

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



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Order Instituting Rulemaking to Continue
Implementation and Administration, and
Consider Further Development, of California
Renewables Portfolio Standard Program.

Rulemaking 15-02-020
(Filed February 26, 2015)

**2016 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN
OF MARIN CLEAN ENERGY**

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Dated: August 8, 2016

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I. INTRODUCTION

In accordance with the California Public Utilities Commission’s (“Commission”) May 17, 2016 *Assigned Commissioner and Assigned Administrative Law Judge’s Ruling Identifying Issues and Schedule of Review for 2016 Renewables Portfolio Standard Procurement Plans* (“ACR”), and the June 8, 2016 *Email Ruling Granting, In Part, IOUs Request for an Extension of Time to Produce the 2016 RPS Procurement Plans*, Marin Clean Energy (“MCE” or “Agency”) hereby submits this 2016 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in ACR sections 6.1-6.5, 6.7, 6.8, and 6.12-6.14. MCE notes that certain issues and requests in these ACR sections apply to electrical corporations and electric service providers, but do not extend to Community Choice Aggregators (“CCAs”). MCE is nevertheless voluntarily providing responses to these ACR sections in the interest of transparency and in order to collaborate with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR, however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”) 350, as well as components of Commission decisions and rulings on RPS Procurement Plan

submittals, do not extend to CCAs, and MCE reserves the right to challenge any such assertion of jurisdiction over these matters.

MCE is California's first CCA program, which commenced customer service on May 7, 2010. Since that time, MCE's membership has grown and currently comprises the entirety of Marin County and Napa County, as well as the Cities of Richmond, Benicia, El Cerrito, San Pablo, Walnut Creek, and Lafayette. Following an upcoming customer enrollment, which is scheduled to occur in September 2016, MCE will serve approximately 260,000 residential and commercial customers within the aforementioned communities; MCE's annual retail sales will subsequently increase to approximately 3,000 gigawatt hours. The Commission is aware of MCE's ongoing expansion, having certified MCE's most recent Revised Implementation Plan and Statement of Intent Addendum No. 4 ("Addendum No. 4), which addressed the previously described expansion activities and related consequences, on May 6, 2016.¹

MCE is governed by a board of 18 locally elected officials, who set policy for the Agency and oversee general operations. MCE's governing board generally convenes on a monthly basis with appropriate public noticing occurring in advance of such meetings. MCE also maintains certain standing committees, which meet publicly to discuss MCE administration and operations.

Since its inception in December 2008, MCE has operated with the primary purpose of increasing clean energy sources for its customers. Consistent with this purpose, MCE has consistently exceeded statewide RPS procurement mandates and has substantiated this

¹ MCE's Addendum No. 4 was submitted to the Commission on April 22, 2016. Addendum No. 4 addressed expansion to the cities of American Canyon, Calistoga, Lafayette, Napa, Saint Helena, Walnut Creek and Yountville. The Commission subsequently certified Addendum No. 4 on May 6, 2016.

commitment through its planning and procurement decisions as well as participation in California's RPS compliance program.

MCE also maintains an Integrated Resource Plan, which addresses resource planning and procurement over a forward-looking, 10-year period. MCE's Integrated Resource Plan is annually updated and adopted by its governing board, memorializing the evolving policies and resource preferences of the Agency. In its most recent Integrated Resource Plan, which was adopted by the Agency's governing board on October 15, 2015, MCE indicated its intent to pursue a 95% carbon-free supply portfolio by 2025 (with 80% of MCE's 2025 supply portfolio sourced from renewable resources).² While not specifically addressed in its Integrated Resource Plan, MCE expects that similar clean energy procurement targets will persist over the 20-year planning horizon.

