

Docket No.: R.20-11-003
Exhibit No.: _____
Witness: Bill Powers, P.E.
Commissioner: Marybel Batjer
ALJ: Brian Stevens,
Sarah R. Thomas

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

Order Instituting Rulemaking to Establish
Policies, Processes, and Rules to Ensure
Reliable Electric Service in California in
the Event of an Extreme Weather Event in
2021.

Rulemaking 20-11-003
(Filed November 19, 2020)

**THE PROTECT OUR COMMUNITIES FOUNDATION OPENING TESTIMONY OF
BILL POWERS, P.E., PROPOSALS, AND COMMENTS ON ENERGY DIVISION
STAFF CONCEPTS**

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TABLE OF CONTENTS

I. INTRODUCTION AND COMMENTS ON ENERGY DIVISION STAFF CONCEPT PAPER	2
A. PCF Recommends Avoiding Duplication and a Rush to Judgment By Addressing the Myriad IRP, RA, DER and EV Issues Within the Proceedings That Were Opened to Concentrate on Resolving Each Specific Issue	4
B. The Department of Market Monitoring’s Criticisms Confirm that the Commission Should Not Adopt the CEC’s Flawed Analyses Nor the ISO’s Capacity Procurement Mechanism Without Independent Vetting.....	9
C. Given the Substantial Procurement Already Ordered, the Commission Must Assess the Need for Any Additional Procurement And Its Effects on Disadvantaged Communities.....	12
II. PCF PROPOSALS TO INCREASE SUPPLY AND REDUCE DEMAND	14
A. On Bill Financing Tied to the Meter Results in Significant Demand Reduction Additional Supply At Peak Demand at Little or No Cost to Utility Consumers.....	15
B. Whole House Solar + Storage For HFTD Customers Increases Reliability and Safety and Reduces Demand.....	16
C. The Commission Should Inspect California Generation Facilities Like MLB Tests Players and Pitchers: Every Plant and Multiple Times, Focusing on Facilities with A History of Outages.....	17
D. The Commission Should Work with the CAISO to Decrease Exports At Times of Grid Stress, Heat Waves or High Demand.....	20
III. DATA AND ANALYSIS SUPPORTING PCF PROPOSALS AND COMMENTS.....	22
A. California’s Current And Expected Electricity Resources More Than Meet California’s Need.	22
B. Troubling Anomalies Occurred with Power Plant Generation This Summer, As With Last Summer.	26
C. Data Supporting Commission Adoption of Whole House Solar + Battery Storage.....	28
IV. CONCLUSION	30

1 **THE PROTECT OUR COMMUNITIES FOUNDATION OPENING TESTIMONY OF**
2 **BILL POWERS, P.E., PROPOSALS, AND COMMENTS ON ENERGY DIVISION**
3 **STAFF CONCEPTS**

4 The Protect Our Communities Foundation (PCF) provides these comments, proposals and
5 the testimony of Bill Powers, in accordance with the Assigned Commissioner’s August 10, 2021
6 Amended Scoping Memo and Ruling for Phase 2, ALJ Stevens’ Email Ruling of August 11,
7 2021, providing “Proposal Guidance to Parties” and ALJ Stevens’ August 16, 2021 Email Ruling
8 providing the Energy Division Staff Concept Paper with Proposals for Summer 2022 and 2023
9 Reliability Enhancements.¹ As directed, PCF provides comments and proposals directed to (1)
10 “any new program or modification to an existing program that could reduce demand or increase
11 supply at net peak” . . . (2) “any new policy or modification to an existing policy that
12 could reduce demand or increase supply at net peak (for example a rule, regulation, incentive,
13 penalty)”, . . . and (3) “Procurement mechanisms/Resources not previously accepted in this
14 proceeding.”² PCF also amplifies and explains its comments and proposals in Mr. Powers’
15 Testimony in Section III.³

¹ PCF combines these documents as directed by ALJ Stevens on August 25, 2021 in response to the question by Gregory Klatt. R.20-11-003, Email from ALJ Stevens to Gregory Klatt and the R.20-11-003 service list (August 25, 2021) “...Parties should put as many of their recommendations as possible in their September 1, 2021 Opening Testimony given the expedited nature of this proceeding. Matters raised in the staff concepts document shall be addressed in the Opening Testimony...”).

² R.20-11-003, E-mail Ruling Providing Staff Guidance on the Contents of All Program Proposals Submitted in Opening Testimony by Parties to This Proceeding (August 11, 2021)

³ As PCF has provided extensive information concerning Mr. Powers expertise and experience in his opening and reply testimony earlier in this proceeding in January and February 2021, *see* PCF-1 and PCF-3. PCF does not include Mr. Powers’ resume or further detail about his expert qualifications in this additional testimony. PCF hereby refers to and incorporates by reference herein all of the testimony previously submitted in this proceeding. *See* PCF Exhibits 1-4, filed respectively on January 11, 2021 and January 19, 2021; *see also* R.20-11-003, Assigned Commissioner’s Amended Scoping Memo and Ruling for Phase 2 (August 10, 2021), p. 6 (“All proposals submitted by parties, but not addressed in the Phase 1 decision, may be considered in this Phase. If a party recommends such a proposal, it shall refer to the proposal in its Opening Testimony or Opening Brief.”).

1 **I. INTRODUCTION AND COMMENTS ON ENERGY DIVISION STAFF**
2 **CONCEPT PAPER**

3 As PCF’s proposals delineated in Section II demonstrate, California and this Commission
4 retain numerous options to increase supply and decrease demand while ensuring greater equity,
5 accountability, access to clean energy resources, and reasonably-priced electricity. Moreover, as
6 Mr. Powers’ testimony in Section III demonstrates, significant generation resources located in
7 California have failed to produce electricity when needed. That failure not only threatens safety,
8 it drives up prices, for which California’s businesses and families ultimately must pay.

9 PCF posits that the current California-based generation resources residing within the
10 CAISO’s footprint plus import capacity contracted to CAISO-located load serving entities
11 (LSEs) can easily meet California’s current and projected load – and even the hypothetical load
12 projected by the California Energy Commission (CEC)⁴ -- if California enforces the power plant
13 maintenance and operations standards it currently maintains and if California eliminates the
14 opportunities for arbitrage and profiteering that now exist in California’s electricity markets.
15 Even more reliability – and cost containment – will be gained by curtailing the CAISO’s export
16 policies that serve out-of-state customers over Californians. PCF submits Proposals in Section II
17 below, to address the problems of excessive plant outages and considerable electricity exports
18 out of California, especially at times of grid stress or high temperatures or demand.

19 PCF has submitted proposals to reduce peak demand and ensure reliability and safety in
20 other proceedings where the Commission has found those ideas intriguing but out of scope or to
21 be considered later; PCF submits these proposals for consideration in this proceeding. PCF’s
22 first proposal recommends providing Behind the Meter (BTM) on-bill-financing (OBF) that is
23 tied to the meter and not to the customer, to incent the deployment of effective distributed solar

⁴ California Energy Commission, TN # 239251, Item 3 - Draft CEC Preliminary 2022 Summer Supply Stack Analysis, (August 11, 2021).

1 resources to all customer classes, regardless of home ownership or credit status. Expanding
2 access to rooftop solar distributed resources to all customers -- will decrease peak loads, and
3 when coupled with energy storage, can also reduce net peak loads, as discussed in Mr. Powers’
4 testimony in Section III. Such an expansion comports with the Staff Concept Paper’s concerns
5 that limiting various incentive and demand reduction programs “raises questions of both equity
6 and effectiveness. . .”⁵ PCF also submits its proposal to provide whole home solar + battery
7 storage systems both to low-income customers and to customers in High Fire Threat Districts
8 (HFTDs). Such systems will increase reliability by reducing both peak and net peak loads and
9 will increase safety and reduce costs by improving self-sufficiency to HFTD customers and by
10 reducing the need for expensive undergrounding and new transmission lines in remote and
11 HFTD areas.

12 Mr. Powers’ testimony not only provides policy and factual detail supporting the
13 proposals that PCF includes in this filing. It also describes the ample power generation that
14 exists in California. The more important question continues to be: how California can deploy
15 those resources to ensure reliability and safety using its regulatory authorities? Mr. Powers
16 details the facts about California’s electricity usage, noting that peak demand has never exceeded
17 51,000 MW in California’s history; and that California’s current summer demands range
18 between 45,000 to 48,000 MW.⁶ California’s actual peak demand stays well below the planned
19 demand forecasts produced by the CAISO and approved by the Commission. Mr. Powers also
20 explains that California’s demand could well decline as BTM resources become more prominent

⁵ R.20-11-003, E-mail Ruling Issuing Commission Developed Staff Concepts Proposal Document and Seeking Comment in Opening Testimony due September 1, 2021 (August 16, 2021), (“Energy Division Staff Concept Paper”), p. 8.

