CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

Agenda

Monday, July 11, 2016

4:30 PM

City Hall, Conference Room 2A

Council Sustainability Committee

CALL TO ORDER

ROLL CALL

PUBLIC COMMENTS:

(The Public Comment section provides an opportunity to address the City Council Sustainability Committee on items not listed on the agenda as well as items on the agenda. The Committee welcomes your comments and requests that speakers present their remarks in a respectful manner, within established time limits, and focus on issues which directly affect the City or are within the jurisdiction of the City. As the Committee is prohibited by State law from discussing items not listed on the agenda, any comments on items not on the agenda will be taken under consideration without Committee discussion and may be referred to staff.)

APPROVAL OF MINUTES

1. MIN 16-059 Minutes of the City Council Sustainability Committee Meeting on May 9, 2016

REPORTS/ACTION ITEMS

2. LB 16-078 Renewable Energy Generation Potential at City Facilities & Establishment of a Cumulative Municipal Zero Net Energy (ZNE) Goal

Attachments: Attachment I Table Listing Potential Renewable Energy Facilities

3. RPT 16-068 Community Greenhouse Gas Inventory Update: Building Energy Usage and Emissions Data, 2005 - 2015

Attachments: Attachment I 2005 and 2010 GHG Inventory Comparison Chart
Attachment II Building Energy Emissions: 2010 – 2015 Charts
Attachment III Building Energy Consumption: 2010 – 2015 Charts

4. RPT 16-078 Net Energy Metering 2.0 Regulations

Attachments: Attachment I Solar Permit Data
Attachment II Summary of CPUC Hearings

5. WS 16-048 East Bay Community Energy - Presentation of Technical Study

6. RPT 16-081 Sustainability Education and Outreach Update

Attachments: Attachment I Sustainability Outreach Plan
Attachment II Screenshot of "Your Environment" Webpage
Attachment III Screenshot of Sustainability Dashboard
Attachment IV April Newsletter
Attachment V Water Conservation Rebate Combined Handout

7. RPT 16-082 Suggested Sustainability Committee Meeting Topics

FUTURE AGENDA ITEMS

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS

ADJOURNMENT

NEXT REGULAR MEETING, 4:30 PM, MONDAY, SEPTEMBER 12, 2016

File #: MIN 16-059

CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING
Hayward City Hall - Conference Room 2A
777 B Street, Hayward, CA 94541-5007

May 9, 2016
4:30 p.m. - 6:30 p.m.

MEETING MINUTES

CALL TO ORDER: Meeting called to order at 4:30 p.m. by Chair Al Mendall.

ROLL CALL:

Members

- Al Mendall, City Council Member /CSC Chair
- Francisco Zermeño, City Council Member

Staff:

- Alex Ameri, Utilities & Environmental Services Director
- Erik Pearson, Environmental Services Manager
- Jennifer Yee, Sustainability Technician
- Gillian Corral, Civic Spark Fellow
- Carol Lee, Administrative Secretary (Recorder)

Others:

- Jillian Buckholz, Director of Sustainability, California State University East Bay (CSUEB)
- Jillian Hogan, Hayward Resident, Keep Hayward Clean and Green Task Force
- Karina Garbesi, Director of Environmental Studies, CSUEB
- Meri Soll, Senior Program Manager, StopWaste
- Sasha Stackhouse, Public Services Sector Manager, Waste Management of Alameda County (WMAC)

PUBLIC COMMENTS

Jillian Hogan announced that the 33rd Annual City-Wide Cleanup Event will be taking place at Weekes Park on Saturday, May 14 from 8 a.m. to 12:00 p.m., and encouraged those in attendance to participate.

Council Member Zermeño inquired if the Bicycle Master Plan was going to be brought before the

Committee, as it was scheduled on the tentative agenda schedule for City Council. Staff confirmed that the item was tentatively scheduled to come before the Committee meeting in November.

1. Approval of Minutes of Council Sustainability Meeting on March 14, 2016.

The Committee approved the minutes of the Council Sustainability Committee meeting of March 14, 2016.

