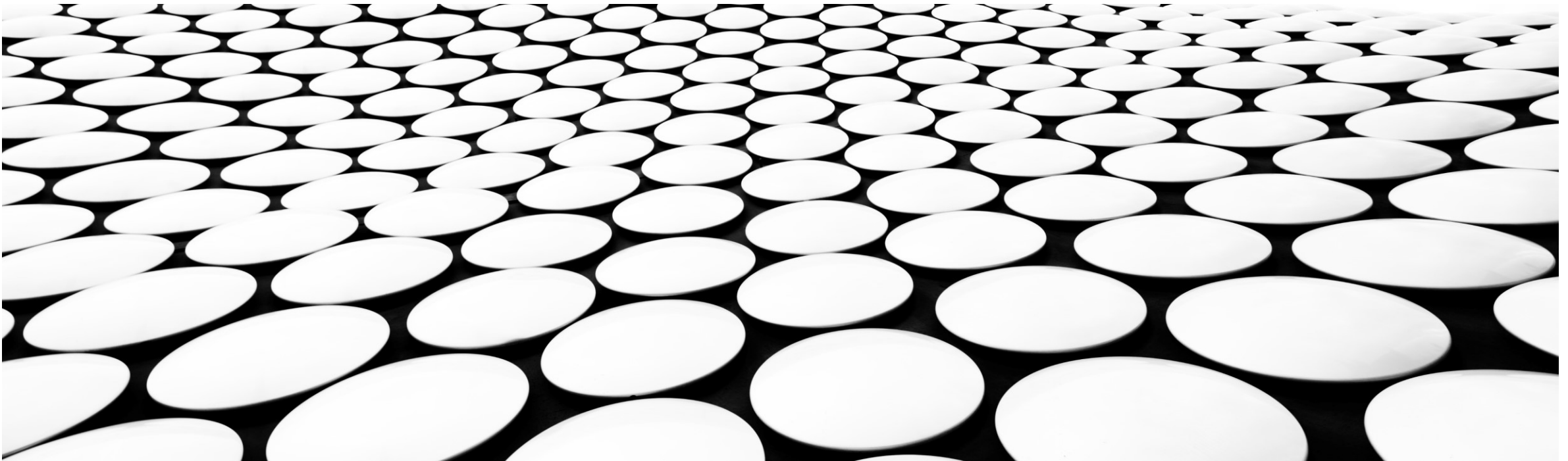

CALIFORNIANS FOR RENEWABLE ENERGY PROPOSED QUALIFYING FACILITY NET ENERGY METERING SUCCESSOR TO THE CURRENT NET ENERGY METERING TARIFF - MIKE BOYD

MARCH 23-24, 2021 WORKSHOP TO PRESENT AND DISCUSS PROPOSALS FOR THE SUCCESSOR TO THE CURRENT NET ENERGY METERING TARIFF



This proposal is for adopting avoided cost pricing tiered by energy generator type, and size, for Pacific Gas and Electric Company (“PG&E”); Southern California Edison Company (“SCE”), San Diego Gas and Electric Company (“SDG&E”) and other Load Serving Entities (“LSEs”) within the Commission’s jurisdictional authorities.

We request the Commission hold evidentiary hearings for the purposes of adopting avoided cost pricing tiered by energy generator type, and size, for Pacific Gas and Electric Company (“PG&E”); Southern California Edison Company (“SCE”), San Diego Gas and Electric Company (“SDG&E”) and other Load Serving Entities (“LSEs”) within the Commission’s jurisdictional authorities, after these entities have publicly released those factors identified in 18 C.F.R. § 292.304(e) for each type and size of energy resource.

What is PURPA?

- In 1978, Congress enacted the Public Utility Regulatory Policies Act ("PURPA") to reduce American dependence on fossil fuels, encourage renewable energy development, and promote increased energy efficiency. 16 U.S.C. § 824a-3
- PURPA aims to eliminate significant barriers to the development of alternative energy sources, including the reluctance of traditional electric utilities to purchase power from and sell power to non-traditional facilities and the financial burdens imposed upon alternative energy sources by state and federal utilities. *CARE v. CPUC*, 922 F.3d 929, 932 (9th Cir. 2019)
- Section 210 of PURPA requires large electric utilities to purchase energy from small power production QFs at standard-offer rates. 18 C.F.R. §§ 292.201, 292.203, 292.204. Small power QFs have a nameplate capacity of 80 megawatts ("MW") or less and produce electric power from biomass, waste, or renewable resources such as wind, water, or solar energy. 18 C.F.R. § 292.204(a), (b); 16 U.S.C. § 796(17)(A).

