



# CITY OF SANTA BARBARA

## COUNCIL AGENDA REPORT

**AGENDA DATE:** December 6, 2016

**TO:** Mayor and Councilmembers

**FROM:** Facilities Division, Public Works Department

**SUBJECT:** Update On Renewable Energy Options For Desalination

### RECOMMENDATION:

That Council hear a presentation from staff regarding renewable energy options to offset greenhouse gas emissions produced by the operation of the Charles Meyer Desalination Plant.

### DISCUSSION:

During the coming months of Fiscal Year 2017, the Charles Meyer Desalination Plant (Desal Plant) will be reopened and will become operational. While the system is expected to produce nearly three (3) million gallons of potable water per day, it will also increase the City's electrical demand by an estimated 3 megawatts due to the energy intensive processing required to remove the salt from the water. Although the long-term operational role of desalination has not been determined, it is anticipated that desalination will continue to play a critical role in the City's water supply planning until surface and groundwater supplies recover from the current drought.

Staff has explored potential renewable energy options to offset this increased load with the goal to minimize energy cost increases and greenhouse gas (GHG) emissions. Potential options include solar photovoltaic arrays and biogas cogeneration. The renewable options to be presented will include:

- Renewable generation included in the Utility power mix
  - 37% by 2020
  - 50% by 2030
- 470 kW solar photovoltaic array funded through a power purchase agreement, located on the El Estero Wastewater Treatment Plant roofs
- 167 kW solar photovoltaic array funded through a power purchase agreement, located in the City Annex Yard
- 400 kW biogas cogeneration funded through a power purchase agreement, located at the El Estero Wastewater Treatment Plant

- Renewable generation possibilities associated with Community Choice Aggregation

During the Council presentation, staff will provide information on the feasibility and financial considerations associated with these potential renewable energy options.

**SUSTAINABILITY IMPACT:**

The City of Santa Barbara is always looking for ways to increase its use of renewable energy in order to reduce its GHG emissions and meet emissions targets set by the Assembly Bill 32 Scoping Plan and The Compact of Mayors. The Desal Plant serves a critical role in diversifying the City's water supply plan, but will significantly increase the City's electrical load. Exploring and implementing renewable opportunities to offset this load will help mitigate the effects of the electrical use of the plant.

**PREPARED BY:** Jim Dewey, Facilities and Energy Manager/AP/td

**SUBMITTED BY:** Rebecca J. Bjork, Public Works Director

**APPROVED BY:** City Administrator's Office