II. RPS PROCUREMENT PLAN

6.1. Assessment of RPS Portfolio Supplies and Demand - § 399.13(a)(5)(A)

MCE expects to meet or exceed applicable RPS compliance obligations for the 2014-2016 compliance period (Compliance Period 2). MCE also projects that it will meet or exceed applicable RPS procurement obligations over a twenty-year timeframe, though the exact characteristics of MCE's supply portfolio may vary over time, depending on market developments, policy changes, technological improvements, Agency preferences, and/or other factors.

To manage this future uncertainty, MCE examines and estimates customer demand, and structures its procurement efforts to balance customer demand with resource commitments. MCE also considers the deliverability characteristics of its resources (including the expected delivery profile, available capacity and dispatchability attributes, if any, associated with each generating

² MCE will continue to procure 100% renewable energy on behalf of customers participating in MCE's voluntary Deep Green and Local Sol service options.

resource and/or supply agreement) and reviews the respective risks associated with short- and long-term purchases as part of its forecasting and procurement processes. This process and related projections are discussed within MCE's aforementioned Integrated Resource Plan, which is annually updated and adopted by the Agency's governing board. The Integrated Resource Plan provides a great deal of information regarding MCE's resource planning policies and procurement practices as well as projected operations over a 10-year planning horizon.

Within this document, MCE describes its evolving resources preferences and the manner in which it will advance the Agency's clean energy goals and objectives through ongoing procurement and program administration. These efforts will lead to a more diverse resource mix, address grid integration issues, and provide value to the local community. A quantitative description of this forecast is attached to this RPS Procurement Plan in Appendix A.

6.2. Project Development Status Update - § 399.13(a)(5)(D)

As of the date of this RPS Procurement Plan, MCE has entered into three utility-scale contracts with eligible renewable energy resources that are not yet commercially operational. Furthermore, certain of MCE's Feed-In Tariff projects, which are being developed by third parties, are currently involved with development and construction activities with commercial operation expected to occur within the upcoming 12-24 months.

With regard to MCE's utility-scale renewable energy contracts that will support RPS compliance and voluntary, internally focused renewable energy procurement targets, there are currently three projects that are under active development or have recently achieved commercial operation. These utility-scale projects are:

Facility	Type	MW	Location	Status
RE Mustang	Solar PV	30	Fresno County	COD achieved. Deliveries to MCE begin 01/18
Redwood Landfill	Landfill Gas-to-Energy	4	Novato, CA	Expected COD 02/17
MCE Solar One	Solar PV	10.5	Richmond, CA	Expected COD 2017

6.3. Potential Compliance Delays - § 399.13(a)(5)(B)

MCE currently significantly exceeds applicable RPS requirements, with more than 51% renewable energy purchased and retired for use in the 2015 compliance year. MCE does not anticipate any compliance delays for the 2014-2016 compliance period.

6.4. Risk Assessment - § 399.13(a)(5)(F)

MCE does not anticipate any specific risk associated with the development and construction of the eligible renewable energy resources that will be used to fulfill MCE’s existing contractual commitments. With regard to future contractual commitments that MCE may make with additional eligible renewable energy resources, MCE acknowledges the possibility that anticipated electric energy deliveries associated with such contracts may not be delivered as planned. As noted in § 399.13(a)(5)(A), and the ACR, generation variability and resource availability may impact the amount of future electricity delivered. MCE considers this potential risk in its forecasting practices and during procurement review and decision-making.

6.5. Quantitative Information - §§ 399.13(a)(5)(A), (B), (D) and (F)

MCE has provided a quantitative assessment to support the qualitative descriptions provided in this Procurement Plan, which is attached as Appendix A.

**6.7. Bid Solicitation Protocol, Including Least-Cost Best Fit Methodologies
- § 399.13(a)(5)(C) and D.04-07-029**

Since MCE's governing board is comprised of local elected officials, solicitation and procurement decisions are overseen by elected representatives of MCE's member communities, and are designed to comply with locally established targets (that explicitly exceed applicable RPS requirements and promote the development of locally situated renewable generating facilities). MCE conducts bid solicitations designed for purposes of identifying requisite energy and capacity products. Such solicitation processes address a broad range of considerations, including pricing, MCE's need for eligible renewable energy resources, generating capacity, locational preferences, and required online dates.