Compensation Rates for PURPA QF NEMs

- Rates must be "just and reasonable" to consumers, "in the public interest," and nondiscriminatory to the QF to "encourage" renewable energy development and allow small QFs to "become and remain viable suppliers of electricity." 18 C.F.R. § 292.304(a); 16 U.S.C. § 824a-3(a),
- Avoided costs are "the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source." 18 C.F.R. § 292.101(b)(6) (emphasis added).
- Capacity costs are those costs incurred from providing the capability to deliver energy, consisting primarily of the capital costs of energy storing facilities. FERC Order No. 69 at 12,216.
- Energy costs are costs associated with energy production, including operating and maintenance expenses. FERC Order No. 69 at 12,216.

CPUC NEM Website <http://cpuc.ca.gov/NEM/>

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Net Energy Metering (NEM)

For information on the California Public Utilities Commission's (CPUC) open NEM Successor Tariff (also known as NEM 2.0) Rulemaking [R.14-07-002](#), please visit this [page](#).

On August 27, 2020 the CPUC initiated a new NEM Revisit Rulemaking ([R.20-08-020](#)). As part of the new proceeding, the CPUC commissioned Energy and Environmental Economics (E3) to write a white paper on potential successors to the NEM 2.0 tariff. The white paper was released publicly on January 28, 2021. A workshop on the [white paper](#) was held on February 8, 2021. Slides used during the workshop are available [here](#) and a recording of the workshop is available [here](#).

To access the California Solar Consumer Protection Guide, please visit this [page](#).

To access information on the NEM 2.0 evaluation, please visit this [page](#).

Note: The content on this page applies only to NEM policy in Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) territories.

NEM Overview

Customers who install small solar, wind, biogas, and fuel cell generation facilities to serve all or a portion of onsite electricity needs are eligible for the state's net metering program. NEM allows customers who generate their own energy ("customer-generators") to serve their energy needs directly onsite and to receive a financial credit on their electric bills for any surplus energy fed back to their utility. Participation in the NEM does not limit a customer-generator's eligibility for any other rebate, incentive, or credit provided by an electric utility. More than 90% of all megawatts (MW) of customer-sited solar capacity interconnected to the grid in the three large investor-owned (IOU) territories (PG&E, SCE, and SDG&E) in California are on NEM tariffs.

The current NEM program was adopted by the CPUC in [Decision \(D.\)16-01-044](#) on January 28, 2016 and is available to customers of PG&E, SCE, and SDG&E. The

NEM Overview current tariff



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NEM Overview

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The current NEM program was adopted by the CPUC in [Decision \(D.\)16-01-044](#) on January 28, 2016 and is available to customers of PG&E, SCE, and SDG&E. The current NEM program went into effect in SDG&E's

CURRENT Net Surplus Compensation (NSC) rate is 2-3 ¢/kWh

Net Surplus Compensation and Renewable Energy Credits (RECs)

At the end of a customer's 12-month billing period, any balance of surplus electricity is trued-up at a separate fair market value, known as net surplus compensation (NSC). The NSC rate is based on a 12-month rolling average of the market rate for energy. That rate is currently approximately \$0.02 to \$0.03 per kWh (for up-to-date NSC data, follow these links: [PG&E](#), [SCE](#), [SDG&E](#)). This rate structure was established in Commission [Decision \(D\).11-06-016](#) pursuant to Assembly Bill (AB) 920 (Huffman, 2009). More information on the Commission's implementation of AB 920 can be found [here](#).

