



**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, February 28, 2017
8:45 a.m.
Training Resource Center**

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

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 Source Costs and Greenhouse Gas Emissions (Wallis)
2. Drinking Water Bottle Filling Stations (X. Irias)
3. Greenhouse Gas Emissions Associated with Employee Commuting (Wallis)

ADJOURNMENT:

Disability Notice

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Document Availability

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 23, 2017

MEMO TO: Board of Directors

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

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

SUBJECT: Energy Source Costs and Greenhouse Gas Emissions

INTRODUCTION

The District manages its energy use to reduce greenhouse gas (GHG) emissions, minimize reliance on fossil fuels, provide reliable energy sources, reduce energy costs, and support the District's goal to be carbon-free for indirect emissions pursuant to Policy 7.07. Annually, the District conducts an audit of all GHG emissions and has met its goals towards being carbon-free every year. This memo addresses the costs and GHG from all the energy sources and how the District selects an energy provider for its accounts. This information will be presented at the February 28, 2017 Sustainability/Energy Committee meeting.

SUMMARY

As noted in the table below, the District has 565 electrical service accounts including 50 accounts with Marin Clean Energy (MCE). The District routinely reviews its Pacific Gas and Electric (PG&E) accounts for opportunities to receive the lowest cost tariff and explore opportunities to switch to a cost-effective MCE account with a lower GHG emission factor, consistent with Policy 7.07. As noted in the July 21, 2016 memo to the Board of Directors on annual GHG emission, the District continues to make progress toward meeting its 2040 goal to be carbon free.

Energy Suppliers	Number of Accounts	Emissions Factor(2014) lbs CO ₂ e/MWh	Average Unit Cost (\$/kWh)	Cost Range (\$/kWh)
PG&E	508	412	\$ 0.16	\$0.12- \$0.45
WAPA	6	492	\$ 0.10	\$0.10
MCE (Deep Green)	24	0	\$ 0.18	\$0.13 - \$0.46
MCE (Light Green)	26	334	\$ 0.17	\$0.12- \$0.45
SMUD	1	522	\$ 0.12	\$0.12

DISCUSSION

Criteria for Moving Electrical Accounts to Community Choice Aggregation (CCA) Supplied Electricity

Any CCA eligible account that is determined to have a lower cost of service compared to PG&E will be switched to CCA electric service. However, if the District has not met its annual GHG goals, the decision to switch to CCA supplied power will additionally be based on the quantity of GHG needed to be offset to meet the District goals, and the lowest cost GHG emissions offsets which include CCA power, Renewable Energy Credits, renewable energy projects, and energy conservation.

Status of Alameda County CCA

The Alameda County (County) CCA has formed a Joint Powers Authority called East Bay Community Energy (EBCE) which includes all the incorporated cities in the county except for Pleasanton and Newark. In September 2016, a feasibility study was finalized and found that the EBCE could offer electric rates less than PG&E while reducing GHG and facilitating local workforce development. On October 4, 2016, the Alameda County Board of Supervisors unanimously voted to begin the implementation phase of the EBCE authority. Later in October, the County released a Request for Proposals to contract additional services needed to prepare for the launch of the EBCE program including:

1. Technical and energy services
2. Community outreach, marketing, and customer notifications
3. Data management and call center services

The EBCE received nine proposals in December 2016. The contracts were scheduled for consideration at the Alameda County Board of Supervisors' February 2017 meeting. However, there is a protest by at least one non-winning bidder for each of the three contract categories. Therefore, the consideration of the contracts has been delayed until March 2017. This will delay the completion of the EBCE Implementation Plan, and the start of the CPUC review and certification, which will likely delay the scheduled October 2017 program launch.

NEXT STEPS

The District continues to evaluate moving electrical accounts to a CCA and to monitor the progress of EBCE in establishing a CCA.

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 23, 2017

MEMO TO: Board of Directors

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

FROM: Xavier J. Irias, Director of Engineering and Construction *XJI*

SUBJECT: Drinking Water Bottle Filling Stations

INTRODUCTION

Drinking water bottle filling stations (i.e., hydration stations) are becoming more common throughout California and the United States and provide an alternative to using disposable plastic bottles, which are harmful for the environment, while creating an opportunity to promote the use of tap water. This memo provides background information on hydration stations and describes a proposed pilot program as requested at the October 25, 2016 Board meeting. Staff will provide a presentation to the Sustainability/Energy Committee on February 28, 2017.

DISCUSSION

The volume of water sold in plastic bottles increased in the United States from 23 to 34 gallons per person between 2004 and 2014, neared 11 billion gallons in 2014, and is expected to be the largest beverage category in the United States by the end of the decade. However, bottled water is up to 2,000 times more energy intensive than tap water, about 25 percent or more is actually tap water, and about 80 percent of plastic bottles end up in landfills or the environment. Staff investigated the potential benefits of a hydration station program, which included surveying other existing hydration station programs, to help define a pilot program for the District.

Benefits of Hydration Stations

Hydration stations with proper branding promote use of local tap water and, when combined with efficient filling of reusable bottles, hydration stations reduce energy use and the amount of plastic bottles sent to landfills or the San Francisco Bay. Hydration stations also promote environmental, economic, and social sustainability by engaging District customers and reducing pollutant discharges – all of which align with the District's Strategic Plan.