⁶ CAISO, California ISO Peak Load History 1998 through 2020, [last accessed August 31, 2021] available at <https://www.caiso.com/documents/californiaisopeakloadhistory.pdf>.

1 and larger commercial customers fulfill their goals to become self-sufficient. Thus, to ensure
2 reliability and safety at a reasonable cost, the Commission should act to optimize the electricity
3 resources available to California in the most efficient manner possible.

4 PCF recommends that the Commission should revert to tried-and-true command and
5 control levers – ensuring that utility owners are properly compensated, but without tolerating
6 profiteering or withholding that drives up prices without providing the reliability that California
7 needs and that the Governor has commanded.

8 **A. PCF Recommends Avoiding Duplication and a Rush to Judgment By**
9 **Addressing the Myriad IRP, RA, DER and EV Issues Within the Proceedings**
10 **That Were Opened to Concentrate on Resolving Each Specific Issue.**

11 The Amended Scoping Memo and the related additional guidance documents published
12 in this proceeding over the past three weeks all have, at their core, the Commission’s focus on
13 and its desire to ensure reliable, safe retail service in California. To that end, this proceeding has
14 announced that it will assess myriad issues, programs, rates and pilots that are actively being
15 evaluated and implemented within numerous other Commission proceedings. The Amended
16 Scoping Memo proposes to evaluate over thirty issues, programs and incentives on an expedited
17 basis – and the related Staff Concept Paper adds dozens more programs, incentives and subjects
18 to this proceeding’s purview. The programs, policies and payments that this proceeding now
19 includes/touches on/affects/commandeers include:

- 20 • Resource Adequacy requirements updates
 - 21 ○ consideration of resource adequacy penalty structures
 - 22 ○ establishing new non-bypassable charges for additional reserve margin
 - 23 emergency procurement and for purchasing additional resources that do not
 - 24 provide firm resource adequacy

- 1 • IRP-related evidentiary issues, including:
 - 2 ○ the Planning Reserve Margin
 - 3 ○ analyses of need
 - 4 ○ determining net peak and
 - 5 ○ determining net short data
- 6 • CAISO’s Capacity Procurement Mechanism Authority
- 7 • Capacity bidding programs with dispatch in real-time markets
- 8 • Interconnection issues
- 9 • a host of demand response programs including
 - 10 ○ ELRP program eligibility and incentive levels
 - 11 ○ Critical Peak Pricing
 - 12 ○ Flex Alerts
 - 13 ○ Measures to minimize declining DR enrollment
 - 14 ○ New demand response programs
- 15 • EV charging and DR incentives
- 16 • modifications to the DRAM program and consideration of other third-party demand
- 17 response programs;
- 18 • modifications to agricultural demand programs
- 19 • smart thermostats
- 20 • a host of energy efficiency program changes
- 21 • Rate issues, including
 - 22 ○ Rate structures
 - 23 ○ pilot program rates

- 1 ○ Memorandum and Balancing account authorizations
- 2 ○ Establishment of new non-bypassable charges for emergency procurement
- 3 ○ Reconsideration of the Cost Allocation Mechanism (CAM) for emergency
- 4 procurement
- 5 • Penalty structures for procurement delays
- 6 • Accelerated procurement ordered in the IRP proceeding

7 The extraordinarily broad scope of this proceeding combines with the amazingly
8 expedited procedures and an abnormally truncated administrative schedule imposed in the
9 Amended Scoping Memo. Due process problems loom large if the Commission proceeds with
10 its stated intent to address all the issues in the Amended Scoping Memo, the Staff Concept Paper
11 Proposals and the CEC’s Stack Analysis within the next 78 days – all without the benefit of
12 evidentiary hearings or any real opportunity to assess the facts contained in party proposals and
13 testimony, aside from one ten-day period in which parties must evaluate and turnaround reply
14 testimony addressing what are sure to be voluminous and extensive party proposals and opening
15 testimony. The Commission puts itself at risk of a ready, fire, aim course of action that will incur
16 extraordinary costs without any concomitant benefit if it continues to go, go, go and act with
17 such an anemic factual record and without time for any analysis, modeling, fact development or
18 cost scrutiny. The Commission calls into question its authority as an administrative agency
19 grounded in fact and law when it throws its multitude of complicated administrative proceedings
20 together into one gargantuan and rapid-fire bucket in a rush to judgment without thought, facts or
21 evidence of how the innumerable program and rate changes will work together.

22 As a threshold matter, PCF recommends that the Commission continue to address all the
23 issues that are already being addressed in other proceedings within the context of those

1 proceedings. The Figure 1 below shows many of the issues now scoped in this proceeding that
 2 other proceedings are already currently addressing:

3 **Figure 1: Scoped Issues Overlap Other Proceedings**

Extreme Weather Proceeding Issues Listed in the August 16, 2021 Proceeding		Proceeding Already Scoped to Address the Issue, or the Most Appropriate Proceeding for the Issue	
A. Demand Reduction			
1. Emergency Load Reduction Program (ELRP) Modifications	RA	The RA proceeding sets requirements for demand response (DR) because DR provides RA capacity. Thus all proposed "demand reduction" programs should be addressed in the RA proceeding.	
2. Demand Response Auction Mechanism (DRAM) Modifications	RA		
3. Third Party Demand Response Procured by Non-IOU Load Serving Entities	RA		
4. Agricultural Demand Flexibility Pilot	RA		
B. Smart Thermostats (SCT)			
1. SCT Related Changes to Energy Efficiency Programs	RA	Smart thermostats are demand response. Thus, these programs should be addressed in the RA proceeding.	
2. SCT Related Changes to Energy Savings Assistance Programs	RA		
C. Utility-Scale Storage, Imports, and Generation			
1. Introduce Penalties for Delays to D.19-11-016 Procurement	IRP	Other than the RA penalty consideration which was just reviewed and set in the RA proceeding in D.20-06-031, the rest of these issues remains squarely in the IRP proceeding scope because they are procurement or procurement planning issues.	
2. Increase Resource Adequacy Penalties	RA		
3. Accelerate Procurement Ordered in IRP Mid-Term Reliability Decisions	IRP		
4. Emergency Procurement and Cost Recovery via a Non-Bypassable Charge	IRP		
5. Bundled Procurement Rules Modifications	IRP		

4

5 PCF recommends that the Commission refrain from updating Resource Adequacy
 6 requirements within this proceeding (as contemplated by 1 (b) of the Amended Scoping Memo)
 7 and keep that work within the Resource Adequacy proceeding where this subject remains under
 8 active evaluation and analysis.⁷ Similarly, the IRP-related changes contemplated by this
 9 expedited proceeding and schedule should be considered and addressed in the IRP proceeding, as
 10 the numerous recent decisions in the IRP proceeding attest to the fact that the Commission
 11 actively continues to address the problems and concerns cited in the Amended Scoping Memo.
 12 For example, the IRP has already put into place a penalty structure for LSEs via backup
 13 procurement by the utilities if an LSE were to fail to achieve the online date required. PCF
 14 remains unaware of any LSE filing documents claiming to be late on 2021 IRP procurement
 15 other than the utilities regarding the 3,300 MW procurement consideration of penalties for

⁷ R.19-11-009, Decision 21-07-014 Decision on Track 3B.2 Issues: Restructure of the Resource Adequacy Program (July, 16, 2021), p. 2 (“This decision addresses issues scoped as Track 3B.2 to restructure the Resource Adequacy program and sets forth a process and schedule for further development of Track 3B.2 proposals.”).

1 procurement delays and resource adequacy failures.⁸ The Commission is poised to address the
2 electric vehicle charging and load management issues at its September 9th meeting when it
3 considers Item 13, Energy Division Resolution E-5167.⁹ Moreover, all the DER-related issues
4 raised in the Amended Scoping Memo properly should be addressed in the new DER OIR that
5 the Commission just opened this summer comprehensively to evaluate the future of DER
6 programs and incentives.¹⁰

7 Only the few remaining issues which involve expediting already-ordered new resources
8 to move up on-line dates and assessing other opportunities to increase supply¹¹ -- are not
9 concomitantly addressed in the Commission’s myriad other proceedings. To attempt to
10 determine more than the handful of unassigned issues within 78 days – especially issues that
11 require factual analysis, modeling and examination to be determined adequately and
12 appropriately, will invite chaos, confusion – and inconceivable costs. In short, the Commission
13 need not move complicated and costly issues around like a shell game between proceedings to
14 show its responsiveness to the Governor’s Emergency Proclamation.¹²

15 This proceeding should concentrate, instead, on ensuring that the supplies already under
16 valid contract perform to their full capacity, every time they are needed. This proceeding could
17 find new supply by identifying the barriers that currently exist – barriers limiting closer
18 coordination with California’s municipal utilities to achieve greater reliability at just and

⁸ See Energy Division Staff Concept Paper, at Section C. 1, 2, and 4.

