

## Outline

- ▶ Board Policy, Outcome Measures & Strategies
- ▶ Progress on emission reduction (Energy Management)
- ▶ Progress towards Carbon Neutrality
- ▶ Next Steps

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## Board Policies

Carbon Neutrality Related Policies

### Board Ends Policy

4.3 Strive for zero Net Greenhouse Gas Emission or Carbon Neutrality

4.3.1 Reduce Greenhouse Gas Emissions to achieve Carbon Neutrality by 2020.



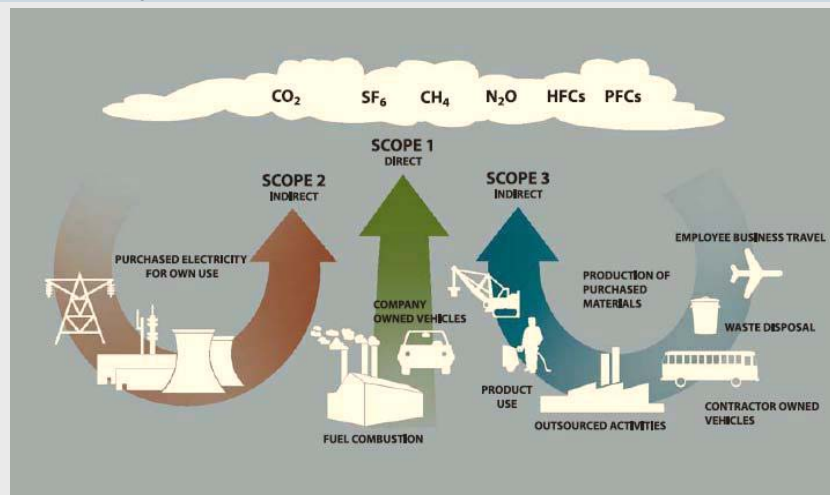
### Outcome Measures

- Maintain California Green Business Certification.
- By 2020, the amount of District greenhouse gas emissions is equal to or less than carbon offsets as calculated by the District carbon offset methodology.

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## GHG Emissions Overview

The Methodology



PWRPA and PG&E  
Electricity

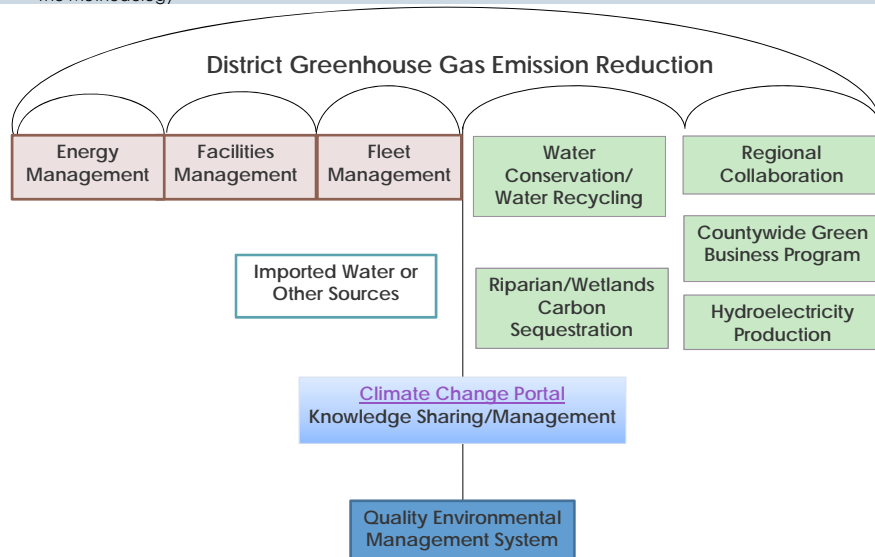
Fleet, Heating

Imported Water, Employee  
Commute & Business Travel

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## District's Carbon Reduction Framework

The Methodology



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## Emission Reduction through Energy Management

- ▶ Renewable Energy Projects
  - Local Renewable Projects
  - Utility-Scale Renewable Projects
  - In-conduit Hydroelectric Projects
- ▶ Silicon Valley Clean Power
- ▶ Energy Optimization Plan

