

## Agenda Report

**DATE:** NOVEMBER 7, 2017

**TO:** CITY COUNCIL

**FROM:** COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT –  
ADMINISTRATION

**SUBJECT:** RECIEVE CLIMATE ACTION PLAN UPDATE AND PROVIDE DIRECTION  
ON POTENTIAL FUTURE INITIATIVES

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### **STATEMENT OF ISSUE:**

The Climate Action Plan (CAP) was adopted by Council in 2012. The CAP addresses climate change by setting a goal of reducing community-wide greenhouse gas emissions 15% from 2005 levels by the year 2020. It also sets a goal of reducing emissions at municipal facilities. Each year, staff tracks our progress implementing strategies in the CAP, estimates our greenhouse gas emissions, and provides an update to Council.

### **RECOMMENDED ACTION:**

Receive the annual Climate Action Plan update and provide direction to staff on the nine ideas for future initiatives.

### **DISCUSSION:**

#### **Greenhouse Gas Emissions (2016)**

##### Community

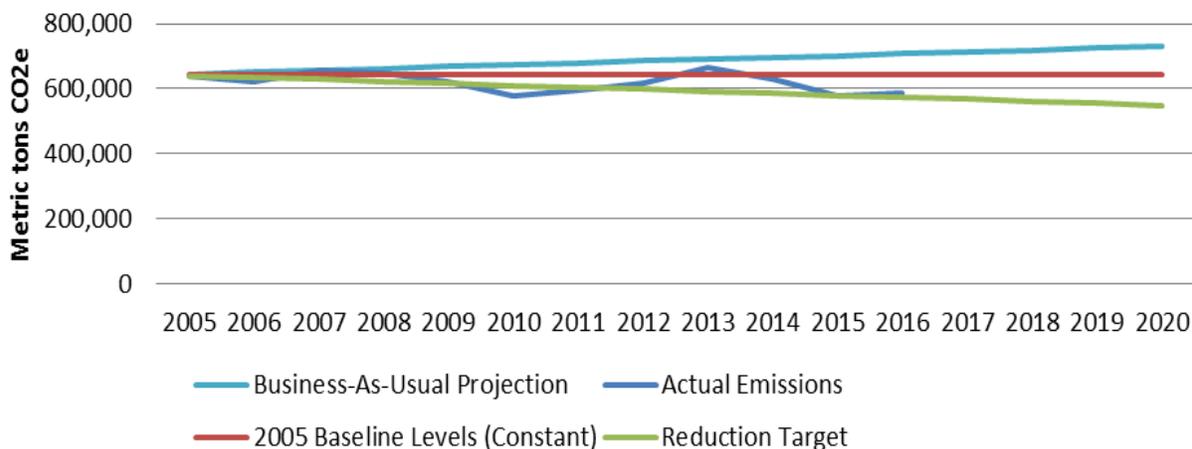
The CAP recommends completing a full greenhouse gas inventory every five years. In between, an Excel tracking tool that was created by the CAP consultants is used to estimate annual emissions and track progress toward our goals. The last inventory was completed for the year 2013. For 2016, staff used the Excel tool to track and estimate emissions across the entire community and found that at the end of 2016, emissions had decreased an estimated 8.8% from 2005 levels (Figure 1).

Overall, emissions are trending downward and transportation, residential energy use, and non-residential energy use continue to be the top three sources of the community's emissions. Total water use has stayed fairly flat following the end of the drought. In the residential sector, natural gas use has been increasing since 2014.

For this annual estimate, the downward emissions trend is more important than the exact number because of data limitations. Transportation data is not yet available for the year 2016, so 2015 data was used as a placeholder. The community switched to using MCE's Light Green (50% renewable) electricity in September 2016, so this annual update captures the September – December 2016

electricity use under MCE. The switch to MCE also revealed a data issue. Due to rules to protect customer privacy, PG&E excluded electricity data in a certain commercial sector in past years' datasets. With the switch to MCE, there are enough customers in that commercial sector that electricity data was able to be shown for the first time, sharply increasing the total amount of electricity used.

**Figure 1.** Estimated 2016 Greenhouse Gas Emissions in Walnut Creek



### Municipal

Staff used the same tool to assess the City's progress on its 39 percent emissions reduction goal from the 2005 baseline for municipal facilities. At the end of 2016, the City's municipal facilities were about 54% of the way to our 2020 municipal emissions reduction goal. This annual estimate captures just four months of electricity use through MCE.

### **Accomplishments and Current Initiatives**

Staff has updated the 2016-2018 work plan (Attachment 1) to show current progress toward the 2020 goal. "Ongoing" measures are ongoing in nature and continue to be implemented, while "Current" measures are short-term initiatives planned for 2016-2018. A few major 2016 accomplishments and current initiatives are highlighted below.