2. East Bay SunShares

Erik Pearson, Environmental Services Manager, presented the report on East Bay SunShares, a group purchase program for solar photovoltaic systems and electric vehicles (EVs). Mr. Pearson mentioned that this program supports our General Plan and greenhouse gas reduction goals

Council Member Zermeño questioned why so few cities participated last year. Mr. Pearson suggested that the staff time required to participate maybe be a potential factor deterring a city from participating. Staff has not identified any other drawbacks to the program.

The Committee was in favor of staff submitting a letter of interest for East Bay SunShares.

3. Reusable Bag Ordinance Expansion - Review Draft Ordinance

Jennifer Yee, Sustainability Technician, presented a report regarding the proposed reusable bag ordinance expansion, which would expand the ordinance to include all retail stores and restaurants. Ms. Yee indicated that any member agency choosing to opt out of the expansion must do so by a resolution of its governing body before December 9, 2016.

Director Ameri commented that in slide five of the presentation, the pie chart reflects the number of stores by type, not to be confused for the amount of plastic bags used by store type. He noted that the largest distributers of plastic bags are already regulated by the current ordinance.

Council Member Zermeño asked what actions are taken with the 10% of stores that are noncompliant. Meri Soll, Senior Program Manager, StopWaste, explained that the agency works closely with such stores, and offers education and technical support until they are brought into compliance. Ms. Soll noted that there are about fifteen stores that are currently not in compliance and if they continue to be noncompliant, StopWaste will have to issue a citation.

Mr. Ameri stated that non-compliance does not necessarily mean that stores are not participating in the program and requested that Ms. Soll elaborate on what noncompliance entails. Ms. Soll explained that failing to charge for a reusable bag, not showing the bag purchase itemized on the receipt, or not distributing a compliant bag makes a store noncompliant. She further explained that a plastic bag without a handle is considered a produce bag or protective covering and is not

covered under the current or proposed ordinance.

Council Member Zermeño inquired if there were any other counties, outside of Alameda County, that have expanded ordinances. Ms. Soll confirmed that there are other counties as well as other cities in the Bay Area and in the state that already have expanded ordinances. She explained that the expansion is proposed as a countywide measure, with the option for cities to opt out.

Chair Mendall inquired if any businesses have voiced objections. Ms. Soll stated that to date no one has come forward to StopWaste and opposed the ordinance. In response, Chair Mendall asked if there were any provisions to allow for changes to the ordinance if after the ordinance goes into effect, a business type is identified as one to which the ordinance should not pertain. Ms. Soll explained that it would go back to the Waste Management Authority, as they are adopting the ordinance. There would be a process to make an amendment to the ordinance that would require a vote by the members of the Board, and it would be required to go through the same process as this current amendment. Staff clarified that all of the member agency representatives will vote on the amendment, and should it pass, the represented agencies and cities will automatically be included in the amended ordinance. Individual cities will have until December 2016 to pass a resolution if they choose not to participate.

The Committee was in favor of the reusable bag ordinance expansion and requested that staff bring it before City Council as a consent item.

4. Update on PAYS Implementation

Erik Pearson, Environmental Services Manager, provided an update on the PAYS (Pay-As-You-Save) Program, an On-Bill Conservation and Efficiency Financing Pilot Program. He noted that since the last update in December 2015, two properties have signed contracts and scheduled upgrades with Bottom Line Utility Services (BLUS), the City's selected contractor. Nine properties have pending contracts and three have declined. He added that two of the three properties have decided to do the work themselves. Director Ameri commented that the properties that make upgrades on their own are still eligible for water rebates offered by the City.

Chair Mendall asked if staff could follow up with the two properties that opted to do the work in-house to ensure they follow through. He further commented that at the county level, Community Choice Energy (CCE) is moving forward, and would likely provide a similar program for energy savings. He suggested encouraging CCE to expand efficiency programs to include water savings in order to avoid duplicative efforts.

Council Member Zermeño asked if staff contacted both property owners and managers regarding this program. Staff responded that they have, and noted that the contractor has primarily focused on larger properties which have posed some challenges, as some of those properties have remote owners or corporate owners.

5. 2016 Agenda Topics

Council Member Zermeño requested clarification regarding the Outreach Campaigns - Results scheduled in July. Staff explained that the report would summarize several events that City hosted to outreach to the community regarding sustainability.