Survey Results of Existing Programs

Five existing hydration station programs were surveyed to understand the motives, funding, costs, and potential partners. The surveys indicate that most programs started as pilot programs

to help meet Senate Bill 1413 requirements (i.e., clean water for students), to promote the use of tap water, or to reduce pollution. A public relations, government affairs, or water conservation department typically managed the program and, if a program had a partner, it was either another public agency, a community benefit group, or a manufacturer. Public outreach typically included creating websites, using mobile applications, attending community events (e.g., portable hydration stations at races), and conducting ribbon cutting ceremonies; some programs provided free reusable canteens with program branding. The programs were funded by grants, parcel taxes, water rates, or general funds.

The surveyed programs targeted schools and, to a smaller degree, parks, but none of the programs, with the exception of the San Francisco Public Utilities Commission (SFPUC), evaluated hydration stations on public transportation sites (e.g., BART). The SFPUC also used area statistics (e.g., number of reimbursable lunches) to help prioritize their program. The average unit capital cost for each hydration station ranged from \$3,800 to \$17,000 depending on the installation type (e.g., retrofit or new installation) and the location (e.g., school or community park). All of the surveyed programs covered the initial capital costs, with all ongoing operation and maintenance (O&M) costs borne by the recipients of the hydration stations.

Proposed Pilot Program

A hydration station program would provide an opportunity to promote the use of tap water to enhance the District's sustainability efforts. However, there are over 600 schools and parks and 20 BART stations within the District's service area; consequently, District staff recommends a small-scale pilot program to refine potential locations and costs of a larger-scale program. The pilot program would target three schools (elementary, middle, and high school), a local park (e.g., Lake Merritt, near Children's Fairyland), and the three busiest BART stations, if applicable. Each of these locations will require approval by its governing agency. To equally distribute the benefits of the pilot, one hydration station could be located in each of the District's seven wards.

The estimated capital cost of a pilot program consisting of up to seven hydration stations could range between \$70,000 and \$160,000, which includes 30 percent to cover administration, outreach, and any necessary contracts with manufacturers and installers; all O&M costs would be borne by the hydration station recipient. Additionally, to help quantify success, all seven hydration stations would be equipped with a counter that estimates the number of plastic bottles avoided. Following installation of the hydration stations and a period long enough to quantify usage with the avoided-bottle counters, a recommendation will be made regarding a full-scale program, including scope, timing, and costs.

NEXT STEPS

If the Committee supports the pilot program, a request for funding will be included in the FY18/19 budget. Upon approval, District staff will initiate a pilot program by developing criteria for selecting locations (e.g., economically distressed areas), creating a public outreach messaging

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strategy that includes branding, and contacting potential hydration station recipients once identified.

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 23, 2017
MEMO TO: Board of Directors
THROUGH: Alexander R. Coate, General Manager *mc*
FROM: Michael J. Wallis, Director of Operations and Maintenance *mw*
SUBJECT: Greenhouse Gas Emissions Associated with Employee Commuting

INTRODUCTION

At the July 26, 2016, Sustainability/Energy Committee, the Board requested an estimate of greenhouse gas emissions (GHG) generated by employees commuting to work. This item will be discussed at the February 28, 2017 Sustainability/Energy Committee.

DISCUSSION

Approximately 1,330 employees commute 67,778 miles on a daily basis. The estimated annual GHG emissions from this activity total 6,034 metric tons (MT). This amount represents fourteen percent of the 2015 District GHG emissions of 37,289 MT.

The GHG emissions were estimated based on each employee's home city and zip code, along with the zip code of the facility associated with their budget unit. Mileage was calculated using travel from zip code to zip code. Several conservative assumptions were made including the number of work days (219) and average fuel economy (21.6 mpg). Given these assumptions, District employees commute 14,843,382 miles per year and consume 687,194 gallons of fuel. This is equivalent to 31 round trips to the moon. The 6,034 MT of GHG generated from commuting exceeded the 3,878 MT of GHG from fuel consumption in District vehicles in 2015. Commute miles associated with the approximately 452 employees using the transit subsidy and 78 employees with take-home vehicles were not counted in the total miles travelled.

A survey of some East Bay employers for alternative commute programs yields the following results:

Pandora

- Employees can use pre-tax dollars to offset parking and transit expenses
- Pandora will contribute \$50 per month towards public transportation costs

Clorox

- Employees can use pre-tax dollars for public transportation, vanpools or pay to park at work or at public transportation

University of California Office of the President

- Telecommuting
- Alternate work schedules
- Employees can use pre-tax dollars for public transportation or parking

The District's Alternative Commute Program includes:

- Transit subsidies (\$105 per month)
- Telecommuting
- Compressed work schedules
- Bike racks available at most District facilities
- Guaranteed rides home

Other options include:

- Employer-paid tax-free vanpool passes
- Free shuttles to and from transit stations
- Ridesharing or carpool matching
- Preferred or reduced-cost parking for carpools and vanpools

Larger companies sometimes also provide free bus transportation to and from work.

MJW:ss