates is in line with the statutory mandate to *reduce ratepayer costs*,⁴ which can be accomplished by *maximizing the ratepayer value*. In the PD, Staff asserts that reducing “incentive rates for technologies which

² D.15-12-027 (SGIP to reopen with partial budget); D.15-11-027 (GHG compliance rules); ACR seeking additional information regarding the potential eligibility requirements for the SGIP issued on February 25, 2016.

³ On January 7, 2016, SoCalGas and SDG&E filed Opening Comments on the Energy Division Staff Proposal for SB 861 modifications to the SGIP.

⁴ Pub. Util. Code § 379.6(a)(1). “It is the intent of the Legislature that the self-generation incentive program increase deployment of distributed generation and energy storage systems to facilitate the integration of those resources into the electrical grid, improve efficiency and reliability of the distribution and transmission system, and reduce emissions of greenhouse gases, peak demand, and ratepayer costs.”

meet too few of the program goals will help maximize ratepayer value.”⁵ However, SoCalGas believes Staff inappropriately recommends a 60% reduction in rates for Fuel Cell technologies that have been found to reduce GHG emissions and other criteria air pollutants, and that can best meet the majority of the program goals.⁶ In contrast, AES received an incentive reduction of less than 25%, while AES was found to increase GHG emissions.⁷ While SoCalGas supports the Staff’s interpretation of the statutory requirement to reduce ratepayer costs, the rate reductions for AES and Fuel Cells are inconsistent and not substantiated by the fact driven SGIP Measurement and Evaluation reports.

2. Provide Equitable Distribution Among Customer Classes

GHG emission reductions, peak load reductions, and grid reliability are beneficial to all customers connected to the grid. Therefore, all customers should bear the costs resulting from SGIP projects.

D. Biogas Requirements

Biogas offers the highest environmental benefits and warrants priority in funding and market adoption. As such, the PD’s proposed modifications to biogas policy should be sufficiently flexible to facilitate the adoption of biogas, which will inherently yield higher GHG reductions. SoCalGas offers the following comments to the PD:

- Projects that use 100% biogas (onsite, directed in-state, directed out-of-state) should be classified as renewables and receive full incentive benefits.
- GHG emissions and incentives should be prorated for projects that use less than 100% biogas.
- Compliance verification for blended onsite biogas projects should not be based on the Renewable Fuel Use Report (RFUR). Instead, this alternate solution should be addressed in the prescribed workshop.
- Aligning SGIP biogas requirements with the California Energy Commission’s (CEC) guidelines is appropriate, and therefore, out-of-state biogas should be allowed.
- Generation technologies should be allowed to blend biogas to meet the GHG eligibility requirement.⁸

⁵ PD, at 11.

⁶ Itron, 2013 SGIP Impact Evaluation Report.

⁷ Itron, 2013 SGIP Impact Evaluation Report, Section 8-10.

⁸ See Appendix A for full details.

- Biogas used to meet GHG requirements should not be eligible for biogas incentives.
- Biogas used in excess of what is needed to meet GHG requirements should receive biogas incentives.

The prescribed workshop should help modify the processes for the proper implementation and verification of biogas compliance.

E. Minimum Zero Emission Fuel Blending Requirement

SoCalGas appreciates the Commission's forward thinking on how to further decrease GHG emissions than those already prescribed in D.15-11-027. However, SoCalGas firmly believes that the minimum biogas requirement for generation technologies as an additional requirement for GHG emission reductions is unnecessary. Although SoCalGas supports the intent of enabling the utilization and production of biogas in California, more data is needed to help set the appropriate requirements that will truly help generate the biogas market. As such, a full market analysis should be commissioned before adopting this requirement.

The SGIP's Market Transformation report, which has been ready for over six 6 months but still not provided to the public and stakeholders by staff, identified over 15GW of potential generation in California. Most generation customers are from industrial and commercial sectors with a unique need for heat. Primarily, these projects are in the food manufacturing sector, each of which typically employs between 1,000 to 10,000 employees. In achieving the State's GHG reduction goals in an economically benign manner, it will be critical to offer a diverse set of compliance options for these unique customers in order to allow them to *cost-effectively* meet their environmental requirements and remain as economically viable industries in the State. The proposed minimum requirement creates an unintentional relative disincentive, which will systemically force SGIP to ignore some of its most impactful and otherwise cost-effective generation opportunities. As such, instituting a minimum biogas that will not abruptly or significantly increase costs for these important and financially sensitive customers can help shape future policy requirements to aid biogas market adoption.

