COMMENTS OF
THE COGENERATION ASSOCIATION OF CALIFORNIA ON THE
PROPOSED DECISION OF COMMISSIONER RANDOLPH

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The Cogeneration Association of California¹ (CAC) files these comments on the Proposed Decision (PD) of Commissioner Randolph pursuant to Rule 14.3 of the Commission’s Rules of Practice and Procedure.

I. INTRODUCTION AND SUMMARY

CAC commends and appreciates the effort of the Assigned Commissioner and Commission Staff for endeavoring to address many issues in the extensive PD. To do so required sorting through: (a) 46 sets of opening comments with almost 1,200 pages of detailed opening positions; and, (b) 22 sets of reply comments with over 300 pages of additional views. Collectively, these wide-ranging stakeholder comments expressed multiple concerns and reservations about the Staff’s proposed Reference Plan and modeling assumptions.

¹ CAC for the purposes of this filing represents the existing, efficient combined heat and power and cogeneration and related Utility Prescheduled Facility (UPF) operation interests of Midway Sunset Cogeneration Company and Watson Cogeneration Company. References to existing CHP in this pleading include the associated related UPF operations.
Notwithstanding this effort, the PD has effectively ignored a critical and unsubstantiated assumption from Staff regarding the retention of existing generation resources, specifically existing, efficient CHP resources. The Commission can and should remedy this failing now in this proceeding, and to be timely, in this PD.

Staff’s workshop presentations and express statements unequivocally established that the Reference Plan for the IRP is focused upon \textit{incremental} resource additions to meet SB 350 goals. Staff has also acknowledged that modelling assumptions included, among other things, the retention of generation capacity from existing, efficient combined heat and power (CHP) resources. Watson Cogeneration Company and Midway Sunset Cogeneration Company fall into this class of generation resources.

In comments filed with the Commission, CAC demonstrated several factual, technical and legal issues that compel actions to establish a program that will reasonably sustain these resources, as assumed by Staff’s model. These issues included: (1) the IOUs’ express position that there is no greater-than-20MW CHP retention program beyond the 2020 termination of the CHP Settlement; and (2) the LTPP/IRP proceeding is the proper forum to address

\footnote{CHP facilities refer not only to cogeneration/combined heat and power operations but also associated Utility Prescheduled Facility facilities supporting industrial and manufacturing operations under contracts approved by the Commission.}

\footnote{The Qualifying Facility and Combined Heat and Power Program Settlement Agreement (CHP Settlement or Settlement): \textit{Decision Adopting Proposed Settlement}, D.10-12-035, A.08-11-001 (December 21, 2010), as modified by D.11-03-051 and D.11-07-010, available at \url{http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/128624.pdf}. Other CPUC Decisions addressing subsequent modifications to the Settlement conditions include D.15-06-028 and D.15-11-046. \textit{See also}, FERC’s action on the
post-CHP Settlement issues under PURPA. The extent of the PD’s recognition of these specific CHP issues is captured in two passages in the 131-page decision:

- For CHP resources, CAC argues that the Commission should assume a five-year extension of the existing contracts. The IOUs, in their reply comments, argue against this suggestion.\(^4\)

- For the current round of analysis, we are satisfied that Commission staff has utilized the best available assumptions and functionality, and has run enough sensitivity analyses that we can evaluate the impact of changes in certain assumptions to inform our decisionmaking and IRP framework.\(^5\)

From a CHP perspective, the Commission’s inaction related to the retention of existing CHP resources is, of course, disappointing and concerning. There is a truth that the consequence of inaction often means action. In this instance, the Commission’s failure to address a CHP retention program has adverse consequences not simply for the CHP projects, but for attaining the Commission’s SB 350 objectives. Industrial hosts that rely on CHP will be left with the option to replace existing resources with natural gas industrial boilers for thermal energy. The grid in the short term will most likely rely on emitting

\[^4\] PD at 38. To be precise, CAC did not argue that the Commission assume a five-year extension of existing contracts. What CAC presented was the factual and legal case for the Commission taking action to fulfill Staff’s modelling assumption that existing, efficient CHP resources would remain in the base case through 2030. As pointedly demonstrated, there is no program beyond 2020 to provide for CHP resources to secure power purchase agreements, and the CAISO day ahead market will not sustain these resources. The IOUs have expressed to the Energy Division and to CHP parties that there is no CHP Settlement program post 2020. In light of that fact, CAC sought Commission action to provide a reasonable extension of existing PPAs to bridge the IRP analysis, decision and implementation gap post 2020.