⁹ See Draft Resolution E-5167, Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric request approval to establish new Electric Vehicle (EV) Infrastructure Rules and associated Memorandum Accounts, pursuant to Assembly Bill 841 (September 9, 2021).

¹⁰ R.21-06-017, Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future (June 24, 2021).

¹¹ R.20-11-003, Assigned Commissioner’s Amended Scoping Memo and Ruling for Phase 2 (August 10, 2021), (“Amended Scoping Memo”), p. 4 at 1(a) and (h).

¹² Executive Department State of California, Proclamation of a State of Emergency, (July 30, 2021), p. 3, <https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf>

1 reasonable prices. Recent history shows us that the CAISO leans on the munis at times of high
2 demand to provide their excess energy and capacity to shore up the CAISO balancing authority.
3 In this proceeding, the Commission could explore and recommend ways to coordinate with the
4 munis, as their balancing authorities are more fully resourced and reliable than the CAISO
5 balancing authority.

6 **B. The Department of Market Monitoring’s Criticisms Confirm that the**
7 **Commission Should Not Adopt the CEC’s Flawed Analyses Nor the ISO’s**
8 **Capacity Procurement Mechanism Without Independent Vetting.**

9 The California Energy Commission (CEC) stack analysis has already created confusion
10 for IRP proceeding parties as to where and when they will be able to comment and participate in
11 the process and the CAISO’s Department of Market Monitoring (DMM) has consistently called
12 out the CEC’s plant operations and costs analyses as not based in fact.¹³ The continuing issues
13 resulting from the questionable quality of the CEC’s data and analyses should give this
14 Commission pause as it proceeds to assume that the CEC’s stack analysis should be used without
15 proper vetting and testing against the facts. The stack analysis makes several questionable
16 assumptions about supply and demand for Summer 2022. The analysis assumes lower import
17 levels than historically available, higher outages than historically occur, and further drought
18 increases over 2021 despite the 2021 record drought.¹⁴

19 Just one example not considered by the CEC’s analysis highlights its inadequacies. Rapid
20 technological change and customer response to California’ high electric rates are driving

¹³ FERC Docket ER20-1075-000, Department of Market Monitoring, Answer and Motion for Leave to Answer of the Department of Market Monitoring of the California Independent System Operator (April 3, 2020), found at <https://www.aiso.com/Documents/AnswerandMotionforLeavetoAnswer-DMMCommentsonCPMTariffFilingER20-1075-Apr32020.pdf>.

¹⁴ PCF makes this analysis based on the limited information in the CEC draft stack analysis document. For a complete analysis, PCF would need the CEC to provide more detailed information regarding its inputs and assumptions.

1 substantial changes to California’s future demand scenario. As of March 2021, the second
2 largest BTM residential solar installer in the country has decided to only install solar with battery
3 storage attached.¹⁵ Other solar installers are also quickly increasing their battery attachment rates
4 as well.¹⁶ Net energy metering customers must take service under TOU rates, and TOU rates
5 highly incentivize NEM customers to use electricity from their own batteries instead of from the
6 grid during peak demand times. NEM capacity has grown by at least 1,100 MW per year since
7 2016.¹⁷ Thus, good reason exists to believe that solar-plus-storage could actually drive down the
8 peak demand over the next several years.

9 As to this proceeding’s consideration of the CAISO’s CPM authority, the CAISO’s
10 Department of Market Monitoring has repeatedly documented that the CAISO set its soft bid cap
11 for its Capacity Procurement Mechanism purchases unjustifiably high. The DMM has shown
12 that “the CAISO itself has not undertaken any review to assess the accuracy of these studies or
13 the CEC data being utilized to set the CPM soft cap.”¹⁸ The DMM demonstrated that “The fixed
14 annual O&M estimates used by the CAISO to set the CPM soft cap are about three times higher
15 than the highest estimates of fixed annual O&M found by DMM. Nothing in the CAISO’s reply
16 comments explains such a dramatic discrepancy between the CEC cost assumptions and all other
17 studies cited by DMM. Moreover, no generator has provided comments in the CAISO
18 stakeholder process or this proceeding questioning the accuracy of the cost estimates cited by
19 DMM or supporting the cost assumptions in the CEC reports.”¹⁹

¹⁵ Electrek, *Tesla stops taking orders for Powerwall without solar panels*, (March 15, 2021),
<https://electrek.co/2021/03/15/tesla-stops-taking-orders-powerwall-without-solar-panels/>.

¹⁶ GTM, *Sunrun Deploys Record Solar Capacity in Q4 as Battery Interest Increases*, (February 27, 2020)
available at <https://www.greentechmedia.com/articles/read/sunrun-q4-earnings-battery-resilience>

¹⁷ California Distributed Generation Statistics website [last accessed August 31, 2021] available at
<https://www.californiadgstats.ca.gov/charts/>

¹⁸ ER20-1075-000, DMM Answer, p. 2 (April 3, 2020.)

¹⁹ *Id.*, p. 3.

1 The DMM then compared the CAISO’s CPM cost estimates with the actual fixed O&M
2 costs of a plant under a Reliability-Must-Run contract, one of the most expensive contracts
3 allowed. It found that “The fixed annual costs assumptions from the 2019 CEC report
4 (\$58.90/kW-year) used by the CAISO are almost twice (about 183 percent) of the fixed annual
5 costs filed for this 593 MW combined cycle unit (\$32.13/kW-year). Contrary to the CAISO’s
6 reply comments, “these data provide strong evidence that the CEC data used by the CAISO to set
7 the CPM soft cap significantly overestimates the actual annual going forward fixed costs of gas
8 units.”²⁰

9 The DMM’s analysis and data show that the CAISO’s cost assumptions and subsequent
10 CPM payments create additional and unwarranted subsidies – paid for by California ratepayers.
11 Similarly, the Energy Division’s Staff Concept Paper repudiates the electricity markets structure
12 because it recommends numerous expensive and enormous subsidies to nip, tuck and tweak the
13 market failures creating reliability problems. The Concept Paper attempts to predetermine
14 outcomes to try to achieve reliability outside the electricity market structure. Does the
15 Commission truly want to continue to prop up organized markets through higher and higher
16 subsidies and incentives that are provided primarily to large commercial customers at the
17 expense of residential and small commercial customers? If the Commission wants to
18 predetermine the outcome of system operations, then the most cost effective way to accomplish
19 that involves traditional command and control regulation. Direct regulation provides the best
20 assurance that the Commission can ensure adequate electricity supplies that are affordably
21 priced.

22 At base, the Commission should not affirm, accept or use the CAISO’s Capacity
23 Procurement Mechanism (CPM) or the CEC’s incorrect data. The CPM relies on unevaluated

²⁰ Id., p. 3. *See also*, p. 5.

1 calculations from the CEC that the DMM calls out as factually incorrect. Pursuant to Public
2 Utilities Code Section 1821, the Commission must validate the accuracy of the modeling used in
3 a proceeding that may influence a rate. That has not occurred here and the Commission should
4 not act on either the CEC’s data or the ISO’s data that relies on CEC analyses without
5 independently verifying both.

6 **C. Given the Substantial Procurement Already Ordered, the Commission Must**
7 **Assess the Need for Any Additional Procurement And Its Effects on**
8 **Disadvantaged Communities.**

9 PCF recommends that the Commission step back and consider what electricity resources
10 are actually available and how best to ensure their availability for use by California –at a
11 statutorily-mandated just and reasonable price. The Commission should determine first whether
12 the resources already under valid contracts, through valid bi-lateral contracts and valid resource
13 adequacy net qualifying capacity contracts, among other mechanisms, are producing to either
14 their maximum or their contracted-for levels. As Figure 2 in Section III details, by the summer
15 (August 1) of 2022, 2,475 MW of the 3,300 MW that the Commission has recently ordered will
16 be online. By 2023 all 3,300 MW of the resource adequacy procurement the Commission has
17 recently ordered will be online, in addition to 3,458 MW of the 11,500 MW procurement ordered
18 in June in D.21-06-035 will be online.²¹ That new procurement will equal 6,758 MW of new
19 peak capacity by summer 2023. And although PCF does not recommend that this proceeding
20 address DER, IRP and RA incentive programs, if it continues to do so, then the Commission
21 should evaluate whether the myriad new incentive program expansions and changes are effective
22 and are producing additional resources as assumed.

23 After determining essentially whether Californians are receiving what they have already
24 paid for, the Commission must then determine whether any need exists for additional

²¹ D.21-06-035, Table 2, p. 21.