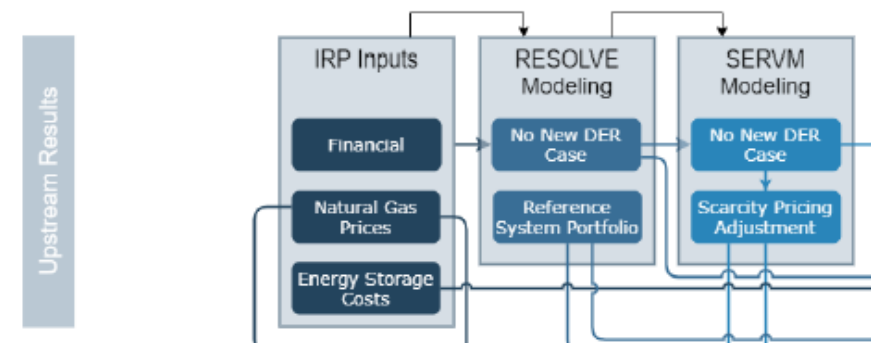
White Paper Avoided Cost Calculator (ACC) uses Fossil Fuel Powerplant Benchmark

Figure 2. Avoided Cost Calculator Structure

CPUC 2020 ACC Documentation

1 Introduction

Decision (D.)19-05-019 in the Integrated Distributed Energy Resources (IDER) proceeding, R.14-10-003, initiated a process to implement major and minor updates to the Avoided Cost Calculator (ACC) in 2020. This process culminated in a Staff Proposal (ACC Staff Proposal) for the 2020 ACC update that was adopted in D.20-04-010, issued April 24, 2020. The ACC determines the benefits of Distributed Energy Resources (DERs) such as energy efficiency and demand response. DER program cost-effectiveness analysis depends on the ACC to accurately determine the benefits they provide to the electric grid and natural gas system. The ACC determines several types of benefits including avoided generation capacity, energy, ancillary services, greenhouse (GHG) emissions, and transmission and distribution capacity.



CARE v CPUC, 922 F. 3d 929 (2019) found fossil fuel powerplants could not be used to calculate Avoided Costs for Renewables

In *CARE v CPUC*, 922 F. 3d 929 (2019) the Court panel observes at 937 “FERC reiterated that when a state has a requirement that utilities source energy from a particular type of generator, ‘generators with those characteristics constitute the sources that are relevant to the determination of the utility's avoided cost for that procurement requirement.’ Thus, where a state has an RPS and the utility is using a QF's energy to meet the RPS, the utility cannot calculate avoided costs based on energy sources that would not also meet the RPS.”

In *CARE v CPUC*, 922 F. 3d 929 (2019) at 938, the Court panel addressed capacity costs for QF NEMs

“A QF would not be entitled to capacity costs unless it actually displaced the utility's need for additional capacity. If a QF displaces the utility's need for additional capacity, however, the utility is required to include capacity costs as part of avoided costs.”

When setting the purchase price, QFs must be compensated at a rate equal to the utility's full avoided cost. 18 C.F.R. § 292.304(b)(2).

Responsibilities of State regulators under PURPA

State regulatory agencies have the responsibility of calculating avoided cost, but FERC has set forth factors that states should consider. 18 C.F.R. § 292.304(e). Those factors are:

- (1) the utility's system cost data;
- (2) the terms of any contract including the duration of the obligation;
- (3) the availability of capacity or energy from a QF during the system daily and seasonal peak periods;
- (4) the relationship of the availability of energy or capacity from the QF to the ability of the electric utility to avoid costs; and
- (5) the costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from the QF.

What is PG&E, SCE, and SDG&E System Cost Data??

Table B-2. Weighted Average RPS Procurement Expenditures
(Bundled Energy Only) for 2018 (¢/kWh)