6.8. Consideration of Price Adjustment Mechanisms - § 399.13(a)(5)(E)

Consistent with SB 350, MCE is evaluating the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index.

6.12. Important Changes to Plans Noted

As CCAs were not previously required to submit RPS Procurement Plans,³ there is no prior plan from which to identify and summarize changes.

6.13. Redlined Copy of Plans Required

As CCAs were not previously required to submit RPS Procurement Plans,⁴ there is no redlined plan to attach.

³ See ACR at 7 (summarizing SB 350's new requirements for CCAs).

⁴ *Id.*

6.14. Safety Considerations

MCE holds safety as a top priority. Presently, MCE does not own, operate, or control generating facilities, so there are no present safety considerations to report.

Respectfully submitted,

/s/ Elizabeth Kelly

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Dated: August 8, 2016

VERIFICATION

I, Elizabeth Kelly, am authorized to make this Verification on behalf of Marin Clean Energy. I declare under penalty of perjury that the statements in the foregoing 2016 Renewables Portfolio Standard Procurement Plan are true of my own knowledge, except as to matters which are therein stated on information or belief, and as to those matters I believe them to be true.

Executed on August 8, 2016, at San Rafael, California.



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APPENDIX A

Variable	Calculation	Item	Deficit from RPS prior to Reporting Year	2011 Actuals	2012 Actuals	2013 Actuals	2011-2013	2014 Actuals	2015 Actuals	2016 Forecast	2014-2016
		Forecast Year		-	-	-	CP1	-	-	-	CP2
Annual RPS Requirement											
A		Bundled Retail Sales Forecast (LTPP)		185	570	1,110	1,866	1,255	1,695	2,147	5,097
B		RPS Procurement Quantity Requirement (%)		20.0%	20.0%	20.0%	20.0%	21.7%	23.3%	25.0%	23.3%
C	A*B	Gross RPS Procurement Quantity Requirement (GWh)		37	114	222	373	272	395	537	1,204
D		Voluntary Margin of Over-procurement (per MCE's adopted Integrated Resource Plan)		14	52	142	209	374	471	537	1,382
E	C+D	Net RPS Procurement Need (GWh; reflects MCE's internally adopted renewable energy procurement target, including the RPS PQR - Variable C)		52	167	364	582	647	866	1,073	2,586
RPS-Eligible Procurement											
Fa		Risk-Adjusted RECs from Online Generation		52	167	364	582	647	866	1,227	2,740
Faa		Forecast Failure Rate for Online Generation (%)		-	-	-	-	-	-	-	-
Fb		Risk-Adjusted RECs from RPS Facilities in Development		-	-	-	-	-	-	-	-
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)		-	-	-	-	-	-	-	-
Fc		Pre-Approved Generic RECs		-	-	-	-	-	-	-	-
Fd		Executed REC Sales		-	-	-	-	-	-	-	-
F	Fa + Fb + Fc - Fd	Total RPS Eligible Procurement (GWh)		52	167	364	582	647	866	1,227	2,740
F0		Category 0 RECs		39	39	93	171	-	-	-	-
F1		Category 1 RECs		6	70	115	190	172	468	848	1,487
F2		Category 2 RECs		6	33	62	101	120	165	311	596
F3		Category 3 RECs		-	25	95	120	355	234	68	656
Gross RPS Position (Physical Net Short)											
Ga	F-E	Annual Gross RPS Position (GWh)		-	-	-	-	-	-	154	154
Gb	F/A	Annual Gross RPS Position (%)		27.8%	29.2%	32.8%	31.2%	51.5%	51.1%	57.2%	53.8%
Application of Bank											
Ha	H - Hc (from previous year)	Existing Banked RECs above the PQR		-	-	-	-	-	-	-	-
Hb		RECs above the PQR added to Bank		-	-	-	-	-	-	-	-
Hc		Non-bankable RECs above the PQR		-	-	-	-	-	-	-	-
H	Ha+Hb	Gross Balance of RECs above the PQR		-	-	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance		-	-	-	-	-	-	-	-
Ib		Planned Sales of RECs above the PQR		-	-	-	-	-	-	-	-
J	H-Ia-Ib	Net Balance of RECs above the PQR		-	-	-	-	-	-	-	-
J0		Category 0 RECs		-	-	-	-	-	-	-	-
J1		Category 1 RECs		-	-	-	-	-	-	-	-
J2		Category 2 RECs		-	-	-	-	-	-	-	-
Expiring Contracts											
K		RECs from Expiring RPS Contracts		52	162	328	541	585	770	1,099	2,454
Net RPS Position (Optimized Net Short)											
La	Ga + Ia - Ib - Hc	Annual Net RPS Position after Bank Optimization (GWh)		-	-	-	-	-	-	154	154
Lb	(F + Ia - Ib - Hc)/A	Annual Net RPS Position after Bank Optimization (%)		27.8%	29.2%	32.8%	31.2%	51.5%	51.1%	57.2%	53.8%