Council Member Zermeño asked that staff look into how the City can become more bike-friendly when addressing the Bicycle Master Plan. Mr. Zermeño requested that staff look into working with Hayward Area Recreation and Park District to develop new bike/walk trails along local creeks. Director Ameri responded that this cooperative work may be possible through the Sustainable City Year Program, in collaboration with CSUEB. He stated that staff would look into it and could make a recommendation.

He further inquired about the project to expand the solar field at the Water Pollution Control Facility, and asked staff to provide an update to either the Committee or Council. Direct Ameri explained that this Capital Improvement Project was already approved by Council, and that the City is preparing the land that is required for the expansion, noting that the existing one megawatt field takes up eight acres of land. He affirmed that staff would prepare an update.

Director Ameri commented that staff will bring a report before the Committee regarding renewable energy and noted that the City is producing much more green energy than previously expected due to the new cogeneration and solar at the Waste Water Pollution Control Facility and other City facilities. Gillian Corral, Civic Spark Fellow, announced that staff is working to get the City's greenhouse gas (GHG) inventory onto the ClearPath platform to allow more efficient tracking and concise comparison of GHG emissions over time. Chair Mendall asked staff to update the Committee as to the trend of the City's GHG emissions.

Director Ameri commented that staff will provide the Committee with an update on water supply, outlook, and efficiency, including the revised regulations released earlier that day.

Chair Mendall commented that the schedule for July appeared full and requested that staff be mindful of the time it would take to present and discuss several of the scheduled items. He recommended that staff consider postponing items in order to allow for adequate discussion.

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS:

Erik Pearson announced that StopWaste and the City will be hosting a home energy upgrade workshop at City Hall on May 10. He noted that currently sixty people are signed up to attend. He further announced that the City will be hosting an energizer station at South Hayward BART on Bike-to-Work Day and reiterated that the Annual Clean-up Event will be on May 14.

Council Member Zermeño expressed his heartfelt thanks to Sasha Stackhouse, Public Services

Sector Manager, WMAC, for her attendance and assistance at the Annual Cinco de Mayo Family Festival the past weekend.

Director Ameri announced that, under the leadership of the City Manager's Office, City staff and CSUEB faculty are continuing to discuss and prepare for the implementation of the Sustainable City Year Program. Director Ameri also announced that the Zero Net Energy Policy for New and Refurbished City Buildings, which was brought before the Committee already, will be going before Council. Lastly, Director Ameri stated that the City has received the Acterra Business Environmental Award, noting that the only other non-private entity is Stanford University, and the City will receive this award on May 26 at Intuit in Mountain View. He invited Council Members to attend.

ADJOURNMENT: 6:15 p.m.

Attendance	Present 5/9/15 Meeting	MEETINGS Present to Date This F Year	Excused to Date This Fiscal Year	Absent to D This Fiscal Year
Greg Jones	X	3	1	0
Al Mendall*	✓	4	0	0
Francisco Zermeño	✓	4	0	0

✓ = Present O = absent X = excused
* Chair

Staff Report

File #: LB 16-078

DATE: July 11, 2016

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT
Renewable Energy Generation Potential at City Facilities & Establishment of a Cumulative Municipal Zero Net Energy (ZNE) Goal

RECOMMENDATION
That the Committee reviews and comments on this report and recommends that staff schedule this item for consideration by Council to set a goal of achieving cumulative municipal ZNE using renewable energy by 2025.

BACKGROUND

During the December 10, 2015 meeting, the Committee asked staff to present a report about City-wide renewable energy use and to provide a timeline for achieving cumulative Zero Net Energy for City facilities.

Hayward's General Plan includes the following policies and implementation programs related to renewable energy.

> *Policy NR-4.4 Energy Resource Conservation in Public Buildings* - The City shall continue to require all public facilities and services to incorporate energy and resource conservation standards and practices.
>
> *Policy NR-4.10 Public Renewable Energy Generation* - The City shall ensure that all new City-owned facilities are built with renewable energy, as appropriate to their functions, and shall install renewable energy systems at existing City facilities where feasible.
>
> *Policy NR-4.11 Green Building Standards* - The City shall require newly constructed or renovated public and private buildings and structures to meet energy efficiency design and operations standards with the intent of meeting or exceeding the State's zero net energy goals by 2020.