	PG&E	SCE	SDG&E	Total
Biogas	0-3 MW	14.40	8.69	10.54
	+3-20 MW	11.91	6.72	7.37
	Biogas Total	12.45	7.84	8.86
Biomass	+3-20 MW	11.00	Only 1 Contract	11.11
	+20-50 MW	11.70	9.91	Only 1 Contract
	+50-200 MW	9.00		9.00
	Biomass Total	11.15	10.27	Only 1 Contract
Geothermal	+3-20 MW	9.00	6.32	7.54
	+20-50 MW		6.37	6.37
	+50-200 MW		8.75	8.75
	+200 MW	8.00	8.79	8.45
	Geothermal Total	8.06	7.80	0.00
Small Hydro	0-3 MW	8.17	8.46	13.11
	+3-20 MW	7.67	8.32	7.83
	+20-50 MW	7.74		7.74
	Small Hydro Total	7.80	8.38	13.11
Solar Photovoltaic	0-3 MW	12.48	12.85	12.00
	+3-20 MW	9.81	8.04	8.29
	+20-50 MW	15.37	11.33	13.90
	+50-200 MW	13.60	7.57	11.88
	+200 MW	15.46	12.48	13.89
Solar Thermal		13.82	10.45	11.74
Wind	+20-50 MW		10.41	10.41
	+50-200 MW	16.00	15.50	15.74
	+200 MW	20.01		20.01
	Solar Thermal Total	18.82	14.11	0.00
				17.35
UOG Small Hydro	0-3 MW	4.00	7.69	7.69
	+3-20 MW	6.33	5.43	7.50
	+20-50 MW	9.61	7.74	5.13
	+50-200 MW	8.14	9.53	7.29
	+200 MW	8.70	10.49	8.99
UOG Solar Photovoltaic	Wind Total	8.10	9.09	7.79
				8.61
Average of All Resources	0-3 MW	75.52	9.15	40.83
	+3-20 MW	19.81	8.42	17.03
	+20-50 MW	29.59	3.55	12.99
	UOG Small Hydro Total	23.97	6.50	0.00
Average of All Resources				17.80
Average of All Resources	0-3 MW	33.71	69.75	57.66
	+3-20 MW	21.26	62.32	24.74
	+20-50 MW	19.42		
	UOG Solar Photovoltaic Total	20.20	64.98	32.80
Average of All Resources				29.98
Average of All Resources	0-3 MW	12.24	9.57	10.05
	+3-20 MW			
	+20-50 MW			
	Average of All Resources	12.24	9.57	10.05

The three IOU's utility owned generation (UOG) Solar Photovoltaic system costs in (¢/kWh) for 0-3 MW systems was **33.71¢** for **PG&E**, **69.75¢** for **SCE**, and **57.66¢** for **SDG&E** respectively in 2018.

	PG&E	SCE	SDG&E	Total
UOG Small Hydro				
0-3 MW	75.52	9.15		40.83
+3-20 MW	19.81	8.42		17.03
+20-50 MW	29.59	3.55		12.99
UOG Small Hydro Total	23.97	6.50	0.00	17.80
UOG Solar Photovoltaic				
0-3 MW	33.71	69.75	57.66	64.92
+3-20 MW	21.26	62.32	24.74	35.55
+20-50 MW	19.42			19.42
UOG Solar Photovoltaic Total	20.20	64.98	32.80	29.98
Average of All Resources	12.24	9.57	10.05	10.65

Costs and Cost Savings for the RPS Program

May 2019 | 20

Source 2019 Padilla Report at page 20:

[https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/Office_of_Governmental_Affairs/Legislation/2019/Padilla%20Report%202019%20-%20Final\(1\).pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/About_Us/Organization/Divisions/Office_of_Governmental_Affairs/Legislation/2019/Padilla%20Report%202019%20-%20Final(1).pdf)

QF NEM proposal would provide a successor to the net energy metering tariff to enhance consumer protection measures for customer-generators during system emergencies

Access to net energy metering services under PURPA regulations [18 C.F.R. §292.101(b)] defining what constitutes a system emergency, supplemental power, back-up power, interruptible power, and maintenance power for all QFs.

4) System emergency means a condition on a utility's system which is likely to result in imminent significant disruption of service to customers or is imminently likely to endanger life or property.

(8) Supplementary power means electric energy or capacity supplied by an electric utility, regularly used by a qualifying facility in addition to that which the facility generates itself.

(9) Back-up power means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.

(10) Interruptible power means electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions.

(11) Maintenance power means electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility.

Costs and Benefits of NEM under current Tariff compared to Proposed QF NEM Tariff

Current NEM

Avoided Cost based on market price indexed to fossil fuel

Net Surplus [energy only] at annual true-up 2 – 3 ¢ per kW

No protections during system emergencies

Proposed QF NEM

Avoided Cost based on IOU's System Cost indexed to renewables

Full Avoided Cost based on IOU's Solar Photovoltaic system costs in (¢/kWh) for 0-3 MW systems was **33.71¢ for **PG&E**, **69.75¢** for **SCE**, and **57.66¢** for **SDG&E** respectively in 2018.***

Supplemental power, back-up power, interruptible power, and maintenance power for all QFs

***TBD following evidentiary hearings pursuant to QF NEM proposal.**