2017 Forecast	2018 Forecast	2019 Forecast	2020 Forecast	2017-2020	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast	2030 Forecast	2031 Forecast	2032 Forecast	2033 Forecast	2034 Forecast	2035 Forecast
-	-	-	-	CP3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,833	2,826	2,819	2,812	11,290	2,806	2,799	2,792	2,786	2,779	2,793	2,807	2,821	2,835	2,850	2,864	2,878	2,893	2,907	2,922
27.0%	29.0%	31.0%	33.0%	33.0%	34.7%	36.4%	38.1%	39.8%	41.5%	43.2%	44.9%	46.6%	48.3%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
765	820	874	928	3,386	974	1,019	1,064	1,109	1,153	1,207	1,260	1,315	1,370	1,425	1,432	1,439	1,446	1,454	1,461
746	782	818	853	3,198	897	940	984	1,027	1,070	1,028	985	942	899	855	859	863	868	872	876
1,511	1,601	1,691	1,781	6,585	1,870	1,959	2,048	2,136	2,224	2,235	2,246	2,257	2,268	2,280	2,291	2,303	2,314	2,326	2,337
985	760	403	283	2,431	288	288	288	288	288	288	288	288	288	288	288	288	288	288	288
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	140	140	140	470	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,035	900	543	423	2,901	428	428	428	428	428	428	428	428	428	428	428	428	428	428	428
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
850	825	418	423	2,516	428	428	428	428	428	428	428	428	428	428	428	428	428	428	428
95	75	125	-	295	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(476)	(701)	(1,149)	(1,358)	(3,684)	(1,442)	(1,531)	(1,620)	(1,708)	(1,795)	(1,807)	(1,818)	(1,829)	(1,840)	(1,852)	(1,863)	(1,874)	(1,886)	(1,897)	(1,909)
36.5%	31.9%	19.2%	15.0%	25.7%	15.3%	15.3%	15.3%	15.4%	15.4%	15.3%	15.3%	15.2%	15.1%	15.0%	15.0%	14.9%	14.8%	14.7%	14.7%
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
784	558	200	81	1,623	70	70	70	70	-	-	-	-	-	-	-	-	-	-	-
(476)	(701)	(1,149)	(1,358)	(3,684)	(1,442)	(1,531)	(1,620)	(1,708)	(1,795)	(1,807)	(1,818)	(1,829)	(1,840)	(1,852)	(1,863)	(1,874)	(1,886)	(1,897)	(1,909)
36.5%	31.9%	19.2%	15.0%	25.7%	15.3%	15.3%	15.3%	15.4%	15.4%	15.3%	15.3%	15.2%	15.1%	15.0%	15.0%	14.9%	14.8%	14.7%	14.7%