1 procurement, given that this Commission has ordered or approved more than 16,800 MW of new
2 procurement within the past two years (see Figure 2 in Section III.A below).²² If further need
3 can be established from the facts developed in this administrative record, which PCF
4 recommends be pursued in the IRP proceeding which remains the appropriate venue to
5 determine and develop those facts, then the Commission must assess how to obtain
6 supplementary power resources while complying with its overarching statutory mandates to
7 ensure just and reasonable prices²³ while minimizing the impact on ratepayers,²⁴ minimizing the
8 impact of pollution on disadvantaged communities in California,²⁵ and ensuring the use of clean
9 energy to the maximum extent possible. Any procurement ordered by the Commission in Phase 2
10 of this proceeding should explicitly set quantitative requirements for eliminating or reducing
11 polluting resources in disadvantaged communities. Thus far, the Commission has only set
12 minimal qualitative, and as a result subjective, requirements on utilities regarding energy
13 procurement based in disadvantaged communities.²⁶

14 Moreover, consistent with the Commission’s statutory requirements and current policies,
15 any new procurement should “increase the availability of carbon-free energy at all times of

²² See Section IV, below for a detailed discussion of the new procurement already ordered.

²³ Pub. Util. Code, § 454. All statutory references are to the Public Utilities Code unless specified otherwise.

²⁴ See § 454.52(a)(1)(D). (“...the commission shall...(D)Minimize impacts on ratepayers’ bills.”). *See also*, § 747, which requires the Commission to “reduce rates for electricity and natural gas to the lowest amount possible.”

²⁵ Section 454.52(a)(1)(H), that requires procurement to minimize the impact of pollution on “minimize localized air pollutants and other greenhouse gas emissions, with early priority on disadvantaged communities.”

²⁶ D. 20-03-028, 2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning (March 26, 2020), Ordering Paragraph 5, p. 105, (The OP contains the qualitative requirement to “address” activities when it states that “All load-serving entities required to participate in the Commission’s integrated resource planning (IRP) process shall address, in their individual IRPs, their activities to minimize criteria air pollutants with priority on disadvantaged communities.”).

1 day”²⁷ and should further “ensure increased clean energy capacity by October 31, 2022.”²⁸ And
2 to comply with current statutory and policy mandates, after October 31, 2021, the Commission
3 should re-impose the limits on the use of prohibited resources for diesel back up generation that
4 it allowed in D.21-03-056.

5 II. PCF PROPOSALS TO INCREASE SUPPLY AND REDUCE DEMAND

6 All of the following proposals submitted by PCF comport with the Amended Scoping
7 Memo’s priorities to increase peak and net peak supply resources or reduce peak and net peak
8 demand, and several delineate “other opportunities to increase supply”²⁹ as directed by the
9 Assigned Commissioner in the Amended Scoping Memo. How fast and to what extent these
10 proposals will contribute to increasing supply and decreasing demand lies within the
11 Commission’s discretion and ultimate program design and implementation. PCF has submitted
12 on-bill-financing tied to the meter and whole home solar + battery storage proposals in the
13 CARE/ESA and in the SGIP and NEM proceedings, among others, but the Commission
14 continually concludes that it lacks the time, the resources or the appropriate proceeding within
15 which to consider PCF’s proposals.³⁰ PCF submits, in accordance with the Amended Scoping
16 Memo’s focus on “increas[ing] peak and net peak supply resources in 2022 and 2023 . . . and
17 “reduc[ing] peak and net peak demand in 2022 and 2023”³¹ that now is the time to evaluate and
18 adopt proven programs to add distributed and resilient resources to the system, which can be

²⁷ Executive Department State of California, Proclamation of a State of Emergency, (July 30, 2021), p. 3, <https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf>. PCF notes that the Governor’s Proclamation did not suspend or affect in any way the requirements of Sections 454, 454 or 747, or indeed, any applicable statutory requirement relating to the cost or pricing of electricity.

²⁸ Id., at p. 10.

²⁹ Amended Scoping Memo, p. 4.

³⁰ R.20-08-022, D.21-08-006 Decision Extending California Hub for Energy Efficiency Financing Programs and Conditionally Approving Use of Platform For Non-Ratepayer Funded Programs (August 9, 2021); A.19-11-003, D.21-06-015 Decision on Large Investor-Owned Utilities’ and Marin Clean Energy’s California Alternate Rates for Energy (CARE), Energy Savings Assistance (ESA), and Family Electric Rate Assistance (FERA) Program Applications for Program Years 2021-2026 (June 7, 2021).

³¹ Amended Scoping Memo, p. 4.

1 used by vast new swaths of customers who have been left out of ratepayer-funded incentives and
2 programs,³² to either decrease demand or increase supply when needed.

3 **A. On Bill Financing Tied to the Meter Results in Significant Demand Reduction**
4 **Additional Supply At Peak Demand at Little or No Cost to Utility Consumers.**

5 PCF submits that to obtain greater reliability and safety equitably and with reasonable
6 costs, the Commission should create an on-bill financing program open to all residential and
7 small business customers that is tied to the meter, not the customer, to incent the deployment of
8 additional key and critical solar & battery storage resources. Equity can be enhanced by
9 mandating that the utilities offer a tariffed on-bill financing program tied to the customer meter
10 to assure that renters and lower income customers have equal access to solar and battery storage.
11 “Tied to the meter” means the meter is billed, not the customer behind the meter.

12 This type of financing is already offered in California. BayREN currently administers a
13 OBF “tied to the meter” financing program for water efficiency measures in the Bay Area.³³
14 OBF tied to the meter financing is also available to Hawaii IOU residential customers.³⁴
15 Currently the California utilities offer very limited OBF programs, restricted to commercial
16 customer energy efficiency upgrades. These OBF programs do not cover residential customers,
17 renters, solar, or battery storage.

18 The Commission authorized the utilities to modify or expand their OBF programs
19 through a simple advice letter process in 2019. This same 2019 decision recognized the need to

³² See Energy Division Staff Concept Paper, p. 8 at section A.1.d, discussing incentive programs that do not include residential customers, stating that such exclusion “raises questions of both equity and effectiveness given that the CPUC has developed numerous programs, including ELRP, that compensates [sic] non-residential customers for load reduction.”

³³ R.20-08-022, Clean Energy Finance Workshop – Day 2 (January 28, 2021), pp. 34-36, Attachment 44.

³⁴ Ibid, pp. 52-58.

1 consider opening utility OBF programs to private capital in order to expand the programs.³⁵ The
2 Commission should act now to expand these programs to increase all customers’ ability to add
3 NEM solar as well as better manage their electricity loads.

4 **B. Whole House Solar + Storage For HFTD Customers Increases Reliability and**
5 **Safety and Reduces Demand.**

6 The continued reliance by the utilities on public safety power shutoffs (PSPS) persists as
7 a testament to the ineffectiveness of the utility grid- hardening strategies to assure reliable power
8 under high fire threat conditions. Customer-sited solar and storage is an alternative solution that
9 would allow the utilities to initiate PSPS events as needed without interrupting customer power
10 supply and without huge capital investment in grid-hardening projects. The Commission’s 2019
11 SDG&E WMP Decision required SDG&E to consider “renewables potentially coupled with
12 storage” for backup generation,³⁶ an alternative solution to grid hardening – at much less cost –
13 to reduce fire risk. However, SDG&E failed to comply.³⁷

14 In contrast, the Commission allocated over \$513 million of its 2020 to 2024 incentive
15 budget, nearly two-thirds of the \$814 million total budget, to equity resiliency customers.
16 “Equity resiliency” in this context means lower- and middle-income (LMI) customers living in
17 HFTDs.³⁸ The Commission, with this allocation of SGIP funds, recognized the resiliency value

³⁵ D.19-03-001, Decision Granting Petition for Modification of Decision 09-09-047 Concerning On-Bill Financing (March 14, 2019), Attachment A, p. 3 (“II. New Ordering Paragraph: Decision 09-09-047 is further modified to add Ordering Paragraph 61, as follows: 61. PG&E, SCE, SDG&E, and SoCalGas may each file a Tier 2 advice letter for Commission review and approval of proposed program changes...”); *see also* D.19-03-001, p. 17 (Find of Fact 10: “NRDC has raised valid issues in its filed comments regarding how to enable the investor-owned utilities to manage their on-bill financing loan programs so that private capital is deployed, thereby enabling more loans and more energy-saving projects.”).

³⁶ R.18-10-007, D.19-05-039, Decision on San Diego Gas & Electric Company’s 2019 Wildfire Mitigation Plan Pursuant to Senate Bill 901 (June 6, 2019), p. 12.

³⁷ R.18-10-007, The Protect Our Communities Foundation Comments on the 2020 Wildfire Mitigation Plans Pursuant to Resolution WSD-001 (April 7, 2020), p. 35.