\[^5\] PD at 43.
resources to accommodate the increased load from industrial energy demand resulting from the loss of CHP electric generation. These consequences undermine the very assumptions Staff has relied upon to support its Reference Plan for incremental IRP resources, i.e., sustaining the presumed availability of existing CHP resources.

The following is an outline summary of factual, technical and legal issues that compel revision to the PD are addressed in these comments:

1. Staff’s Reference Plan is predicated on the retention of certain existing, efficient resources, including CHP, and the plan’s incremental procurement design assume the retention of these resources.

2. There is no established California program for the retention of greater than 20 MW CHP resources after the expiration of the CHP Settlement, yet federal law (PURPA) remains as an obligation for the retention of existing and development of new California CHP resources.

3. CHP is not, and should not be considered, a natural gas plant in the context of the staff’s IRP modelling.

4. Termination of existing, efficient CHP facilities will likely result in increased GHG emissions as industry replaces cogeneration with industrial boilers and the existing grid remains in transition. This means increased industrial loads resulting from terminated CHP will be met, at least in the short term, with increased natural gas generation.

5. Time is of the essence. Planning decisions for major industry relying on CHP cannot await 2018 or 2019 in hopes there will be a solution in 2020 and beyond. Industrial facilities are making long term, irrevocable decisions now about thermal and electric power supply for 2020 and beyond.

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II. THE PD FAILS TO ADDRESS FACTUAL, TECHNICAL AND LEGAL ISSUES TO SUSTAIN EXISTING, EFFICIENT CHP RESOURCES IN THE IRP REFERENCE PLAN

A. Staff’s Reference Plan Depends Upon the Retention of Existing Efficient CHP Resources

The Staff’s IRP Reference Plan presents a path for procurement in anticipation of 2030 that is *incremental* to assumptions relative to existing, efficient CHP resources. This assumption, particularly for existing, efficient CHP resources, is rather critical. The Commission’s action on this assumption will either send the existing CHP operators a message supporting retention, or a message that there is no program contemplated to sustain their operations through 2030. That message will prompt business decisions and actions either consistent with or directly contrary to the Reference Plan assumptions adopted by the PD. Absent revision, the PD is factually and technically inconsistent with the assumptions underlying the Staff’s Reference Plan with regard to the retention of existing, efficient CHP resources.

B. The CPUC QF/CHP Program Settlement Terminates in 2020; What California Program Will Sustain Existing CHP Resources to Meet Federal Obligations?

The CPUC QF/CHP Program Settlement will expire by its terms in 2020. The Settlement expressly identifies an objective that it “[e]stablishes a platform for a State CHP Program with identified features through 2020, and sets a

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7 Staff’s slide deck entitled “All-Party Meeting on the Proposed Integrated Resource Planning Process and Reference System Plan,” November 2, 2017, at 11: “Note: all resources shown in this chart are selected by RESOLVE and are in addition to baseline resources” and at 32, “All cases studied assumed that most existing gas resources continued to be available.”
framework for a sustained State CHP Program beyond 2020.” CAC, other CHP parties to the Settlement and the CPUC Energy Division have been advised expressly by the IOU parties that there is no such program beyond 2020. This fact leaves open to the Commission what actions it will take to address this void in policy over California’s existing CHP resources.

CAC remains confounded by the IOU responses and objections on this subject, since there is no Settlement or CHP retention program, according to the IOUs, post 2020. CAC’s comments do not seek an extension of the Settlement, but an extension of existing contracts approved by the Commission as a reasonable, available and timely means to sustain the Staff’s Reference Plan assumptions.