Facility Name	Technology	Contract Expiration Date
Portfolio RPS Sale, no specific facility (seller: OneEnergy)	Varies	2013
Portfolio RPS Sale, no specific facility (seller: OneEnergy)	Wind	2013
Middle Fork Irrigation District - Hydro system	Small Hydro	2014
Wild Horse	Wind	2014
Calpine Geysers	Geothermal	2014
Portfolio RPS Sale, no specific facility (seller: Shell Energy North America)	Varies	2015
Portfolio RPS Sale, no specific facility (seller: Shell Energy North America)	Varies	2015
Portfolio RPS Sale, no specific facility (seller: Shell Energy North America)	Varies	2015
Portfolio RPS Sale, no specific facility (seller: 3Degrees)	Wind and Biomass	2015
Portfolio RPS Sale, no specific facility (seller: OneEnergy)	Wind	2015
Portfolio RPS Sale (seller: Exelon): Alta 10 and White Creek Wind 1	Wind	2015
Calpine Geysers	Geothermal	2015
Portfolio RPS Sale, no specific facility (seller: DirectEnergy)	Small Hydro	2015
Portfolio RPS Sale (seller: 3Phases): Cedar Creek	Wind	2015
Portfolio RPS Sale (seller: Cedar Creek RECs LLC): Meadow Creek Wind Farm	Wind	2015
Rising Tree Wind Farm	Wind	2015
Portfolio RPS Sale, no specific facility (seller: Shell Energy North America)	Varies	2016
Parrey, LLC - Generator TBD	PV Solar	2016
3Phases	TBD	2016
Portland General	TBD	2016
Portfolio RPS Sale, multiple facilities (seller: Los Angeles County)	Biogas	2017
Kansas	PV Solar	2017
Portfolio RPS Sale, no specific facility (seller: Powerex)	Wind	2017
3Phases	TBD	2017
Rising Tree Wind Farm	Wind	2018
Shiloh 1 Wind Project	Wind	2018
Portfolio RPS Sale, no specific facility (seller: Powerex)	Wind	2019
Pardee and Camanche Reservoirs (seller: East Bay MUD)	Small Hydro	2025

MW	Expected Annual Generation (GWh)	Location	PCC Classification
NA	26.25	Seller's discretion (w/in WECC)	PCC3
NA	25	Seller's discretion (w/in WECC)	PCC3
NA	10.5	Hood River, Oregon	PCC3
NA	195	Kittitas, Washington	PCC3
NA	25	Sonoma, California	PCC1
NA	32.519	Seller's discretion (w/in WECC)	PCCO - Grandfathered
NA	8.579	Seller's discretion (w/in WECC)	PCC1, PCC2
NA	41	Seller's discretion (w/in WECC)	PCC1, PCC2
NA	19	Oregon and Idaho	PCC3
NA	150	Seller's discretion (w/in WECC)	PCC3
NA	55	Kern, California and Klickitat, Washington	PCC2
NA	27.244	Sonoma, California	PCC1
NA	50	Riverside and Los Angeles, California	PCC1
NA	50	Weld, Colorado	PCC2
NA	125	Bonneville, Idaho	PCC3
NA	2.676	Kern, California	PCC3
NA	42.2	Seller's discretion (w/in WECC)	PCC1, PCC2
TBD	60	California	PCC1
NA	140	TBD	PCC2
NA	120	TBD	PCC2
NA	79	Los Angeles, California	PCC3
	20	56 Kings, California	PCC1
NA	60	TBD	PCC1
NA	70	TBD	PCC2
	100	300 Kern, California	PCC1
	25	62.7 Solano County, California	PCC1
NA	75	TBD	PCC2
	34	120 Valley Springs and Clements, California	PCC1