³⁸ R.12-11-005, D.20-01-021, Self-Generation Incentive Program Revisions Pursuant to Senate Bill 700 and Other Program Changes (January 16, 2020), Table 4 - 2020 to 2024 Adopted Allocations and Total Incentives Budgets, p. 27.

1 of NEM storage and the importance of assuring this NEM storage is available to low-income and
2 vulnerable customers subject to power shutoffs. Further, in D.21-08-006 the Commission stated
3 it would consider PCF’s On-Bill-Financing proposal for solar + storage at a future time.³⁹ Thus,
4 PCF recommends the proposal be considered in this proceeding. Section III.C provides more
5 information on PCF’s whole home solar + storage proposal.

6 **C. The Commission Should Inspect California Generation Facilities Like MLB**
7 **Tests Players and Pitchers: Every Plant and Multiple Times, Focusing on**
8 **Facilities with A History of Outages.**

9 The Commission maintains unique authority to ensure reliability and safety.⁴⁰ Pursuant to
10 that authority it should increase inspections of all plant outages and continue to investigate the
11 role that power plant outages played in the reliability problems that California experienced both
12 last summer and during this summer as the best way to ensure that California has a safe and
13 reliable electricity supply through October 31, 2022.⁴¹ PCF submits that, to enhance reliability
14 and safety, the Commission must ensure that lawfully operating power plants located in
15 California both stay properly maintained and ready to run when needed so that those plants can
16 produce as promised.

17 Resolution ESRB-9, adopted by the Commission on June 25, 2021, constitutes a
18 necessary first step in the Commission’s review and strengthening of its generation plant
19 enforcement schema. There, the Commission’s Safety and Enforcement Division revealed that
20 after the rolling blackouts of August 2020, it had inspected a sampling of power plants: “In
21 response to these rolling outages, the Commission’s Safety and Enforcement Division (SED)

³⁹ R.20-08-022, D.21-08-006 Decision Extending California Hub for Energy Efficiency Financing Programs and Conditionally Approving Use of Platform for Non-Ratepayer Funded Programs (August 9, 2021), p. 40.

⁴⁰ See Senate Bill (SB) X2 39 (Burton and Speier), added by Statutes 2002, Second Extraordinary Session, Chapter 19, Section 4 (effective August 8, 2002), enacting Section 761.3; see also G.O. 167.

⁴¹ Amended Scoping Memo, p. 2.

1 conducted in-person inspections at a select number of electric generating facilities that
2 experienced outages during the August 2020 heatwave and shared its findings with the
3 Commission.”⁴²

4 Much more than a “table top exercise” or a sampling of plants should be inspected to
5 provide a sufficient deterrent effect on errant generators, however. PCF recommends that the
6 Commission expand SED’s inspection scope to include snap, unannounced inspections of every
7 plant, every year, during times of peak demand. PCF recommends inspections similar to the
8 prohibited substances testing that Major League Baseball (MLB) now conducts involving all
9 League pitchers. In order to stop cheating through the use of prohibited substances that was
10 rumored to be rampant throughout baseball, MLB began a new program that checked every
11 pitcher, every time, and effectively shut down the cheaters.

12 Similarly, SED should focus on those power plants that maintain a history of both
13 planned and forced outages, when those outages occur in summer and high demand months. As
14 Mr. Powers’ testimony explains, power plant outages should not occur during the summer in
15 California. Neither the Commission nor the CAISO should blithely allow power plants to call
16 their own planned outages without investigation and subsequent confirmation that each outage
17 was, in fact, necessary, and that the power plant resumed operations as quickly as reasonably
18 possible. The Commission’s goal should be to achieve a level of no outages during the summer
19 months and times of demand, except for necessary outages caused by documented mechanical
20 problems for which the Commission can attest. Moreover, the Commission should follow up
21 with each plant experiencing a SED-verified outage to ensure that any problems are fixed as
22 rapidly as possible.

⁴² Resolution ESRB-9 (June 25, 2021), p. 3.

1 To ensure that SED obtains all necessary information and evidence, each Commission
2 inspection should include accessing and reviewing all plant operator logs and operator
3 communications with the ISO. Section 761.3 requires generators to record plant status
4 information daily and to maintain a Control Operator Log, a “formal record of real time
5 operating events as well as the overall status of the generating units” under the operator’s control
6 and to report the reasons for any unit curtailments to the Commission and to the CAISO. The
7 Commission should activate its reporting and enforcement mechanisms and both demand and
8 then publish monthly CAISO “after action” outage reports for all California-based generation.

9 No longer can California rely on trust, without verification. SB 2X 39 and the Federal
10 Power Act’s Savings Clause⁴³ provide more than sufficient authority for this Commission to
11 ensure the reliability and safety of the California-based power plants upon which our economy
12 and our safety depends. It is time to use the full extent of that authority to ensure maximum
13 electricity production when California needs the power.

14 In addition to the SED inspections as an outside check on cheating, California needs to
15 develop an “insider” check as well. To ensure that California-based power plants are maintained
16 properly and run when needed, the Commission should encourage plant workers to report
17 problems and practices that hamper full production and thorough maintenance. The Commission
18 has adopted workforce whistleblower protections in the natural gas industry and should do the
19 same for the electric utility workforce so that workers’ ability properly to maintain California’s
20 electrical grid is no longer hobbled or constrained. To do so, PCF submits that the Commission
21 can use its own G.O. 112 as a model to adopt on the electric side as well.

⁴³ Federal Power Act of 1935, §201(b).

1 Resolution ALJ-274⁴⁴ and the gas safety inspection program were developed in the wake
2 of the San Bruno explosion. For the gas industry, the Commission has adopted strong whistle-
3 blower and other employee protections.⁴⁵ Gas and electric utilities have strong unionized
4 workforces, with established procedures and processes for regular communication with managers
5 about operating conditions, safety and procedures including deviations from procedure. The
6 Commission can and does rely on regular communications from workers to augment the
7 information it receives from official reports and inspections in fulfilling its inspection and
8 enforcement responsibilities.

9 Many non-utility generators located in California do not have these workforce
10 protections. The Commission should explicitly include in its revision of GO-167 the
11 whistleblower protections for workers comparable to those contained in GO 112-F, Appendix G
12 for the gas industry. Moreover, the Commission should consider adopting additional
13 requirements as to workforce training and protections to ensure sufficient generator maintenance
14 and operations reliability and performance. The reliability of California’s electric system
15 depends, at base, on the ability of the generation workforce to perform at all times.

16 **D. The Commission Should Work with the CAISO to Decrease Exports At Times of**
17 **Grid Stress, Heat Waves or High Demand.**

18 The Commission must investigate the exports that occur during times of high demand
19 and work with the California Independent System Operation (CAISO) to ensure that power
20 produced in California stays in California when needed. The Commission maintained a long and
21 successful history of approving and overseeing bi-lateral contracts, for example with the hydro

⁴⁴ Resolution ALJ-274 Establishes Citation Procedures for the Enforcement of Safety Regulations by the Consumer Protection And Safety Division Staff for Violations by Gas Corporations of General Order 112-E and Code of Federal Regulations, Title 49, Parts 190, 191, 192, 193 and 199 (December 7, 2011), https://docs.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/154782.pdf.

⁴⁵ See GO-112-F, Appendix G.

1 resource owners in the Pacific Northwest, that provided mutual benefits, exporting power to the
2 NW during the winter and importing power from the Northwest during high California demand
3 times in the summer. The thousands of megawatts of exports allowed under current CAISO
4 rules, as detailed in PCF’s expert Rick Humphrey’s earlier testimony,⁴⁶ undermine California’s
5 reliability and safety and thus should be examined and revised to require mutual benefit to
6 California before such exorbitant amounts of electricity exports are allowed when the grid is
7 stressed or at high demand times. The CAISO, after a long stakeholder process after last
8 summer’s blackouts, merely re-prioritized exports from the first priority, over California’s needs,
9 to a priority that leaves exports equal to California’s load.⁴⁷ Equating the scheduling of
10 California’s needs with the scheduling of electricity to be exported out of California will not be
11 sufficient to ensure the reliability or the safety of California’s electricity system.

12 One option for eliminating the exports of resources for which California LSEs have
13 contracted would be for the Commission to adopt the Bid Cap requirement on proposed by the
14 Energy Division within the RA proceeding.⁴⁸ The Energy Division created the Bid Cap proposal
15 to require RA providers to fulfill the purpose of the RA contract that intends resource to “be
16 available at least 24 hours each month.”⁴⁹ To accomplish the level of availability the proposal
17 sets the maximum bid for RA providers at “the higher of \$300/MWh or the resource specific

⁴⁶ R.20-11-003, Prepared Opening Testimony of Richard Humphreys on Behalf of The Protect Our Communities Foundation (January 11, 2021), (“PCF-2”), pp. 20-23.