The Commission and the state of California still have responsibilities under federal law, PURPA. The recent Winding Creek Solar case should be a clear reminder to the Commission of this point. CHP parties also have the option of seeking FERC reconsideration of the must-take and avoided cost pricing options under PURPA §210(m) in the event of non-action by the Commission for the post-2020 period.

All of these litigated or contested actions are suboptimal for CHP and CPUC interests. These actions can and should be avoided, and the Commission, in the IRP proceeding holds the jurisdictional keys to secure a simple and reasonable program, consistent with IRP assumptions. Simply

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8 QF/CHP Settlement §1.2.2.9.

9 Winding Creek Solar, supra note 6.
extending existing, recently approved contracts of existing CHP resources for a 5-year term is consistent with a reasonable exercise of the Commission’s prerogative. Why a 5-year term? Because that this the typical cycle of major maintenance overhauls to sustain the reliability of the generation equipment (just like any combined cycle or combustion turbine). That 5-year term will provide the assurances to the operations that they will be financially viable to perform the necessary maintenance and recover those costs. The option to extend could be provided for CHP resources for the period up to but not exceeding 2030 to be consistent with the Staff’s modeling assumptions, and be triggered by a formal request by the CHP contract holder with the IOU. The request would be subject to an advice letter filing with the Commission and resolution.

C. The Commission and IRP Staff Need to Recognize and Model the Distinctions between Existing CHP and Natural Gas Plants

While CHP facilities may be fueled by natural gas, they should be distinguished and modelled differently from what Commission Staff has modeled as “natural gas plants.” To quickly review the basics of cogeneration, the system can either be a topping cycle or a bottoming cycle operation.

A bottoming cycle captures waste heat, typically from an industrial process, and produces power from the waste heat. This bottoming cycle operation is attributed with no greenhouse gas emissions since the emissions are attributable to the industrial process.

Alternatively, a topping cycle operation sequentially burns a single fuel, often natural gas, first in a turbine to produce electric power, and then uses the heat from the turbine combustion to produce thermal energy, typically process
steam. The topping cycle operations, particularly for larger capacity projects, are thermally matched to meet high steam demands, and the byproduct of that process produces base load, highly reliable, firm electric power. That “excess” electric power is made available to the grid, and under California CHP contracts the provider is only paid upon meeting strict and exacting delivery obligations.

These projects are industrial and manufacturing steam plants. They were installed as an efficiency and environmentally beneficial option to reliance on industrial boilers for the production of thermal power using a single fuel. By combining the production of thermal power with the production of electric power, the benefits of cogeneration or CHP are made available to the grid, to consumers, and to communities with CHP operations. The result has been lower overall emissions, high efficiency, and a sustained industrial/manufacturing base from combined heat and power as opposed to separate heat and power.

In contrast, a natural gas plant burns a single fuel to produce a single product, electric power. The natural gas plant does not support the thermal demands of an industrial operation, or replace the industrial need for a boiler. When the boiler is needed for all hours or a material number of hours in a year, the efficiency and emissions profile of a CHP facility provides benefits in comparison to separate heat and power. In short, CHP significantly differs from natural gas plants; not only in operational characteristics, but also with respect to the role of electric production.

Staff modeled CHP in a similar manner as Natural Gas plant in the RESOLVE model simulations, yet Staff also acknowledges the differing attributes
and considerations for the CHP operations and products. From an environmental and efficiency standpoint, CHP, as an option to separate heat and power (an industrial boiler plus electric generation operations) should be distinguished from natural gas plants.

Specifically, PD Conclusion of Law 15 and Ordering Paragraph 7 should be modified to recognize and distinguish CHP from natural gas plants. Moreover, the going-forward Staff modelling should recognize and distinguish these resources.

