



**BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT**

375 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

AGENDA

Sustainability/Energy Committee

Tuesday, May 28, 2013

9:15 a.m.

Training Resource Center

(Committee Members: Directors Linney {Chair}, Foulkes, and Katz)

ROLL CALL:

PUBLIC COMMENT: The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

DETERMINATION AND DISCUSSION:

1. Energy Supply Options for EBMUD Facilities in the City of Richmond (Wallis)
2. Briones In-Conduit Hydro-Generation Project (Wallis)

ADJOURNMENT:

Disability Notice

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Document Availability

Materials related to an item on this Agenda that have been submitted to the EBMUD Board of Directors within 72 hours prior to this meeting are available for public inspection in EBMUD's Office of the Secretary at 375 11th Street, Oakland, California, during normal business hours.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 23, 2013

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Michael J. Wallis, Director of Operations and Maintenance *MJW*

SUBJECT: Energy Supply Options for EBMUD Facilities in the City of Richmond

INTRODUCTION

On June 19, 2012, the City of Richmond voted to join Marin Clean Energy (MCE) and offer Richmond residents and businesses two alternatives to PG&E for their electric supply: a Light Green option (50 percent renewable) and a Dark Green option (100 percent renewable). The City's program, as required by state law, automatically switches each ratepayers' service to MCE and enrolls them in the Light Green option unless a ratepayer proactively chooses to continue electric service with PG&E. In April 2013, MCE sent out the first of five notices to Richmond electric service ratepayers, giving them a choice to opt-out of MCE and continue electric service with PG&E. The District has 30 water and wastewater facilities in the City of Richmond that received these notices and the District must notify the City by July 1, 2013 if it intends to opt-out of MCE service for any of these facilities. Staff will provide an update on this issue at the May 28th Sustainability/Energy Committee meeting.

SUMMARY

The District has completed an analysis of its accounts in the City of Richmond to compare MCE's two options to PG&E. Based on the analysis summarized in the attached table, staff intends to switch 28 of the 30 accounts to MCE (Light Green option) effective July 1, 2013. This will reduce the cost of energy by \$8,000 per year and increase the percentage of renewable energy. This maintains approximately the same Greenhouse Gas (GHG) emissions as energy supplied from PG&E, and MCE plans to invest in local renewable energy projects. Switching the remaining two Richmond accounts to MCE would increase energy costs by \$6,200 per year.

DISCUSSION

MCE is California's first Community Choice Aggregation program and is administered by the not-for-profit agency Marin Energy Authority. MCE offers electric customers greener energy alternatives to PG&E: a 50 percent renewable energy option (Light Green) and a 100 percent renewable energy option (Deep Green) based on renewable energy supplies that meet California's Renewable Portfolio Standards (RPS). PG&E's energy is 19 percent renewable

based on eligible renewable energy sources and 59 percent GHG free based on both eligible and non-eligible renewable energy supplies. Non-eligible sources include large hydropower and nuclear sources, which do not count towards the State's RPS.

The emissions factor (i.e., the GHG emissions per kilowatt-hour) is nearly identical between MCE's Light Green option and PG&E. MCE gives rebates to its customers from proceeds collected from their public benefits charge and has future plans to invest in local renewable energy projects.

Staff recommends retaining PG&E service for two facilities, the Moyers Pumping Plant and the Point Isabel Wet Weather Treatment Plant. These facilities are enrolled in PG&E's Peak Day Pricing program, and receive a discount on the cost of electricity by avoiding operation of those facilities during peak energy use days, which occur 9 to 15 times a year.

MCE's Deep Green Program is an option that ratepayers can choose, but are not required to consider or to opt-out of receiving. Purchasing electric service from MCE's Deep Green Program for all 30 accounts would increase District expenses by about \$50,000 per year.

FISCAL IMPACT

Staff estimates that switching 28 of the 30 facilities to MCE Light Green will save the District approximately \$8,000 or 1 percent of the cost currently paid for electric service.

NEXT STEPS

If the District does not opt-out of service for one or more of its electric service accounts in Richmond before July 1, the District's 30 electric accounts for water and wastewater facilities will be automatically enrolled in MCE's Light Green option and will start receiving electricity from MCE in July. Through August, the District would have two more opportunities to opt-out of accounts without paying an opt-out fee (\$25 per account). If the District chooses to opt-out during this initial period, the District can return to MCE at any time at no penalty or costs.

As electric rates change, staff will review the cost for electric service in the context of the District's sustainability policy and choose the most appropriate service option for the District.