⁴⁷ See CAISO, *ISO Board Adopts Final Set of 2021 Summer Readiness Initiatives: Measure Prioritizes Exports, Imports, and Transfers When Supplies Are Tight* (April 21, 2021), <https://www.caiso.com/Documents/ISO-Board-Adopts-Final-Set-of-2021-Summer-Readiness-Initiatives.pdf>; see also Memorandum to ISO Board of Governors From Anna McKenna, Interim Vice President of Market Policy and Performance Re: Decision on Market Enhancements for Summer 2021 Readiness – Load, Export and Wheeling Priorities (April 19, 2021), <https://www.caiso.com/Documents/Decision-Market-Enhancements-Summer-2021-Readiness-load-export-wheeling-priorities-Memo-Apr-21-2021.pdf>

⁴⁸ R.19-11-009, Administrative Law Judge’s Ruling On Energy Division’s Revised Track 3b.2 Proposal, (December 21, 2020), Attachment A, pp. 15-19.

⁴⁹ *Id.*, p. 16.

1 default energy bid, excluding non-resource-specific default energy bids, such as those tied to
2 indices.”⁵⁰ The Commission should adopt the Energy Division bid cap proposal for all valid RA
3 contracts going forward in order to assure that generators that have signed valid RA contracts
4 with California LSEs actually provide energy during times of high energy demand.

5 **III. DATA AND ANALYSIS SUPPORTING PCF PROPOSALS AND**
6 **COMMENTS**

7 The Commission should enforce California’s laws and policies barring more fossil fuel
8 procurement and use. In D.19-11-016 the Commission ordered more than 3,300 MW of
9 incremental electricity procurement by August 2021 and additional procurement to be on line by
10 August 2022 and allowed all LSEs to include fossil procurement. Also, in the proposed decision
11 leading up to D.21-06-035, the Commission considered requiring fossil fuel procurement before
12 a last-minute change removed the fossil fuel requirement. Moreover, the adopted decision stated
13 that the PUC would continue to consider approving fossil fuel-based generation capacity in the
14 “very near future.”⁵¹ The PUC should stop approving new fossil fuel-based generation when that
15 very type of generation fuels climate change which exacerbates the extreme weather, wildfires,
16 and droughts occurring in California and throughout the West.

17 **A. California’s Current And Expected Electricity Resources More Than Meet**
18 **California’s Need.**

19 The available nameplate capacity produced by power plants lawfully serving the CAISO
20 market shows that California electric power generators can produce more than enough electricity
21 to serve Californians' needs. While not all plants can produce at the same time given the
22 exigencies of when the sun shines and the wind blows, California has available more than

⁵⁰ Ibid.

⁵¹ D.21-06-035, p. 43, (“for purposes of this order, we are not authorizing fossil-fueled resources to count toward the 11,500 MW of total capacity required by this order. We will reevaluate the need for these types of resources in the very near future in this proceeding.”).

1 sufficient power production if it changes the way it manages that production and rigorously
2 enforces the power plant maintenance and operation standards already adopted by this
3 Commission, as discussed in PCF’s proposals in Section II, above.

4 The Commission has already acted to increase the amount of all electricity
5 resources available to the California Independent System Operator (“CAISO”) in the past two
6 years. First, in D.19-11-016 the Commission ordered 3,300 MW of incremental
7 electricity procurement, requiring 75% of which to be on line by August 1, 2022. The decision
8 allowed LSEs to procure for their portions of the 3,300 MW from fossil-fuel-based resources.
9 “D.19-11-016 found that the 3,300 MW of capacity is needed to maintain system reliability
10 between 2021 and 2023.”⁵²

11 In D.20-12-044, the Commission detailed the “backstop” procurement it ordered in D.19-
12 11-016, deferring “[t]he details of the cost allocation of any backstop procurement required by
13 the Commission [to] be addressed in a subsequent decision.”⁵³ In D.20-12-044 the Commission
14 also set milestones for on-line completion,⁵⁴ and truncated its processes for determining various
15 issues, including allowing a case by case determination for the length of procurement contracts.⁵⁵

16 In this Emergency Reliability rulemaking, R.20-11-003, the Commission acted in
17 February, in D.21-02-028 and again in March, in D.21-03-056⁵⁶ to order additional procurement,
18 expand eligibility for and payments made pursuant to its DER business customer programs, and
19 increase the procurement reserve margin required to be maintained by all load serving entities

⁵² R.20-05-003, D.20-12-044, Decision Establishing Process For Backstop Procurement Required By D.19-11-016 (December 17, 2020), (“D.20-12-044”), p. 25, Finding of Fact 2.

⁵³ R.20-05-003, D.20-12-044, Decision Establishing Process for Backstop Procurement Required by Decision 19-11-016 (December 22, 2020), p. 2.

⁵⁴ D.20-12-044, p. 28.

⁵⁵ D.20-12-044, p. 29, FOF 16. *See also* FOF 15 & 17.

⁵⁶ The Commission modified certain aspects of its orders in D.21-03-056 regarding the Emergency Load Reduction Pilot (ELRP) triggers and program specifics in D.21-06-27 this past June.

1 (LSE). In D.21-02-028 the Commission ordered additional procurement for 2021 of “power
2 capacity contracts to augment summer 2021 reliability”⁵⁷ and the Commission ordered additional
3 DER program eligibility for summer 2021 and 2022 in D.21-03-056. “One major element of
4 D.21-03-056 involves the establishment of the emergency load reduction program (ELRP) five-
5 year pilot as a tool for the large electric investor-owned utilities and the California Independent
6 System Operator (CAISO) to “access additional load reduction during times of high grid stress
7 and emergencies involving inadequate market resources . . .”⁵⁸

8 In June 2021, the Commission in the IRP rulemaking, R.20-05-003, approved D.21-06-
9 035, *Decision Requiring Procurement to Address Mid-term Reliability (2023-2026)*, ordering an
10 additional 11,500 MW of net qualifying capacity to be procured on a set schedule from 2023
11 to 2026.⁵⁹ The following Figure 2 shows graphically the primary procurement and capacity
12 ordered by the Commission over the past two years. The procurement capacity from those
13 decisions that will be available and online in summer 2022 equals 4,475 MW. This partial list of
14 Commission-ordered new procurement covers 2021-2026 and includes the procurement orders
15 from the following decisions:

- 16 • D.19-11-016: 3,300 MW of new system RA capacity⁶⁰
- 17 • D.21-02-028: 500 MW, system RA contracts.⁶¹

⁵⁷ See description of the Commission’s actions in D.21-02-028 in D.21-06-027, p. 1.

⁵⁸ R.20-05-003, D.21-06-035, *Decision Requiring Procurement to Address Mid-Term Reliability (2023-2026)* (June 24, 2021), (“D.21-06-035”), p. 2, describing the Commission’s actions in D.21-03-056.

⁵⁹ D.21-06-035, p. 94, Ordering Paragraph 1.

⁶⁰ D.19-11-016, p. 34, (“For all of these reasons, we will adopt a requirement for 3,300 MW of incremental system resource adequacy capacity procurement, utilizing the resource adequacy counting rules, above and beyond any resources included in the baseline assumptions for 2022 in the PSP adopted in D.19-04-040.”)

⁶¹ R.20-11-003, D.21-03-056 *Decision Directing Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to Take Actions to Prepare for Potential Extreme Weather in the Summers of 2021 and 2022* (March 26, 2021), p. 48 (“Given that over 500 MW of resources have already been procured in response to the procurement orders in D.21-02-028.” Because

- 1 • D.21-03-056: 1,500 MW, system RA contracts.⁶²
- 2 • D.21-06-036: 11,500 MW, system RA contracts⁶³

3 **Figure 2: PUC Procurement for years 2021-2026**

Decision	Ordered Capacity (MW)	Commercial online date	Contract Expiration	Capacity in 2022 (MW)	Capacity in 2023 (MW)	Capacity in 2026 (MW)	Comments
D.19-11-016	3,300	2021-2023	long term	2,475	3,300	3,300	75% by summer 2022
D.21-02-028	500	2021-2022	after 2022	500			
D.21-03-056	1,500	2021-2022	after 2022	1,500			
D.21-06-035	11,500	2023-2026	long term		3,458	11,500	
				Total 2022	Total 2023	Total 2026	
				4,475	6,758	14,800	

4
5 Moreover, the Commission raised the procurement reserve margin to an assumed “20.7
6 percent, with the addition of several other assumptions and variables that effectively raise
7 the PRM to approximately 22 percent”⁶⁴ for the purposes of “supporting system reliability.” In
8 D.21-06-035 the Commission justified an assumed higher PRM, which had just been raised to
9 17.5% from 15% in the Emergency Reliability proceeding three months earlier in March⁶⁵, in
10 order “to support the need for some procurement in order to support system reliability.”⁶⁶
11 But the Commission also implicitly acknowledged the truncated process used to raise the
12 PCM to an effective 22% in its first Finding of Fact by stating that: “More analysis is needed
13 before revising the planning reserve margin for long-term planning in the IRP proceeding on a
14 permanent basis.”⁶⁷ The Commission explicitly acknowledged that additional procurement

D.21-02-028 did not establish a MW amount of procurement requirements, the 500 MW stated in D.21-03-056 can be used as an estimate of the number of MW procured as a result of the D.21-02-028 order.”