DISCUSSION

Hayward has been producing renewable electricity for decades. Current renewable energy facilities

include the combined heat and power (operating since 1982 and replaced in 2015), solar photovoltaic (PV) on the roof of the animal shelter/landscape building on Barnes Court (2005), solar PV at the Water Pollution Control Facility (2010), solar PV at the Utilities Center (2012), and solar PV at the corporation yard (2012). These facilities in total produce more than 12 million kWh annually, or approximately half of the electricity consumed at all City facilities. Ultimately, all of the energy needs of all City facilities will need to be met by renewable energy in order to meet the City's long term goals.

In 2015, the City purchased approximately 9.4 million kWh of electricity, which includes buildings, traffic signals, streetlights, and water/wastewater pumping. This is the amount that would need to be generated from new renewable sources in order to "zero out" the City's electricity use. The City also consumes approximately 157,000 therms of natural gas per year, mostly for space and water heating, which is equivalent to roughly 4.6 million kWh. To generate enough electricity to achieve ZNE, approximately 14 million kWh would need to be generated. Attachment I lists the facilities staff identified where renewables (solar PV and cogeneration) could be installed. If all potential sites were installed, approximately 15.6 million kWh could be generated annually. Actual generation will depend on technologies available at the time of installation - such as panel efficiency, panels per square foot, and tracking versus fixed systems.

Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT) *Tariff* - Following completion of the Water Pollution Control Facility (WPCF) cogeneration facility in December of 2014, the City switched electric service from Pacific Gas and Electric's (PG&E) net metering tariff to the Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT) tariff. Due to the size of the cogeneration and solar facilities (more than two mega-watts), net energy metering (NEM), which is limited to one megawatt, was no longer applicable. The RES-BCT tariff allows local governments with one or more eligible renewable generating facilities to export energy to the grid and receive generation credits (in dollars) to other "benefitting accounts" at other City facilities. The program allows up to five megawatts of renewable generation per generating account. The solar array and cogeneration facility at the WPCF qualify as renewable generating facilities. Benefitting accounts include three reservoirs with associated booster pump stations, two sewer lift stations, City Hall, and several other smaller accounts.

The California Public Utilities Commission (CPUC) created the RES-BCT tariff system to allow local governments to generate electricity at one account and transfer any available credits to other accounts owned by the same local government in order to provide incentives for creating and using renewable energy. The CPUC mandated that 250 MW be set aside for RES-BCT tariffs, of which PG&E's share is 105.25 MW. As of the third quarter of 2015, PG&E had nine customers under the RES-BCT tariff with a total of 8.4 MW interconnected. The City of Hayward is currently PG&E's largest customer operating under the RES-BCT tariff. PG&E indicates they expect it will take some time before all the RES-BCT tariffs have been allocated. Therefore, the City can likely benefit from setting up one or more additional RES-BCT arrangements provided facilities can be identified with significant excess renewable energy that can be applied to other City facilities.

An important restriction with RES-BCT is that neither the generating account, nor any of the benefitting accounts can be on net energy metering. This means that if a facility has a solar array that produces more energy than is consumed by the facility in the day time, the ability to export to the grid or spin the meter backwards is no longer an option. Therefore, benefitting accounts must be those facilities that

always consume more energy than they generate (even if a solar array is part of the facility). Setting up additional RES-BCT accounts for City facilities with the potential to generate excess power is an option that the City may consider in the goal to reach zero net energy city-wide.

Staff estimates that construction of solar PV necessary to achieve ZNE will cost approximately twenty to thirty million dollars, depending on the type of installation (rooftop versus on canopies or poles), and will take several years to design and install. Staff recommends setting a goal of 2025 for the year by which City facilities will be carbon neutral. The provision of solar PV should be seriously considered and implemented at each and every new building and substantial retrofit or rehab project. In addition, to achieve the goal, consideration should be given to implementing stand-alone PV projects such as installing canopies with PV panels at municipal parking lots throughout the City and on rooftops of existing City-owned buildings.