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## Photovoltaic Solar Project – Penitencia Completed 2016

Local Renewable Energy Projects



### PWTP System Details:

- ❑ 248 KW ground-mount PV solar
- ❑ Offset approximately 21% of WTP annual energy usage
- ❑ 409 MWh / year and reduction of 112 metric ton of CO<sub>2</sub>e / year

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## Photovoltaic Solar Project – Santa Teresa Completed 2016

Local Renewable Energy Projects



### STWTP System Details:

- ❑ 260 KW ground-mount PV solar
- ❑ Offset approximately 22% of WTP annual energy usage
- ❑ 441 MWh / year and reduction of 122 metric ton CO<sub>2</sub>e / year

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## PWRPA Utility-Scale Solar Projects

### Utility-Scale Renewable Projects

- 75 MW Astoria II Solar Project – Kern County
  - Completed in December 2016
  - District allocation: 400 kW (1,247 MWh / year, 344 metric ton CO<sub>2</sub>e / year)



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## PWRPA Utility-Scale Solar Projects

### Utility-Scale Renewable Projects

- 20 MW Whitney Point Solar Project – Fresno County
  - Completed in April 2017
  - District allocation: 750 kW (2,199 MWh / year, 607 metric ton CO<sub>2</sub>e / year)



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## In-Conduit Hydroelectric Projects – Anderson Hydro

In-Conduit Hydroelectric Projects

Power purchase agreement  
(PPA) with PG&E expires in 2018

- ▶ Completed evaluation
- ▶ More profitable feed-in tariff available

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## Silicon Valley Clean Energy

- ▶ 76 of District's remote facilities in Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Morgan Hill, Mountain View, Saratoga, Sunnyvale and Unincorporated Santa Clara County
- ▶ Switched to 100% carbon free energy in April 2017
- ▶ Costs 1% less than PG&E rate



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## Energy Optimization Measures

Progress on Energy Optimization Plan Implementation

### 55 Total Recommended Measures (2013 Energy Optimization Plan)

Completed in FY2013 - FY2016	35
On-Going in FY2017	8
Scheduled for FY2018 - FY2020	6
Not Recommended	6

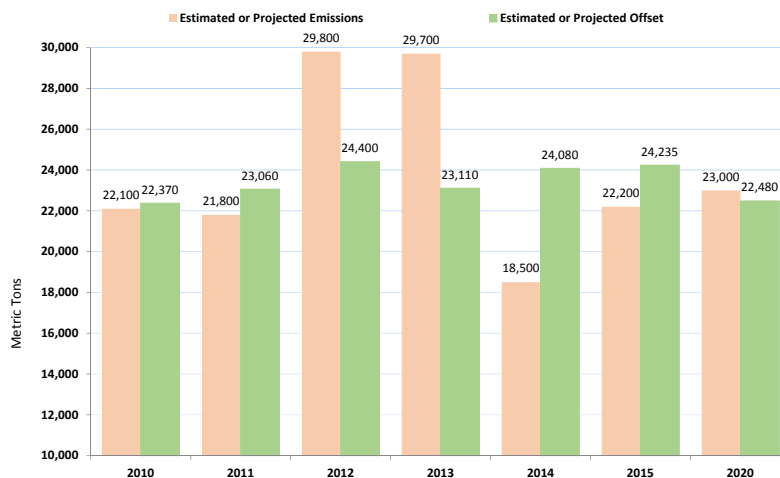
#### ■ Impact of fully implemented projects and measures

- Save about 3220 MWh of energy annually
- Offset about 590 Metric Ton of CO<sub>2</sub>e per year

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## Progress Towards Carbon Neutrality

Progress towards Carbon Neutrality



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## Continuing Efforts

- ▶ Continue to Implement Strategies Towards Carbon Neutrality
  - Support federal and state water supply GHG emission reduction initiatives
  - Evaluate cost effective and renewable resources
  - Continue water conservation and energy efficiency programs
  - Increase recycled water production
  - Maintain Green Business Practices
- ▶ On track to achieve Carbon Neutrality by 2020

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