### Community

- The City joined MCE, a community choice energy program (also called community choice aggregation), to provide additional electricity options to residents and businesses. By providing a default of 50% of electricity from renewable energy, the City projected it would reduce emissions by at least 15,960 metric tons. Participation is higher than the original estimate with 88% of Walnut Creek customers enrolled in MCE and 1.21% choosing the Deep Green 100% renewable energy option, which means total greenhouse gas reductions from this program will be greater than originally projected.
- Contra Costa Transit Authority (CCTA) awarded the City a \$225,000 grant to help the City create a Transportation Demand Management strategy, which is a comprehensive approach for the City to reduce vehicle trips, reduce parking demand, support alternative modes of transportation, and reduce greenhouse gas emissions.

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- CCTA awarded the City \$852,000 in grant funds for bus stop safety and accessibility improvements, primarily in the downtown. The project includes new bus shelters with a public art component, technology features, and sidewalk upgrades.
  - Walnut Creek Saves, a no-cost energy and water savings program for residents, is available through December 2017. It uses federal grant funds and the remaining one-time funds. Walnut Creek Saves has completed 125 home assessments through September 2017, trained 16 local students as interns, and conducted outreach at 62 community events. Homeowners are saving an estimated 10-13% on their utility bills.
  - The California Youth Energy Services program ran a regional summer program in 2017 with Lafayette, Concord, and Walnut Creek at no cost to the cities. The program served 77 Walnut Creek residents, prevented 9.1 MT CO<sub>2</sub>, saved 11,968 kilowatt hours of electricity, and saved 198,840 gallons of water.
  - The City is conducting outreach on the Bay Area SunShares program, which provides discounts on solar and zero emission vehicles to residents through November 10, 2017.
  - The California Energy Commission (CEC) has designated Walnut Creek as a desired location for a hydrogen fueling station as part of a new network of stations to support the hydrogen fuel cell vehicles being sold by auto dealerships. These vehicles have no emissions at the tailpipe. The City has received an application (funded by a CEC grant) to install hydrogen fueling equipment at an existing gas station. The application requires a Conditional Use Permit review by the Planning Commission and will go through the City's Design Review process.
  - The City funded targeted outreach, education, and on-site assistance to commercial and multi-family residential units, with the goal of increasing recycling and green waste material diverted from going to the landfill.

#### Municipal

- The City has conducted energy efficiency audits on a number of its facilities to help make smart investments in upgrading to more efficient HVAC equipment, lighting, and plumbing to save energy and money. The audits also look at using on-bill financing to pay for the project costs over time through utility bill savings.
- Two new solar installations have completed construction at Heather Farm and Boundary Oak Golf Course. The final step of connecting the projects to the grid is estimated to take place in November or December.
- The City installed new, solar powered BigBelly recycling and trash containers downtown.
- Five new electric vehicle charging stations were installed at the downtown Walnut Creek Library garage.
- The City will be instituting organics recycling at all City-owned facilities by mid-2018 even though the law only requires it at certain facilities. This service is free to the City as part of the waste management services provided by Republic Services.
- In 2017, as part of the City's Roadway Maintenance Program, the City installed 16,400 linear foot of buffered bicycle lane on Walnut Avenue, 10,400 linear foot of bicycle lane on

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Marchbanks Drive and 3,000 linear foot of bike lane on Cedro Lane. The City also completed pedestrian and bicycle improvements on Hillside Drive where a critical sidewalk gap was closed on the south side of the street, improving connectivity from northwest Walnut Creek to BART and downtown Walnut Creek.

### **Ideas for Future Initiatives**

There are several overarching strategies to reduce greenhouse gas emissions. First, find a clean source of energy that does not have greenhouse gas emissions. With the switch to MCE, the City has access to electricity from renewable sources. Local renewable energy, like rooftop solar projects, also creates clean electricity. Next, electrify the transportation sector so that it uses clean electricity, rather than traditional fossil fuels, and encourage walking, biking, and public transit. This strategy helps address the transportation sector, the largest source of emissions. At the same time, encourage energy efficiency and reduce waste and consumption. Not using energy in the first place means no greenhouse gas emissions are produced.

Staff is considering ideas for new initiatives for the 2018-2020 work plan. Some ideas do not require funding and could be initiated sooner. Ideas that may require funding can be considered further during the 2018-2020 budget discussion and are marked with (\$). Council's feedback on the following ideas will help staff focus their efforts:

- Overall:
  1. **Creating a new CAP with goals for 2030 (\$).** The adopted CAP sets a goal for 2020, and suggests a goal for 2030, but no goal for beyond 2020 was officially adopted. In 2016, the state passed SB32, a climate change bill that requires much steeper reductions in greenhouse gas emissions, setting a state goal of reducing emissions 40 percent from 1990 emission levels by the year 2030. In the long-term, the state needs to be on track for an 80 percent reduction by the year 2050. The new goals are based on targets scientists say are necessary to avoid the worst effects of climate change. A new CAP could consider new goals and the strategies needed to reach them. The cost of the last CAP was approximately \$85,000 funded through a grant. Developing new goals and a new CAP would also likely require an Environmental Impact Report and a more recent greenhouse gas emissions inventory. A greenhouse gas inventory should be planned for 2018-2020 since the last inventory will be more than five years old.
  2. **Funding source for CAP activities (\$).** Some parts of the CAP are activities that the City has not traditionally undertaken in the past, and so the City has relied on using one-time funds to launch new community programs or to conduct inventories. Some jurisdictions set up fees or policies that create a permanent funding source for CAP activities.
- Transportation:
  3. **Electric vehicle (EV) readiness study.** Transportation is about 60% of the City's greenhouse gas emissions. To enable a widespread shift to EVs in order to reduce greenhouse gas emissions, a study that looks at how much EV charging infrastructure is needed regionally in Contra Costa County and strategies to encourage EVs would be helpful. The County is discussing this idea with other agencies to see if there are opportunities for outside funding.