SoCalGas agrees with the Commission that the idea of instituting policies to help foster the biogas market in California has societal benefits. However, the policy must take into consideration the principals of affordability, funding availability, and timing. Based on these principals SoCalGas finds that:

- 1) A full market analysis will help establish the appropriate requirements;
- 2) Generation Budget Category must be sufficiently funded.
- 3) The minimum biogas requirement should be adopted beginning 2018.

Instituting this requirement may help increase the viability and adoption of biogas; however, positive incentives would be even more beneficial for the biogas market and furthering California’s environmental goals. It is likely that an aggressive minimum zero-emission fuel blending requirement will have no effect on the adoption of biogas if the requirement increases project operating costs above SGIP incentive compensation levels. Furthermore, since the blending requirement is not for the purpose of additional GHG reductions, the minimum amount should not become an economic barrier. Based on the limited data available on the procurement costs, SoCalGas estimates that for every percent increase in biogas required, the overall fuel cost for an SGIP customer can increase by 2-4%. Similarly, the cost of directed biogas is expected to be three to six times the cost of traditional natural gas. Since many SGIP participants are small-scale customers, it is likely that their procurement cost will be higher than customers with greater volumes. In comparison, the proposed SGIP biogas adder would support a procurement cost of around 2.4 times the cost of traditional natural gas, meaning that the incremental cost will not be fully covered for most, if all participants do not adopt directed biogas.

To best illustrate, a customer with a generation system of 1,000 kW will use 85 thm/hr. Using natural gas, the annual fuel cost is expected to be \$275,000. When blending a 10% biogas, the annual fuel cost increases by 21%.

Table 1: Minimum Biogas Fuel Cost

Fuel Type	Fuel Consumption/Hr	Fuel Price	Operating Hours	Total Annual Cost	Total
NG	85 thm	\$.416	7884	\$275,000	\$275,000
Biogas +	8.5 thm	\$1.3	7884	\$87,118	\$338,018
NG	76.5 thm	\$.416	7884	\$250,900	

SoCalGas believes that setting a minimum biogas requirement without informed data will have deleterious impacts on future RNG policy. The economic impacts of a 10% adoption, as proposed in the PD, can be detrimental to the economics of all generation projects. As such, the Program Administrators (PAs) in consultation with Energy Division should commission a full

market analysis on the availability and economics of RNG specifically used for Electric Generation. This analysis will help identify the proper percentages and schedule. Subsequently, the minimum eligibility percentage should be contingent on the results of the analysis. SoCalGas firmly believes that the appropriate schedule could result in additional GHG reductions for the SGIP, and send a market signal to increase RNG production while maintaining a realistic approach and an affordable cost for California businesses. If the SGIP is successful in influencing the production and utilization of biogas, customers will have the option to increase their renewable fuel portion and achieve a greater incentive from SGIP. This approach will enable program participants to test the renewable fuel market conditions by establishing some level of renewable procurement. Additionally, this approach will allow customers to voluntarily increase their renewable fuel portion and receive greater incentives with the biogas adder, while not saddling them with prohibitive restrictions. Flexibility is critical in retaining business in California and harvesting the most cost-effective opportunities, and this modified program design would preserve this flexibility without sacrificing effectiveness. It will also allow these industries to remain competitive and continue to provide jobs in California, which are imperative to the State's economy. Therefore, in an effort to determine the appropriate platform that will best foster RNG market adoption, the SGIP PAs in consultation with Energy Division should first commission a market analysis on the economics and availability of biogas. .

The PD imposes an additional eligibility requirement for generation technologies, but it does not address the limited budget allocation for this requirement. Given the funding challenges that the SGIP has without an additional 25% budget allocation, this policy alone will likely not be successful in affecting the market adoption of biogas. Since renewable fuel can best meet all program goals, these projects should receive funding priority. As such, an additional 25% should be allocated to the Generation Budget category to help offset the minimum biogas requirement. Without sufficient funding for biogas, these projects will be undervalued. To illustrate, SoCalGas has a 22 MW gas turbine generation project for the largest waste water treatment facility in Los Angeles. This project will be operating solely on onsite biogas. Unfortunately, due to limited budget allocation, this project cannot receive any SGIP funding for the use of onsite biogas. It is unfortunate that due to funding constraints, this project, which has a higher environmental benefit than most SGIP projects, will receive a much lower incentive than eligible for. Without the proper funding to support the additional eligibility

requirement, the policy may have the opposite result than that which is expected. A 25% budget increase for generation technologies will support the minimum biogas requirement and it will help fund biogas conversions, which will yield additional GHG benefits without adding generation.

