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California Energy Commission
Docket Office, MS-4
Re: Docket No. 12-IEP-1D
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Re: California Energy Commission Docket No. 12-IEP-1D Combined Heat and Power Staff Paper

To Whom It May Concern:

On February 16, 2012, the California Energy Commission ("Energy Commission") held a Lead Commissioner Workshop on Combined Heat and Power Technical and Market Potential ("the Workshop"). The Workshop was part of the Energy Commission's 2012 Integrated Energy Policy Report Update ("2012 IEPR Update") process. On September 27, 2012, the Energy Commission published a staff paper entitled "A New Generation of Combined Heat and Power: Policy Planning for 2030" (the "CHP Staff Paper") and requested public comment on that paper. Southern California Edison Company ("SCE") appreciates the opportunity to provide these written comments.

Introduction

The CHP Staff Paper highlights many of the benefits that "well-designed CHP systems" can achieve.[1] SCE agrees that well-designed, efficient CHP systems can and do provide these benefits to California electricity customers. However, the CHP Staff Paper's conclusion that additional support for CHP, beyond what is already in place, will necessarily increase these benefits is misguided for several reasons.

In contrast to the portrayal in the report, not all CHP is created equal. The benefits that a CHP system can provide vary greatly by facility. Additionally, as detailed in the CHP Staff Paper and discussed herein, California already has substantial programs in place to achieve each of the benefits attributed to well-designed CHP. Accordingly, there is not a strong rationale for additional programs and incentives to support CHP. In fact, new incentives will likely have the perverse effect of fostering inefficient CHP that undermines California's clean-energy policy objectives.

[1] *See* CHP Staff Paper at 1.

In particular, the CHP Staff Paper's proposal to modify the Renewables Portfolio Standard ("RPS") to encourage load-serving entities to buy more CHP could ***reduce*** the amount of renewables procured. Furthermore, removal of "regulatory barriers" for CHP would simply shift costs of CHP development to other electricity customers while subsidizing CHP. While there could be an argument for cross-subsidies for zero-emitting renewables, the same rationale does not apply to CHP. SCE discusses each of these issues in detail below.

1. SCE Supports Policies that Provide the Benefits Attributed to Well-Designed CHP Systems, Recognizing That Not All CHP Will Provide These Benefits

The use of well-designed CHP facilities can help achieve important efficiency and environmental goals, including "reduced energy costs, more efficient fuel use, fewer environmental impacts, improved reliability and power quality, locations near load centers, and support of utility transmission and distribution systems."[2] However, a CHP facility's ability to provide these benefits depends heavily on the specific characteristics of that facility. For instance, bidders into SCE's most recent CHP Request for Offers ("RFO") held pursuant to the CHP Settlement[3] had a range of system efficiencies, not all of which were greater than a stand-alone boiler combined with grid power.[4] Thermal needs, dispatchability, contribution to greenhouse gas ("GHG") reduction goals, cost and reliability benefits are highly project-specific and cause benefits delivered by each facility to vary greatly. In SCE's CHP RFO, SCE did receive bids that provided combinations of these benefits, including those that can help flexibly respond to changing system needs. The Energy Commission should recommend policies that account for this variability, rather than presume that every CHP installation provides all potential benefits of CHP to all utility customers.

The CHP Staff Paper correctly points out that "[a]s the electric grid changes, the role for CHP will have to change to meet evolving system needs."[5] The State's resource mix has and will continue to become increasingly efficient and low-emitting; state policies should only support those CHP facilities that meet efficiency standards and can compete among these new, cleaner sources of grid electricity. The CHP Staff Paper concedes that "CHP may be cleaner than the utility's marginal generator but may not be to the grid's entire resource mix."[6] Nevertheless, the CHP Staff Paper supports additional subsidies to all CHP on grounds that that without such incentives, "CHP will be forced to compete with grid electricity that is ever increasing in its percentage of renewable resources . . . a competition that CHP cannot win."[7] This statement appears to reflect a "CHP at all costs" bias. Instead, prudent state policy suggests that where

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2 *Id*.

3 The CHP Settlement refers to the "Qualifying Facility and Combined Heat and Power Program Settlement Agreement" by and among SCE, Pacific Gas and Electric Company, San Diego Gas & Electric Company, Independent Energy Producers Association, Cogeneration Association of California, California Cogeneration Association, Energy Producers and Users, Coalition, The Utility Reform Network, and the Division of Ratepayer Advocates, and adopted by the California Public Utilities Commission in Decision ("D.") 10-12-035 and modified in D.11-07-010, and D.11-10-016.

4 This standard is the double benchmark set forth in Section 7.2 of the CHP Settlement Term Sheet.

5 *See* CHP Staff Paper at 3 and 49.

6 *See* CHP Staff Paper at 5 and 51.