Finally, because of the clear nexus between natural gas generation (as distinguished from CHP operations) and emissions in disadvantaged communities within the electric sector, we will require that any LSE proposing to develop new natural gas resources or re-contract with existing natural gas resources (as distinguished from CHP operations) in their IRP, regardless of whether it is located in a disadvantaged community, make a showing as to why another lower-emitting resource could not meet the need identified.¹⁰

D. Termination of Existing Efficient CHP Facilities Will Undermine the Commission’s SB 350 Objectives

Not unlike PURPA, SB 350 and actions to implement the law, like those undertaken in the IRP, should seek to optimize the use of fossil fuels to minimize impact on the environment. It would be unwise and uneconomic to risk reliability by terminating existing, efficient CHP resources with a goal towards eliminating all forms of carbon generation. CHP resources are predicated upon the duel use of a carbon fuel for efficiency and environmental benefits. Moreover, they sustain the thermal and electric demands of industrial and manufacturing industries dependent upon base load, firm, 8760 operations.

¹⁰ PD at 57; see COL 15 and Ordering Paragraph 7.
The PD and the Commission must consider the retention of the benefits of CHP operations as it transitions to 2030. These existing, efficient resources provide material benefits, and their continued operation is assumed by the IRP Reference Plan. Consider the following factors in the event of the termination of these resources:

- A thermal-dependent industrial or manufacturing business will install industrial boilers, most likely utilizing natural gas, to provide thermal energy in order to sustain operations. This means the "elimination" of GHG emissions by terminating CHP resources is illusory, since the business will likely continue operations with more traditional means of thermal generation.

- The terminated CHP operation will no longer provide on-site electric generation to serve the industrial load. Separate electric supply will need to replace the terminated CHP generation. This means there will be higher demand on the supplying utility for both generation and distribution (wires) services.

- As the State trends toward 2030 SB 350 objectives, during the 10 years between 2020 and 2030, the grid will not be carbon free, and generation to serve 8760-hour demand industries will undoubtedly come from some increase in natural gas generation. This likely means an increase, and not a decrease in overall GHG emissions from separate heat and power under the CHP termination option.

- The reliability of service to an industrial customer will depend upon securing firm generation supply, and place greater transmission and distribution strain on the local grid serving the industrial customer.

There will be environmental and efficiency consequences to the choice to retain or terminate CHP resources contrary to SB 350. These are all consequences that can be mitigated or eliminated by the retention of the existing CHP resource for an interim period, up to 2030, while the CPUC IRP direction is resolved, and procurement paths are established. CAC has offered this option to the Commission – an interim extension for existing, efficient CHP contracts -- and it should be adopted in the PD.
E. Time is of the Essence for Existing CHP Retention; the Commission Need to Act Now

From the perspective of a CHP operation, the PD sets forth a leisurely, and commercially untenable, procurement implementation plan for contracts terminating in the 2020 timeframe. Time is of the essence, and the Commission needs to take action now in this PD.

The PD sets forth the planning and procurement timeline in the introduction. That timeline “…adopts a two-year planning cycle for the Commission to conduct modeling and analysis, set greenhouse gas (GHG) emissions targets, and consider IRP filings from all LSEs. …At the end of each two-year cycle, the Commission will authorize procurement, where appropriate, that is necessary to occur within the next 1-3 years, to meet the targets and needs identified in the IRP process. The first such procurement authorization, if needed, is anticipated to come near the end of 2018 at the end of the first IRP cycle.”

Once again, this passage should apply to incremental IRP resource additions; however, there is nothing in the PD addressing the impending loss of baseline resources, particularly existing, efficient CHP.

Absent currently unforeseeable regulatory or market tools to sustain operations, existing CHP will face termination due to the failure of the day ahead market to provide revenues to sustain these operations. As noted, timely Commission action is essential. The CHP Settlement terminates in 2020, and

11 PD at 2.
the IOUs have expressly stated there is no continuing program for CHP resources beyond those with less than 20 MW of capacity.