ARC:MJW:ss

COMPARISON BETWEEN PG&E AND MARIN CLEAN ENERGY						
District Water/WW Facility in City of Richmond	PG&E		MCE Light Green Product		MCE Deep Green Product	
	Annual Cost	GHG Emissions (lbs of CO2)	Annual Cost	GHG Emissions (lbs of CO2)	Annual Cost	GHG Emissions (lbs of CO2)
1. Pt Isabel WWTP	\$190,000	480,000	\$192,425	475,000	\$204,285	0
2. Moyers PP	\$93,000	245,200	96,760	242,730	\$103,125	0
3. North Richmond WRP	\$349,000	1,185,540	\$342,650	1,173,770	\$372,060	0
4. Shawn PP	\$5,100	13,560	\$4,897	13,420	\$5,242	0
5. Tewksbury PP	\$6,200	176,201	\$5,953	17,030	\$6,391	0
6. Pearl PP	\$2,700	6,624	\$2,583	6,558	\$2,757	0
7. Castro PP	\$9,000	24,816	\$8,642	24,569	\$9,274	0
8. Nicholl Knob PP	\$3,000	7,438	\$2,881	7,364	\$3,070	0
9. Potrero RCS	\$248	268	\$243	266	\$250	0
10. Road 24 Reservoir	\$316	413	\$309	409	\$320	0
11. Hilltop CPS	\$170	142	\$167	140	\$171	0
12. Patterson CPS	\$170	142	\$167	140	\$171	0
13. Hensley CPS	\$170	142	\$167	140	\$171	0
14. W Cutting CPS	\$170	142	\$167	140	\$171	0
15. Harbour CPS	\$170	142	\$167	140	\$171	0
16. Burlingame CPS	\$170	142	\$167	140	\$171	0
17. N Service Yard	\$1,175	2,240	\$1,149	2,217	\$1,206	0
18. Tewksbury Reservoir	\$319	488	\$212	483	\$324	0
19. Shawn Reservoir	\$115	19	\$114	18	\$116	0
20. Pearl Reservoir	\$3,582	7,638	\$3,503	7,562	\$3,697	0
21. North Reservoir	\$1,339	2,751	\$1,309	2,724	\$1,379	0
22. Castro Gradient	\$131	51	\$128	50	\$133	0
23. Potrero Reservoir	\$134	59	\$131	58	\$136	0
24. Nicholl Knob Reservoir	\$212	228	\$206	226	\$214	0
25. N Service Yard bldg	\$14,840	34,025	\$14,512	33,687	\$15,378	0
26. Parkside CPS	\$170	142	\$167	140	\$171	0
27. Santa Rita CPS	\$170	142	\$167	140	\$171	0
28. S 8 th St CPS	\$170	142	\$167	140	\$171	0
29. Chevron Rev Meter	\$162	123	\$159	122	\$163	0
30. Garrard CPS	\$170	142	\$167	140	\$171	0
TOTAL	\$682,273	2,189,102	\$680,436	2,009,663	\$731,230	0

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: May 23, 2013

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Michael J. Wallis, Director of Operations and Maintenance *MJW*

SUBJECT: Briones In-Conduit Hydro-Generation Project

INTRODUCTION

The District operates Briones Reservoir as a pumped storage system to meet peak water demands. During winter months, Mokelumne water is pumped into Briones Reservoir. During higher demand months, water from the reservoir is returned to the system. The District has studied installing an in-conduit hydro generation system to capture the energy from Briones Reservoir when the water is returned to the system. Staff will provide an update on this project at the May 28th Sustainability/Energy Committee meeting.

SUMMARY

This project represents a cost-effective alternative, subject to qualification for grants, to produce renewable energy and can be accomplished within the FY14/15 budget. The project would recover wasted energy and produce 1,100 MWh annually, and reduce greenhouse gas (GHG) emissions by 216 tons of CO₂ per year. Staff plans to initiate the design for the project in January 2014. Final design is scheduled to be completed by November 2014 and be eligible for the State's Self Generation Incentive Program (SGIP) in 2015. This project complies with Policy 7.07 Renewal Energy.

DISCUSSION

In 2012, net-energy metering and the SGIP were expanded by California Public Utilities Commission to include in-conduit hydropower projects. In addition, the California Energy Commission (CEC) reduced their Energy Conservation Assistance Act loan rate to 1 percent for financing of energy generation projects. These changes improved the economics of the Briones in-conduit hydro generation project and staff resumed investigating the project. As part of the investigation, the District contracted with NLine Energy Inc. to complete a feasibility analysis. The analysis found the Briones site could support a 600 kilowatt generation facility, generating 1,100 MWh annually, which would lower GHG emissions by 216 tons of CO₂ per year.

The CEC offers 100 percent financed low interest loans for projects that have a payback period of 13 years or less. The Briones project, which has a payback period of greater than 13 years, may be eligible for partial financing. The project would have a 15 to 27 year simple payback period with an SGIP grant, and a 16 and 36 year simple payback period without the SGIP grant. The CEC low interest loan program currently does not have funding available for financing new loans but as existing loans are paid back, money will be made available for new loan applicants. The CEC estimates that funds for new loans will be available in late 2014.

In 2006, the District was granted a Federal Energy Regulatory Commission (FERC) exemption from licensing requirements for this project. However, at the time, the project was not cost effective and was placed on hold pending more favorable market conditions. In January 2013, FERC sent a letter to the District asking for details on the progress of the project and gave the District an option to request an extension of time for the exemption which was expiring. In February 2013, the District responded to FERC requesting an extension until December 2016 but has not heard back from FERC.

FISCAL IMPACT

The feasibility analysis estimated a project cost between \$1.4 and \$1.8 million. The project is eligible for an SGIP grant which could fund up to \$470,000 of the project based on the estimated capacity of the system. Half of the SGIP grant would be paid after the completion of the project and the other half would be paid based on the actual performance of the project during the first five years of operation. The District will need to finance \$1.2 to \$1.3 million, with a portion of the project cost offset from SGIP grants. The annual energy savings from reduced energy use is estimated to be between \$50,000 and \$85,000 per year from generation.

ARC:MJW:ss