⁶² D.21-03-056, (March 25, 2021) p. 43, (“[T]he IOUs are encouraged to exceed their respective targets by as much as an additional 50%, which would result in approximately 1,500 MW of incremental procurement and an effective PRM of 19%.”).

⁶³ D.21-06-036, p. 94.

⁶⁴ D.21-06-035, p. 90, Conclusion of Law 3.

⁶⁵ See D.21-03-056, p. 74, Finding of Fact 66 (“Adopting an interim approach to increasing supply side resources that effectively increases the PRM to 17.5% from summer 2021 through 2022, subject to modification in the RA proceeding, will support procurement of incremental supply side resources.”)

⁶⁶ D.21-06-035, p. 90, Conclusion of Law 3.

1 could not have been justified without raising the PRM to an extraordinarily-high level, and did
2 so, without a fulsome evidentiary record, “to support system reliability.

3 ”However, in D.21-06-035 the Commission found that “Procurement conducted within a
4 year or two of the actual system need is likely to result in higher costs and lower resource
5 diversity than procurement with more lead time.”⁶⁸ The Commission had previously “waiv[ed]
6 the use of our traditional cost-effectiveness tools for all demand response proposals that are
7 adopted in this decision for years 2021 and 2022 will allow for increased participation.”⁶⁹ In
8 doing so, the Commission assumed that it needed to pay more than it had previously allowed in
9 its demand response programs, presumably in order to obtain more participation by offering
10 higher subsidies. But the Commission maintains dual statutory mandates – to ensure reliability
11 and safety *and* to ensure just and reasonable costs.⁷⁰ Thus, the Commission should use this
12 proceeding to evaluate the costs of all the procurement it has ordered pursuant to this proceeding.
13 The Commission should also evaluate all of the enhanced incentives it has provided to date,
14 before it continues layering yet more incentives on top of the ones already provided.

15 **B. Troubling Anomalies Occurred with Power Plant Generation This Summer, As**
16 **With Last Summer.**

17 As I detailed in my January 2021 opening testimony,⁷¹ over 1,400 MW of SoCal OTC
18 capacity, nearly 40 percent of the total SoCal OTC capacity, was unavailable when the 1,000
19 MW rolling blackout was initiated by CAISO on August 14th with demand at 45,716 MW. My
20 analysis of the plant outages that occurred on August 14-15, 2020 reveals unexplained

⁶⁷ D.21-06-035, p. 86.

⁶⁸ D.21-06-035, p. 87, Finding of Fact 10.

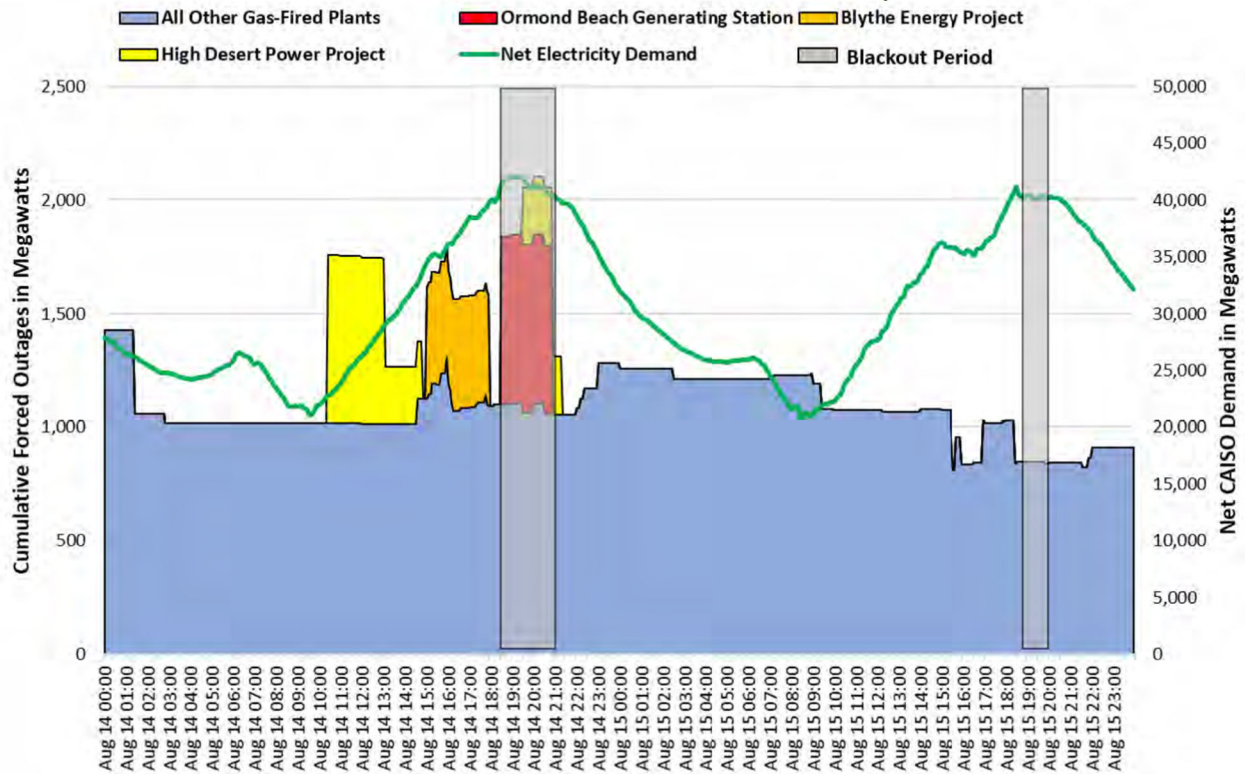
⁶⁹ D.21-03-056, p. 68, Finding of Fact 35.

⁷⁰ See Pub. Util. Code, § 451. See also, Pub. Util. Code, § 747, which requires the Commission to “reduce rates for electricity and natural gas to the lowest amount possible.”

⁷¹ R.20-11-003, Prepared Opening Testimony of Bill Powers, P.E. on Behalf of the Protect Our Communities Foundation (January 11, 2021), (“PCF-1”), p. 9.

1 coincidences and troubling anomalies that pinpoint the specific plants that caused the blackouts
 2 on August 14, 2020 and August 15, 2020. See Figure 3 below for details regarding the alignment
 3 of plant outages coincident to the peak day demand.

4 **Figure 3: August 14-15 Forced Outages Due to Maintenance/Trouble**
 5 **in Gas-Fired Plants in CAISO Territory**



6 Source: CASIO Outage Data for August 13-16, CAISO Net Demand, CAISO Final Root Cause Analysis, Foundation for Resilient Societies Analysis

7 Just as in 2020, unexplained anomalies have occurred in 2021. My review of electricity
 8 imports and exports on July 10, 2021, a day when the ISO called a Flex Alert shows that at 5:20
 9 pm, imports were at -82 MW and the demand was 40,047 MW.⁷² At 6:00 pm, the peak for the
 10 day, imports were +561 MW and the demand was 40,479 MW. These numbers are atypical.
 11 ISO's data shows that California was a net exporter of electricity just minutes before hitting the
 12 peak on a Flex Alert day. Earlier that day, California's forecast peak today was 40,677 MW,⁷³

⁷² CAISO, Today's Outlook, [last accessed August 31, 2021] available at <http://www.caiso.com/TodaysOutlook/Pages/supply.html>

⁷³ *Ibid.*

1 about 5,000 MW below the 2021 forecasted 1-in-2 annual peak load of 45,837MW.⁷⁴

2 Nonetheless, CAISO identified July 10th as a Flex Alert day.

3 Like in 2020, OTC plants severely underperformed this summer when CAISO called flex
4 alerts and triggered its CPM. On June 17, 2021 CAISO called a flex alert. On that day, Ormand
5 Beach Generating Station Unit 1 reported 741 MWs offline.⁷⁵ Ormand Beach Generating Station
6 Unit 2 reported 499 MW offline.⁷⁶ The combined total of curtailed capacity of those two units on
7 June 17, 2021 was 1,240 MW.

8 CAISO continues to experience problems keeping the lights on even on days with much
9 lower peak demand levels and even when those levels of demand were predicted and planned
10 for. California needs a comprehensive focus on the problems that continue to occur with the
11 CAISO markets and grid operations to ensure reliability and to safely provide power to all
12 California customers.