NEXT STEPS

If the Committee recommends this action, staff will prepare a report for consideration by the full Council. Following favorable Council action, staff will prioritize installation of renewable energy facilities with those that are the most cost-effective and for which funding has been identified in the Capital Improvement Program. Staff will identify potential funding sources for additional projects.

Prepared by: Suzan England, Senior Utilities Engineer
Erik Pearson, Environmental Services Manager
Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:

Fran David, City Manager

Attachments:

Attachment I	Table Listing Potential Renewable Energy Facilities

Potential Sites for New Solar PV

	Description	Address	Square Feet	kW	kWh/year	2015 Usage (kWh)*
1	Police Station	300 West Winton Avenue	23,000	345	604,440	929,718
2	Muni Lot (A, B, Main, Mission)	22550 Mission	10,000	150	262,800	
3	Muni Lot (Foothill, A, Main, B) - access from A St.	1025 A St.	12,500	188	328,500	
4	Muni Lot (Foothill, A, Main, B) - access from B St.	1042 B, & 5 more APNs	20,000	300	525,600	
5	Muni Lot (B, C, Foothill, 2nd)	Foothill & B	16,000	240	420,480	
6	Muni Lot (Maple Ct. & A St.)	22456 Maple Ct. (north half)	16,750	251	440,190	
7	Muni Lot (Foothill, Russell, 2nd, A)	Foothill & A	12,000	180	315,360	
8	Cinema Parking Structure	22695 Foothill	10,100	152	265,428	68,126
9	Barnes Ct. bldg (add more on roof)	16 Barnes Ct.	7,000	105	183,960	
10	Barnes Ct. (carport to replace tent at rear of site)	16 Barnes Ct.	4,500	68	118,260	
11	Fleet Bldg.	24505 Soto Road	2,600	39	68,328	80,950
12	Fire Station 1 (assuming carport - roof doesn't look good)	22700 Main Street	5,400	81	141,912	141,457
13	Fire Station 2	360 West Harder Rd	1,000	15	26,280	35,732
14	Fire Station 3	31982 Medinah St	550	8.3	14,454	33,066
15	Fire Station 4	27836 Loyola Ave	650	9.8	17,082	36,413
16	Fire Station 5	28595 Hayward Blvd	880	13.2	23,126	40,810
17	Fire Station 6	1401 West Winton Ave	1,500	22.5	39,420	120,938
18	Fire Station 7	28270 Huntwood Ave	2,000	30.0	52,560	
20	Fire Station 9	24912 Second St	600	9.0	15,768	30,373
21	City Hall	777 B St.	4,190	63	110,113	1,191,355
22	Watkins Street Parking Structure (2nd half)	Watkins & B	14,600	283.0	495,816	
23	2nd CoGen engine at WPCF	3700 Enterprise Way		800	7,008,000	
24	Phase 2 Solar PV at WPCF	3700 Enterprise Way		1,000	2,352,936	
25	Hesperian Pump Station - roofed canopy	28471 Hesperian Bl	11,000	165	289,080	169,160
26	Walpert pump reservoir/station	1241 Walpert St.	7,500	113	197,100	262
27	500 Reservoir	1910 Highland Blvd	4,700	71	123,516	796,462
28	750 Reservoir	26633 Parkside Dr	7,500	113	197,100	740,618
29	1000 Reservoir	3466 La Mesa Drive	1,200	18	31,536	456,309
30	1285 Reservoir	28750 Fairview Ave	2,600	39	68,328	290,520
31	May Road (adjacent to Treeview Reservoir)	087-0040-004-04	20,000	300	525,600	
32	Garin Reservoir	083-0464-024-00	6,800	102	178,704	
33	Emergency Well E (Old Well 9)	28251 Industrial Bl	1,300	20	34,164	
34	Mohrland Emergency Well	24927 Mohr Dr	5,300	80	139,284	
			233,720	**5,025**	**15,615,226**	

Additional Possiblities:
Airport Property (would require FAA approval)
Area between City Hall and BART
Centenial Hall Parking Structure

kWh needed to zero out electricity use:	9,392,958
Difference:	6,222,268
kWh needed to go ZNE (incl. nat gas):	13,997,460
Difference:	1,617,765

* For reference only.