More importantly, the adoption of this eligibility requirement should be contingent upon the results of the market analysis and should only be implemented based on feasibility. Most biogas projects require ample time to develop the onsite procurement installation, or to negotiate a reasonable nominated biogas contract. Based on the potential implementation schedule of the Final Decision, instituting this requirement as early as 2017 would not allow sufficient time for a market analysis to be completed. Revising this requirement to start in 2018 would allow time for completion of the analysis, allow customers to make arrangements to purchase this fuel, and increase market penetration for cost-effective generation projects that are able to meet the already stringent SGIP requirements established in D.15-11-027.

In summary, contingent on additional funding, and the positive results of the full market analysis, the minimum annual biogas requirement beginning in 2018 may help initiate biogas market transformation.

F. Incentive Budget

1. Statewide Budget Allocations

In its opening comments to the ACR for Program Modification, SoCalGas recommended that based on the Energy Storage Procurement goals of AB 2514, a budget distribution of 25% for AES and 75% for Generation Technologies would be appropriate. Subsequently, the Staff Proposal was issued with an allocation of 75% AES and 25% Generation Technologies. SoCalGas responded by proposing an even 50% split between AES and Generation Technologies with an opportunity to increase the AES percentage if warranted. The primary reason for making such recommendations was based on the proven ability of each technology category in meeting the program goals. To date, AES technologies' benefits are theoretical and unsubstantiated by any SGIP measurement and evaluation reports. The PD allocates 75% of the statewide ratepayer funds for the benefit of a single technology. Both AES and Generation can meet Market Transformation goals; SoCalGas, however, is concerned that the proposed budget allocation will not result in more GHG reductions in support of the State's environmental goals, peak demand

reductions, or grid reliability. In this way, the PD mistakenly allocates more funds to a single technology that has yet to prove its efficacy in these areas.

The proposed budget structure will impose many unnecessary constraints. Specifically, the Commission has set an artificial eligibility requirement for fossil fuel generation technologies, which will be unobtainable without a proper budget allocation. Additionally, since each PA has its individual budget allocation, the currently proposed budget distribution would cause major impacts on the PA's ability to fund projects. Similarly, the PD's proposed carve outs will likely make the management of the budget unnecessarily burdensome. Furthermore, it is unnecessary to withhold funds from projects that are ready to be deployed simply for the opportunity to help secure funding for other technology sub-categories. Therefore, to best support the Minimum Biogas Fuel Requirement and to capitalize on benefits of projects that are ready to be deployed, a minimum of 50% of the statewide funds should be allocated to the Generation category and no more than 50% to be allocated to the AES category.

2. SoCalGas Budget Allocation

Over the lifetime of the SGIP, SoCalGas ratepayers have funded generation technologies that have directly helped California's energy management. In its comments on the Staff Proposal, SoCalGas sought to exclude gas ratepayers from funding stand-alone electric AES projects that are not connected to the gas pipeline. Although the PD did not address this request, as the program moves toward a higher participation of electric AES, SoCalGas' ratepayer collections should equally be adjusted to fund projects that will reduce GHG, improve grid reliability, and help transform the market of natural gas- or RNG-fueled technologies. :

G. Incentive Rates

SoCalGas generally agrees with the incentive rates assigned in the PD. However, the assigned incentive rates of \$.60/Wh and \$.50/Wh for AES is still too lucrative. It is imperative that the rates for AES are adjusted to ensure developers and/or customers do not profit from ratepayer funds. Additionally, it is concerning that high rates will likely motivate gaming tactics, similar to those observed during the February 23rd program opening. The following modifications to AES incentive rates and structure would help further maximize ratepayer protections:

- Reduce AES rates
- Tiered incentives

- Cap AES incentive to a maximum of 1MWh

Furthermore, due to the self-reported Total Eligible Project Costs, it is unclear how much ratepayers are actually paying into these projects. In other words, do customers have any vested interest in ensuring the successful deployment and continued use of these systems? To remedy this situation, SoCalGas proposes that AES projects submit receipts for all project costs as part of each reservation request. This will help provide clarity into the real costs of AES systems and can be used to properly measure and evaluate cost-effectiveness.

AES systems are no longer calculated by the kW capacity. Rather, they are to be calculated by the kWh, which creates different opportunities for over funding AES systems. Currently, the program reduces the incentive percentage at a specific MW level. Since AES systems incentives are based on discharge time, SoCalGas suggests that AES rates tier down based on their discharge time.