7 *See* CHP Staff Paper at 5.

installation of a boiler combined with electricity purchased from a load-serving entity would be more efficient than CHP installation, CHP should in fact not be installed. Policies that do not rigorously require new CHP resources to abide by these efficiency standards, will, in effect, foster the development of CHP resources that are costly, inefficient, and detrimental to the State's ability to meet its long-term GHG-reduction goals. And just as "it will take 10, 20, or even 30 years before …[a boiler] is depreciated and needs to be replaced,"[8] it will take as long to move away from inefficient and dirty CHP that has been installed as a result of misguided incentives.

2. Comprehensive Programs Exist to Appropriately Support the Development of Well-Designed, Efficient CHP

As described at length in Chapter 3 of the CHP Staff Paper, the current regulatory and policy environment is very supportive of further CHP development and provides numerous incentives for efficient CHP development. In fact, CHP has benefited from federal programs to promote energy independence for over thirty years[9]. More recently in California, the Self-Generation Incentive Program ("SGIP"), Assembly Bill ("AB") 1969 and AB 1613, and each Investor-Owned Utility's ("IOU"s) all-source Request for Offers ("RFO"s) all provide opportunities for additional sources of revenue for CHP facilities. In addition, the IOUs' CHP-only RFOs, held pursuant to the CHP Settlement, will ensure the development of at least 3,000 MW of CHP in California by making available contracts up to twelve years in length for cost-competitive new CHP generation. In its CHP RFO, SCE received multiple offers for new CHP resources indicating that such a contract length is sufficient for many CHP projects seeking financing. These numerous incentives, subsidies, and procurement targets, covering a broad range of CHP types and each providing policy certainty as well as contracts with mid- to long-terms, are more than sufficient to continue the enduring, stable, and sustained development of California's CHP fleet.[10]

Indeed, the very proliferation of overlapping and conflicting CHP-based programs could actually raise barriers against future CHP development. The CHP Staff Paper cites Sonoma County's small system as an example of project failure due to "regulatory uncertainty,"[11] when in fact the policy difficulty seems to stem from the facility developer attempting to switch between CHP subsidies (AB 1613 and SGIP) in the middle of the development process – and then trying to avail itself to the benefits of net-energy metering. This sort of conflict is endemic to California's electricity policy framework, and SCE agrees that it creates a challenging space to navigate for many parties, including the IOUs. This conflict also argues for fewer incentive

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8 *See* CHP Staff Paper at 34.

9 *See* Public Utility Regulatory Policies Act of 1978

10 California's recent CHP Settlement's goal was to do just this. Through a carefully balanced agreement of many parties with vested interest in CHP, the Settlement proclaims directly that "the purpose of the State CHP Program is to encourage the continued operation of the State's Existing CHP Facilities, and the development, installation, and interconnection of new, clean and efficient CHP Facilities", with the added goal of "greater regulatory and market certainty for CHP Facilities". *See* CHP Settlement Term Sheet Sections 1.2.1.3 and 1.2.2.1, at pages 5-6

11 *See* CHP Staff Paper at 25-26.

programs, not more. In general, SCE supports moving electricity procurement toward streamlined, competitive processes that take all State energy policy objectives into account.

3. Additional Incentives for CHP Are Unnecessary

a. The RPS Legislation Should Not Be Modified to Support CHP Because This Would Undermine the State's Environmental Objectives

The CHP Staff Paper appears to adopt a false assumption that more CHP is needed, for no other reason than for CHP's sake. The cited results of "Combined Heat and Power: 2011-2030 Market Assessment"[12] highlight that as California's electricity portfolio becomes less GHG-intensive (due to AB 32, RPS and other policies), the incremental GHG benefits that CHP can provide will become smaller. The CHP Staff Paper concludes that these results indicate a need to change the RPS accounting formulas. For example, the CHP Staff Paper recommends modifying the RPS to "exempt electricity purchased from CHP resources that are more efficient than the local utility's marginal generator from the calculation of total retail sales."[13] The only justification for doing this is to make CHP appear more valuable to load-serving entities. Such a policy would reduce the amount of renewable generation required under the RPS program and replace that generation with fossil-fuel based CHP, likely triggering the perverse result of supplanting lower-emitting renewable technologies with higher-emitting CHP resources. While this change may increase the amount of CHP procured, it will undermine the State's broader clean-energy policy objectives.

b. CHP Generators Should Bear the Costs They Impose on the Electrical System

The CHP Staff Paper identifies several regulatory barriers to developing CHP in California, including i) cap-and-trade provisions, ii) demand charges, standby charges, and departing load charges, iii) interconnection and metering costs and requirements, iv) lack of net-energy metering ("NEM") eligibility, and v) lack of a long-term (beyond 2015) CHP goal in the long-term procurement plan ("LTPP"). In general, these barriers represent the legitimate costs CHP systems impose on the electrical system. Removing these costs subsidizes CHP by shifting costs imposed on the system by CHP generators onto other electricity customers, who are not responsible for them. Such cost-shifting has been justified in the context of renewable resources because of their GHG-emissions-reduction benefits; however, CHP does not provide the emissions-reduction benefits that renewables provide.