Staff Report

File #: RPT 16-068

DATE: July 11, 2016

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT
Community Greenhouse Gas Inventory Update: Building Energy Usage and Emissions Data, 2005 - 2015

RECOMMENDATION
That the Committee reviews and comments on this report.

BACKGROUND

Greenhouse gas (GHG) inventories are prepared to assess progress toward the emissions reduction goals of Hayward's Climate Action Plan. As a member of the International Council for Local Environmental Initiatives (ICLEI)-Local Governments for Sustainability (a global network of cities and regions), the City of Hayward follows ICLEI's protocol for developing GHG inventories. ICLEI recommends updating GHG inventories at least every five years. Completed and planned inventories to date include:

- **2005 Baseline:** Cataloged municipal and community (city-wide) emissions and established a baseline to compare to future inventories. Sectors covered: building energy consumption, transportation, and landfilled waste.
- **2010 Inventory:** Municipal and community emissions with a 2005 / 2010 comparison. Sectors covered: building energy, transportation, landfilled waste, Water Pollution Control Facility, and water/ wastewater.
- **2015 Inventory:** To be completed once transportation data becomes available (expected by early 2017).

Partial inventory data on energy consumption and emissions are periodically presented to give a snapshot of progress toward energy goals. Staff last presented data on municipal and community energy usage to the Committee in October 2013. The 2013 report as well as GHG reports from 2012 and 2011 are available at <http://www.hayward-ca.gov/your-environment/green-government/greenhouse-gas-reduction>. This report includes a brief review of the 2005 and 2010 inventory totals and provides an update on community electricity and natural gas usage and related emissions for 2010 - 2015, compared to the 2005 baseline.

General Plan policies and programs related to reducing GHG emissions and building energy consumption

include:

Policy NR-2.4 Community Greenhouse Gas Reduction - The City shall work with the community to reduce community-based GHG emissions by 20% below 2005 baseline levels by 2020, and strive to reduce community emissions by 61.7% and 82.5% by 2040 and 2050, respectively.

Program NR 7. Energy Reduction Initiative and Annual Report - The City shall develop and implement a public information and education campaign to encourage every household and every business to reduce their energy consumption by 10% by 2020. The City shall evaluate and report to the City Council annually on the community's progress in achieving the 10% goal, and recommend additional efforts as necessary to ensure the goal is met.

DISCUSSION

About the Data - Staff is using ClearPath, an industry-standard platform developed by the Statewide Energy Efficiency Collaborative (SEEC), to facilitate better record keeping and analysis in GHG accounting. The 2005 and 2010 full inventories and energy data for 2010 through 2015 were uploaded onto ClearPath. ClearPath calculates emissions based on raw data, and due to the availability of new best practices and formulas, there are some differences between ClearPath-calculated emission totals and totals presented in previous inventory reports using different software.

Raw energy data comes from PG&E's most recent report for Hayward. PG&E aggregates energy data for "Residential" and "Non-Residential" sectors. "Non-Residential" includes commercial, industrial, institutional, and municipal buildings and is referred to as "Commercial / Industrial" in this report. PG&E provided multiple sources of community electricity and natural gas data for Hayward for 2015. Staff found that the totals among the electric energy sources differ by 0.424% and notified PG&E. While this discrepancy does not have a material effect on the City's analysis, PG&E analysts are investigating the discrepancy. Staff used the source thought to be the most accurate in the analysis below and will update the figures if needed once PG&E resolves this issue. *The data below should be considered "preliminary" until this issue is resolved.*

The data reflected in the attached charts is unadjusted for population increases. This is because the City of Hayward's emissions reduction goals are based on emission totals, not per capita figures. Therefore, population increase could be a causal factor in any increases in electricity or natural gas usage reflected in the attached charts. Per capita data is presented in the narrative.

2005 and 2010 GHG Inventory Comparison - City-wide emission totals for building energy, on-road transportation, and landfilled waste in 2005 were estimated at 1,149,100 metric tons of carbon dioxide equivalent (MT CO2e) and 1,037,066 MT CO2e for 2010. As reflected in Chart 1 in Attachment I, in 2010 Hayward's community emissions decreased by 10% compared to 2005, which is on track to meeting City Council's goal of reducing emissions by 20% below 2005 levels by 2020. (This is a larger decrease compared to the original 2005 / 2010 inventory completed in January 2013, which estimated an 8% reduction in community emissions.)