The PD expressly states that it only anticipates addressing procurement for the two-year window of 2019 and 2020. Accordingly, the loss of existing CHP, in contrast to the Staff’s RESOLVE modeling assumptions, is exacerbated by the PD’s lack of a solution.

For businesses trying to make informed choices relative to thermal and electric demand and supply options, the issue is far more acute. No business can await long term planning until options are extinguished. Businesses relying on CHP must make a business choice now to be able to permit, develop and construct alternative options for electric and thermal supply in 2020. If business elections are made now to revert to boiler installations, the actions in 2020 will be the assured termination of CHP resources relied upon by Staff’s modelling as baseline for the Reference Plan.

There are other consequences to the loss of the existing CHP resource fleet. In addition to the system reliability and inefficient use of existing resources associated with the loss of a large amount of industrial CHP, the RESOLVE model results do not reflect the reliability implications associated with the loss of CHP generation in local reliability areas. The loss of CHP at an industrial facility with a large electric and thermal energy requirement have a compound impact on local reliability.¹²

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¹² As noted in Section II.D, the loss of existing CHP electric generation serving local off-site electric load will place additional stress on distribution and transmission facilities. These wires will, in the event of termination, be required to deliver more remote system generation to serve the CHP host site requirements and electric load. Moreover, a
From an existing CHP resource perspective, the PD is both disappointing and of material concern. Time is of the essence, and failure to promptly and meaningfully address retention of existing generation resources in the face of Staff’s assumptions is a troublesome issue for the PD to ignore.

III. CONCLUSION

The PD fails to take advantage of the opportunity to timely address key and critical timing issues for existing efficient CHP facilities like MSCC and Watson. CAC recommendations adoption of a five year-extension for Commission-approved CHP contracts. This action will provide needed certainty to industrial facilities to sustain existing CHP operations, particularly as the Commission sorts out the IRP path.

For all of the foregoing reasons, the CPUC should institute a program to extend the PPAs of existing, efficient CHP and associated UPF facilities for a period of five-year terms. This measure will establish the needed program stability to retain these resources, but also provide the CHP operator with revenues to support the major maintenance costs that occur every five years.

Respectfully submitted,

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proven, highly reliable source of electric generation will be lost (e.g., large industrial CHP facilities continued to supply emergency electric generation throughout the California energy crisis without payment from the IOUs).
Appendix A
Proposed Findings of Fact and Conclusions of Law

New Proposed Finding of Fact 24: The Commission acknowledges that the IRP modelling, and Reference Plans address incremental resource procurement planning, and that there are assumptions related to baseline, existing resources that require actions to assure the sustained availability of those resources for GHG emission and reliability interests.

New Proposed Finding of Fact 25: For IRP modelling and Reference Plans existing CHP, as a baseline resource, is to be considered separate and distinct from natural gas plant electric generation.

New Proposed Finding of Fact 26: Good cause has been shown to address the retention of existing, efficient CHP resources under Commission approved contracts. A five-year extension of such existing CHP contracts is a reasonable and necessary option as the optimal IRP procurement for 2030 is established by the Commission.

Conclusion of Law 15: The Commission should require a showing from any LSE seeking to acquire new or re-contract with existing natural gas resources (as distinguished from CHP operations) as part of its IRP filing, justifying why the need met by such a resource cannot be met by another, lower-emitting resource.

New Conclusion of Law 33: The Commission is obligated under federal law to consider measures to sustain existing efficient CHP resources, and has the authority to permit extensions of existing, approved contracts for such resources.

Modified Ordering Paragraph 7, as presented in Section IIC, above.

New Ordering Paragraph 18: The Commission adopts the proposal to extend for 5-year terms existing contracts previously approved by the Commission for existing, baseline CHP resources as proposed by CAC. Existing CHP contract holders may notify the interconnected or contracting IOU of the desire to extend and IOU shall promptly file an advice letter seeking approval of such extension on the same price and non-price terms as the Commission deems reasonable. Such extensions shall be permitted within the time period between 2020 and 2030, with the initial date of any extension being the termination date of the existing Commission-approved contract.