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4. **Bikeshare and carshare opportunities.** The City has been approached by a start-up about a pilot bikeshare program. Staff will continue exploring what types of programs are a good fit for Walnut Creek, and may pursue opportunities to pilot new initiatives.
- Renewable Energy:
    5. **Renewable energy potential study.** The County has received a grant to study the potential for all types of renewable energy in the County, and there may be an opportunity for interested cities to join the study for little to no cost. Public Works staff may also be interested in an updated study of which City facilities can add renewable energy. Past studies focused only on solar.
    6. **Choosing MCE's Deep Green option for City facilities (\$).** In 2016, staff estimated that switching all of the City's facilities to the Deep Green option, which provides all electricity from 100% renewable sources, would cost an additional \$87,000 annually and reduce emissions by 1,316 metric tons of CO<sub>2</sub>. This would be an ongoing cost. Alternatively, the City could consider spending more funding on energy efficiency improvements, which reduces emissions while saving money on utility bills. However, energy efficiency does not eliminate emissions. A third option is to choose Deep Green for a few select facilities to reduce its emissions and show leadership, encouraging local businesses and residents to do the same. For example, choosing Deep Green for the Leshner Center for the Arts is an estimated \$10,000 more annually and for City Hall an estimated \$14,000 annually.
    7. **Adopting energy reach codes.** The City has the option to adopt "reach codes" that go above and beyond the California Building Code's Title 24 Energy Code. In the past, reach codes have been time consuming and expensive because cities are required to conduct a cost-effectiveness technical study to submit to the state to show that the proposed new requirements are cost-effective. The reach code only applies during the three year code cycle, and so this process and associated cost must be repeated every three years. This year, the state has conducted cost-effectiveness studies for the cities and the Bay Area Air Quality Management District has created model ordinances for actions like requiring new construction residential homes and low-rise multi-family to install solar. Policy options could include adopting the entire model ordinance, requiring just single family or just low-rise multifamily to install solar, requiring a smaller solar system, or to not adopt the ordinance. Staff is learning more about the solar ordinance and could bring it to the Housing and Community Development Committee and conduct outreach for feedback before bringing it to Council. The 2019 code cycle will also have reach code opportunities.
  - Energy Efficiency/Renewable Energy
    8. **Expediting permitting for green buildings.** The CAP Assessment Report prioritized incentivizing construction of Zero Net Energy buildings, which are very energy efficient buildings that use as much energy as they produce with on-site renewable energy over the course of a year. This strategy of encouraging green building is also supported by the General Plan. Some cities expedite green buildings in the permitting process, setting a threshold for what level of "green" a building must meet, such as LEED, Zero Net Energy, or another standard, in order to be expedited.
    9. **Reduce natural gas use.** The CAP calls for energy efficiency strategies to reduce energy use in homes and businesses. Residential natural gas use is about 10% of the City's emissions non-residential natural gas use is about 6% of all emissions. In

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California, space heating and hot water production are about half of all home energy use, and they often use natural gas. Switching from equipment that uses natural gas to electricity is a big opportunity to reduce greenhouse gas emissions because methane has a global warming potential that is 28 times that of carbon dioxide. The state is beginning to recognize the need to address natural gas, and there may be grant opportunities for initiatives in this area. While the CAP calls for energy efficiency, it does not highlight “fuel switching” from natural gas toward electricity as a strategy. A new CAP could explore fuel switching further.

**ENVIRONMENTAL REVIEW:**

None.

**FINANCIAL IMPACTS:**

Not applicable. Ideas that require funding will be considered further during the 2018-2020 budget discussion.

**ALTERNATIVE ACTION:**

City Council may recommend different priorities for the 2016-2018 work plan, and provide feedback on ideas for future initiatives.

**DOCUMENTS:**

Attachment: CAP Work Plan 2016-2018

**CITY COUNCIL ACTION RECOMMENDED:**

Move to receive the annual Climate Action Plan update and provide direction to staff on the nine ideas for future initiatives:

1. Creating a new CAP with goals for 2030
2. Funding source for CAP activities
3. Electric vehicle (EV) readiness study
4. Bikeshare and carshare opportunities
5. Renewable energy potential study
6. Choosing MCE’s Deep Green option for City facilities
7. Adopting energy reach codes
8. Expediting permitting for green buildings
9. Reduce natural gas use

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