Table 3: SGIP Project Size Caps and Rebate Levels

AES Discharge Time	<2 hours	2-4 hours	4-6 hours
Energy Storage Technologies	100%	50%	25%

Incorporating the above methodology will add longevity to the program as more funding becomes available for future projects. Additionally, this will better support market transformation for AES technologies.

H. Pressure Reducing Turbines

SoCalGas disagrees with the Commission’s approval of the Petition for Modification (PFM) filed by RightCycle in 2012, requesting eligibility for the biogas adder. From a technology perspective, a Pressure Reducing Turbine (PRT) is no different than a conventional Combined Heat and Power (CHP) Steam Turbine. However, from an SGIP perspective, when a steam turbine is operated in parallel with a pressure reduction valve *without* additional fuel, it is referred to as a PRT. Under this application, the PRT does not emit GHG since it is not using any fuel, other than the pressure or heat from an existing primary process. However, steam turbines that use additional fuel to create more pressure or higher heat are considered conventional CHP and are eligible to receive an additional fuel adder. Therefore, PRT should not be eligible to receive a renewable fuel adder.

I. Measurement & Evaluation and Public Reporting

SoCalGas agrees with the Commission that it is imperative to streamline and simplify the Measurement and Evaluation (M&E) requirements for the SGIP. However, as stated previously, shoehorning CSI policy into SGIP can be impractical. As an example, because M&E data typically contains confidential utility customer information, having Energy Division manage the data collection process will be much more cumbersome than an IOU PA doing so. Lastly, it is important to note, if the PD is implemented as is, there is a potential that all funds may be exhausted within the first year or two of redesign. As a result, M&E efforts may only need to be extended for the next two years. Therefore, the effort of an M&E overhaul may be administratively burdensome for both Energy Division and the PAs.

J. Lottery Application System

SoCalGas continues to believe that an annual funding mechanism would best allow SGIP to meet all statutory program goals. Additionally, it is unreasonable to impact ratepayers with potential rate increases to accommodate the “front-loaded” structure described in the PD. However, should the Commission decide to implement a “front-loaded” lottery system, SoCalGas recommends that the lottery system include a detailed review process prior to allowing a project to participate in the lottery.

SoCalGas is also concerned that the PD’s lottery system would not prevent the rush of application submissions since there will only be a window of time in which to submit applications. As a result, developers would be compelled to submit as many applications as possible in order to increase their odds of being selected in the lottery, regardless of the quality of the applications. In order to eliminate this “rush” of submissions, SoCalGas suggests that projects will only be included in the lottery after they are certified. Including this review process prior to lottery participation would encourage applicant behavior that is consistent with the goals of SGIP and will additionally discourage “phantom” applications from being submitted. The following describes the proposed process at a high level:

- Phase 1 – Submission Period. Applicants will submit project proposal for certification.
- Phase 2 – Certification. Projects eligibility requirements will be reviewed and certified.
- Phase 3 – Solicitation. Certified projects can participate in the solicitation.

- Phase 4 – Lottery. Selection of winners.
- Phase 5 – Notification. Participants will be notified of the lottery results.

The lottery system coupled with the above modification should take place at every rate decline step; this will translate into three submission periods for generation projects, and five solicitations for AES projects. Furthermore, this timeframe structure will help support Market Transformation, market certainty for developers, and ease PA burden.

In summary, the annual funding mechanism is still the best way to meet all program goals. Alternatively, slight modifications to the PD’s lottery system may help manage applications to better maximize benefits to ratepayers and participants.

K. California Supplier Adder

The PD’s recommendation for the California Supplier Adder will likely be overly complicated, time intensive, and costly. However, SoCalGas agrees that it is imperative that the program ensures that those receiving the California Supplier Adder are bringing value to California and therefore supports the PD. Consequently, to ensure a successful implementation, SoCalGas suggests that the new California Supplier Protocol is developed and should go into effect upon the opening of the program. This timeframe will help ensure that new projects do not receive the California Supplier Adder under old program rules. In order to properly administer this incorporation, SoCalGas suggests the following actions:

- Third party California Supplier must be contracted within 90 days of the Final Decision.
- In consultation with the third party, PAs develop a new California Supplier Protocol.
- Currently approved California suppliers may continue to apply for the adder. However, these participants will be required to recertify under the new protocol prior to payment.
- New applicants will be required to apply under the new guidelines.

SoCalGas submits that failure to recertify participants under the new California Supplier eligibility protocol will have adverse effects on the availability to fund more projects.