For example, the CHP Staff Paper recommends that the California Public Utilities Commission revisit the reasonableness of standby and demand charges. SCE assesses standby charges against CHP facilities that opt to rely on SCE for electricity in the event of a system

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[12] *See* CHP Staff Paper, Chapter 4 at 37 - 40

[13] CHP Staff Paper at 6 and 52. In the alternative, the CHP Staff Paper recommends including "all electricity generated from CHP resources in a utility's territory in the calculation of total retail sales." *Id.* The rationale for this recommendation is unclear; SCE recommends that it be rejected, on grounds that it would neither lead to increased CHP procurement nor promote any State policy objective.

failure and demand charges to compensate SCE for making up a CHP's facility performance shortfall. Standby charges reflect the costs that CHP facilities impose on SCE's system and should therefore be assumed by CHP generators. Furthermore, a CHP generator has the option to avoid standby charges by simply forgoing the standby services that generate these charges. Likewise, demand charges reflect the actual costs SCE incurs for assuming the risk that CHP generators will not meet their performance obligations. Because generators impose these costs on the electrical system, CHP generators should be responsible for paying them.

The CHP Staff Paper also raises nonbypassable and departing load charges as another barrier to CHP development. The CHP Staff Paper states that "CHP is subject to nonbypassable charges where energy efficiency is not, even in cases where the CHP application will not be exporting electricity to the grid."[14] However, unlike energy efficiency, CHP facilities continue to rely on SCE for balancing services, whereas energy efficiency does not. Accordingly, CHP should be responsible for the costs it imposes on the electricity system.

c. Renewable Incentives Should Not Be Applied to CHP Because CHP Does not Provide the Same Level of Environmental Benefits

CHP does not provide the emissions-reductions benefits that renewables provide; therefore, it should not receive subsidies comparable to renewables. Yet the CHP Staff Paper points out several instances in which renewable resources receive the benefits of having regulatory hurdles removed, whereas CHP technology does not. For example, the CHP Staff Paper explains that:

> Conventional CHP technologies are ineligible for the net-energy metering program. Arguments that point at its generation profile as reason for its exclusion ignore the fact that fuel cells have a similar profile, and wind generation occurs primarily at night. Both of these technologies are eligible for the program.[15]

The CHP Staff Paper goes on to say:

> Many of the charges that other generators, including CHP, have to pay, such as standby charges and departing load charges, are not charged to renewable resources. In addition, renewable energy projects have numerous additional incentives ranging from waiving interconnection study fees and metering equipment cost subsidies to a higher-paying feed-in tariff and net-energy metering eligibility.[16]

The CHP Staff Paper argues that if CHP does not receive the incentives that are available to renewables, CHP will be forced to compete with grid electricity, which CHP cannot do.[17] That CHP cannot compete with renewables and cannot even compete with the IOUs' system average resource mix only raises the question: why should CHP resources receive comparable subsidies

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[14] CHP Staff Paper at 45.
[15] CHP Staff Paper at 5.
[16] *See* CHP Staff Paper at 6.
[17] *See* CHP Staff Paper at 5.

to renewables (when they do not provide the same level of emissions reduction benefits) or an uncompetitive step-up against conventional resources (when they do not necessarily provide any additional system benefits)? Even assuming that these subsidies are appropriate for the promotion of emerging renewable resources that do not emit GHG, this logic simply does not apply to long-established CHP resources that do.

Conclusion and Recommendations

SCE agrees with the CHP Staff Paper that "as the electric grid changes, the role for CHP will have to change to meet evolving system needs."[18] In developing CHP policy in light of changing system needs, SCE makes the following recommendations:

- Policies should steer away from procurement mandates for CHP, which could lead to development of high-emitting, costly CHP and could undermine the State's larger clean-energy objectives.
- A CHP generator should not receive additional subsidies unless and until it can demonstrate that its system provides benefits attributable to "well-designed CHP systems," including "reduced energy costs, more efficient fuel use, fewer environmental impacts, improved reliability and power quality, locations near load centers, and support of utility transmission and distribution systems."[19]
- Policies should take into account California's increasingly clean electrical system and CHP should be required to compete against this system, rather than against the dirtiest marginal generator within it.

SCE looks forward to working with the Energy Commission in developing future CHP policy in accordance with these guiding principles. As always, SCE appreciates the Energy Commission's consideration of SCE's comments. Please do not hesitate to contact me at (916) 411-2369 regarding any questions or concerns you may have.

Very truly yours,

/s/ Manuel Alvarez

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[18] CHP Staff Paper at 3 and 49.
[19] *See* CHP Staff Paper at 1.