13 **C. Data Supporting Commission Adoption of Whole House Solar + Battery Storage**

14 Events like the August 2020 rolling blackouts – in addition to power shutoff resiliency
15 – have underscored the added resiliency value of augmenting NEM solar systems with battery
16 storage. More than 50 percent of new NEM solar projects installed by some solar companies now
17 include battery storage.⁷⁷ Aggregation of RPS-eligible NEM solar + storage projects, to
18 maximize the value of these dispatchable battery storage systems, is also now occurring at the
19 state level.

⁷⁴ CAISO, 2021 Summer Loads and Resources Assessment, (May 12, 2021), Table 1, p. 5, available at <http://www.caiso.com/Documents/2021-Summer-Loads-and-Resources-Assessment.pdf>.

⁷⁵ CAISO, Curtailed and Non-Operational Generating Units, (June 17, 2021), available at <http://www.caiso.com/Documents/Curtailed-non-operational-generator-am-report-20210617.html>

⁷⁶ *Ibid.*

⁷⁷ Greentech Media, Sunrun Deploys Record Solar Capacity in Q4 as Battery Interest Increases (Feb. 27, 2020). “More than half of Q4 solar sales in the Bay Area included battery storage, CEO Lynn Jurich said in an interview Thursday.” See: <https://www.greentechmedia.com/articles/read/sunrun-q4-earnings-battery-resilience>. (Attachment 31)

1 A manageable number of utility customers live in extreme (Tier 3) HFTDs. In the case of
2 SDG&E, it has only 31,181 customer meters, out of 1.4 million, in Tier 3 HFTDs.⁷⁸ To put the
3 number of SDG&E customers in Tier 3 HFTDs in perspective, approximately 30,000 NEM solar
4 projects are completed in SDG&E service territory every year.⁷⁹ The utility has nearly \$2 billion
5 since 2007 on wildfire mitigation in its HFTDs, and plans to spend nearly \$4 billion more in
6 2021-2030. Much of the proposed \$4 billion wildfire mitigation expenditures could be avoided
7 by having all customers in the Tier 3 HFTD add solar and battery storage, and authorizing the
8 IOUs to conduct power shutoffs at their discretion.

9 This same approach is equally applicable to PG&E and SCE customers located in Tier 3
10 HFTDs. PG&E reports that it has 169,162 customers in Tier 3 HFTDs.⁸⁰ SCE reports it has
11 453,714 customers in HFTDs.⁸¹ Saturation deployment of NEM solar and batteries at these
12 customer sites would eliminate the need to fire harden the existing T&D systems in these Tier 3
13 HFTDs.

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⁷⁸ SDG&E 2020 WMP, Table 13, Appendix A, p. 21 (Total SDG&E customers = 1,287,181 (non-HFTD) + 172,896 (Tier 2 HFTD) + 31,181 (Tier 3 HFTD) = 1,491,258.).

⁷⁹ California Distributed Generation Statistics, Stats & Charts, accessed June 21, 2021: <https://www.californiadgstats.ca.gov/charts>.

⁸⁰ PG&E, 2020 Wildfire Mitigation Plan Section 3 Baseline Ignition Probability and Wildfire Risk Exposure, pp. 3-17 to 3-19: https://www.pge.com/pge_global/common/pdfs/safety/emergency-preparedness/naturaldisaster/wildfires/wildfire-mitigation-plan/2020-Wildfire-Safety-Plan. PG&E has a population of 29,274 living in HFTD tier 3 urban areas, 130,048 in HFTD tier 3 rural areas, and 9,840 living in HFTD tier 3 highly rural areas.

⁸¹ Southern California Edison 2020-2022 Wildfire Mitigation Plan, Appendix B, Table 13, pp. 24-25, <https://www.sce.com/sites/default/files/AEM/Wildfire%20Mitigation%20Plan/SCE's%202020-2022%20Wildfire%20Mitigation%20Plan%20-%20Revision%2003.pdf>. SCE has a population of 323,745 living in HFTD tier 3 urban areas, 92,195 living in HFTD tier 3 rural areas, and 37,774 living in HFTD tier 3 highly rural areas.

1 **IV. CONCLUSION**

2 Because the Commission already maintains numerous proceedings tackling the vast
3 majority of complicated technical issues brought under the scope of this emergency reliability
4 proceeding, and because those proceedings retain the expertise, the developed administrative
5 record and the capacity to evaluate the facts and sort through the hyperbole, the Commission
6 should not sow confusion and chaos by usurping those proceedings' issues and processes.
7 Instead, the Commission should assess whether the myriad changes and expansions to incentives
8 and programs that it has already ordered in D.21-02-028 and D.21-03-56 are effective in
9 reducing net demand or increasing net supplies. This proceeding should also focus on reforming
10 the market mechanisms that are resulting in higher prices for less reliability, as discussed above.

1 **ATTACHMENT A TO BILL POWERS TESTIMONY**

2 **ADDITION TO GENERAL ORDER 167-B adding**

3
4 **APPENDIX F – WHISTLEBLOWER PROTECTIONS**

5
6 **I. GENERAL OBLIGATION**

7 Each facility for the generation of electricity subject to this General Order 167
8 shall post in a prominent physical location, as well as an electronic notice on its
9 website where its employees are likely to see it, a notice containing the following
10 information:

11 **Report unsafe or unusual conditions to the Public Utilities Commission by**
12 **calling the whistleblower hotline at 1(800) 649-7570 or by e-mail to**
13 **safetyhotline@cpuc.ca.gov.**

14 Pursuant to California Public Utilities Code § 761.3, each facility used for the
15 generation of electricity owned by an electrical corporation or located in California
16 (Facility) shall be operated and maintained by its owner(s) and operator(s) in
17 accordance with the following standards:

- 18 1. Each Facility shall be operated and maintained in a safe, reliable and efficient
19 manner that reasonably protects the public health and safety of California
20 residents, businesses, employees, and the community.
- 21 2. Each Facility shall be operated and maintained so as to be reasonably
22 available to meet the demand for electricity, and promote electric supply
23 system reliability, in a manner consistent with prudent industry practice.
- 24 3. Each Facility shall comply with the protocols of the California Independent
25 System Operator for the scheduling of power plant outages.
- 26 4. [Reserved.]
- 27 5. Each Facility shall maintain reasonable logs of operations and maintenance
28 in

1 a manner consistent with prudent industry practice.

2 6. Each Facility shall be operated and maintained in a reasonable and prudent
3 manner consistent with industry standards while satisfying the legislative
4 finding that each facility is an essential facility providing a critical and
5 essential good to the California public.

6 Further, consistent with section 963(b)(3) of the California Public Utilities Code, it
7 is the policy of this State that California's energy utilities and the Commission's
8 regulation of natural gas utilities place safety of the public and the natural gas
9 utilities' employees as the top priority consistent with the principle of just and
10 reasonable cost-based rates. In addition, under section 961(e) of the California
11 Public Utilities Code, the Commission and energy utilities must provide
12 meaningful and ongoing opportunities for the utilities' workforce to participate in
13 the utilities' development of a plan for the safe and reliable operations of their
14 pipeline facilities and to contribute to developing an industry wide culture of
15 safety.

16 In view of the above policies, any employee of a facility for the generation of
17 electric energy or of an independent contractor working under contract, who in
18 good faith, believes that unsafe conditions, services or facilities of the utility
19 threaten the reliability of the facility or the health or safety of its patrons, the
20 employees or the public, has a right to report the conditions to the California Public
21 Utilities Commission. The employee can report the conditions by calling the
22 Commission's Whistleblower Hotline at 1(800) 649-7570, either anonymously or
23 by giving the employee's name, or by sending an e-mail with the pertinent facts
24 and/or documentation to safetyhotline@cpuc.ca.gov. This requirement shall be in
25 addition to any right the employee has to contact any other State or Federal agency,
26 if the employee has reasonable cause to believe that the information discloses a
27 violation of a state or federal statute, or a violation or noncompliance with a state
28 or federal rule or regulation.

29
30 **II. THE UTILITY HAS NO RIGHT TO RETALIATE AGAINST AN**
31 **EMPLOYEE FOR NOTIFYING THE CALIFORNIA PUBLIC UTILITIES**
32 **COMMISSION**

1 In addition to other statutes, which provide remedies for retaliation against
2 Whistleblowers (e.g., the California Whistleblower Act, California Labor Code §
3 1102.5), or any other remedy an employee may have in a court, the Commission
4 prohibits owners and operators of every facility for the generation of electricity
5 subject to this General Order 167 from retaliating against any employee, who
6 reports, in good faith, unsafe conditions to the Commission. For purposes of this
7 regulation, the Commission retains the option to impose penalties and any other
8 remedies provided under the California Public Utilities Code for any person or
9 entity which the Commission finds violates this regulation

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11 **[ADAPTED FROM GO 112-F]**

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