Per Capita Comparison - Population estimates for 2005 and 2010 are 140,305 and 145,090

respectively. Per capita emissions for energy, on-road transportation, and landfilled waste decreased approximately 12.7% from an estimated eight MT CO2e for 2005 to seven MT CO2e for 2010.

Building Energy Emissions: 2010 - 2015 - This section covers emissions from grid electricity and natural gas consumption city-wide for residential, commercial, industrial, institutional, and municipal buildings.

The charts in Attachment II reflect emission trends compared to the targets established by City Council to reduce GHG emissions by 82.5% by 2050. In 2015, Hayward's energy emissions were estimated at 365,711 MT CO2e, an 8% decrease compared to the 2005 baseline total of 395,790 MT CO2e (see Chart 2).

Fluctuations in GHG emissions from grid electricity from 2010 - 2015 are largely due to changes in PG&E's emissions factor, which measures the pounds of CO2e emitted per kilowatt-hour (kWh) of electricity. As PG&E's mix of generation sources changes (i.e. solar, natural gas, hydropower), the emissions factor changes accordingly. For example, year to year electricity usage changed very little from 2010 - 2012 - less than 1% - though emissions increased by 11% and decreased by 13% in 2011 and 2012 respectively.

Residential vs. Commercial / Industrial - Chart 3 in Attachment II reflects residential versus commercial / industrial energy emissions by year, including the 2005 baseline year. Charts 4 and 5 in Attachment II show trends in emissions for residential and commercial / industrial buildings respectively compared with reduction goals. From 2005 to 2015, there was a 15% decrease in energy emissions for residential buildings and a 3% decrease for commercial / industrial buildings.

Building Energy Consumption: 2010 - 2015 - This section covers city-wide trends in consumption of grid electricity and natural gas for residential, commercial, industrial, institutional, and municipal buildings. In 2015, community electricity consumption was 964,750,497 kWh and natural gas consumption was 33,259,832 therms.

Total energy consumption - electricity and natural gas, for all sectors - has changed very little since 2005. As Chart 6 in Attachment III reflects, 2015 saw an estimated 1% decrease in overall energy consumption compared to the 2005 baseline. Per capita energy consumption decreased approximately 13% from forty -eight to forty-two million British thermal units (MMBtu) from 2005 to 2015.

Residential Consumption - Although overall energy consumption has not changed much since 2005, residential energy usage in 2015 was 12% below 2005 levels (Chart 7). This exceeds the City's 2020 target of a 10% reduction from 2005 levels.

Charts 8 and 9 in Attachment III are breakouts for natural gas and electricity usage for residential buildings.

Year to year changes in energy usage may be due to conservation and efficiency programs, but changes in weather and economic activity are also important considerations. Chart 10 in Attachment III shows a decrease in natural gas consumption over the years as well as a decrease in heating degree days. ("Heating degree days", or "HDD", are a measure of how much (in degrees), and for how long (in days),

outside air temperature was lower than a specific "base temperature" (or "balance point"). They are used for calculations relating to the energy consumption required to heat buildings. Fewer heating degree days could partially explain the drop in natural gas consumption by residents.

As mentioned earlier in this report, changes in grid electricity GHG emissions are largely due to, and affected by, changes in the PG&E emissions factor. Because of this relationship, it is possible that electricity emissions may not decline steadily year to year or every five years even if grid electricity usage declines.

NEXT STEPS

Staff will continue to use ClearPath to:

- **Conduct GHG reduction analysis** of specific Climate Action Plan implementation programs.
  - Estimate reductions achieved by current and ongoing programs.
  - Forecast potential reductions for proposed programs and policies with an eye on the 2040 and 2050 goals.
- **Complete the 2015 GHG inventory**, including the following sectors: building energy, transportation, waste, Water Pollution Control Facility, water/ wastewater.
  - Data collection is complete for building energy and other sectors will be added as source data becomes available (anticipated in early 2017).
  - Once the 2015 inventory is complete, staff will compare all inventories and present analysis to the Committee.

Prepared by: Gilian Corral, CivicSpark AmeriCorps Fellow

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:

Fran David, City Manager

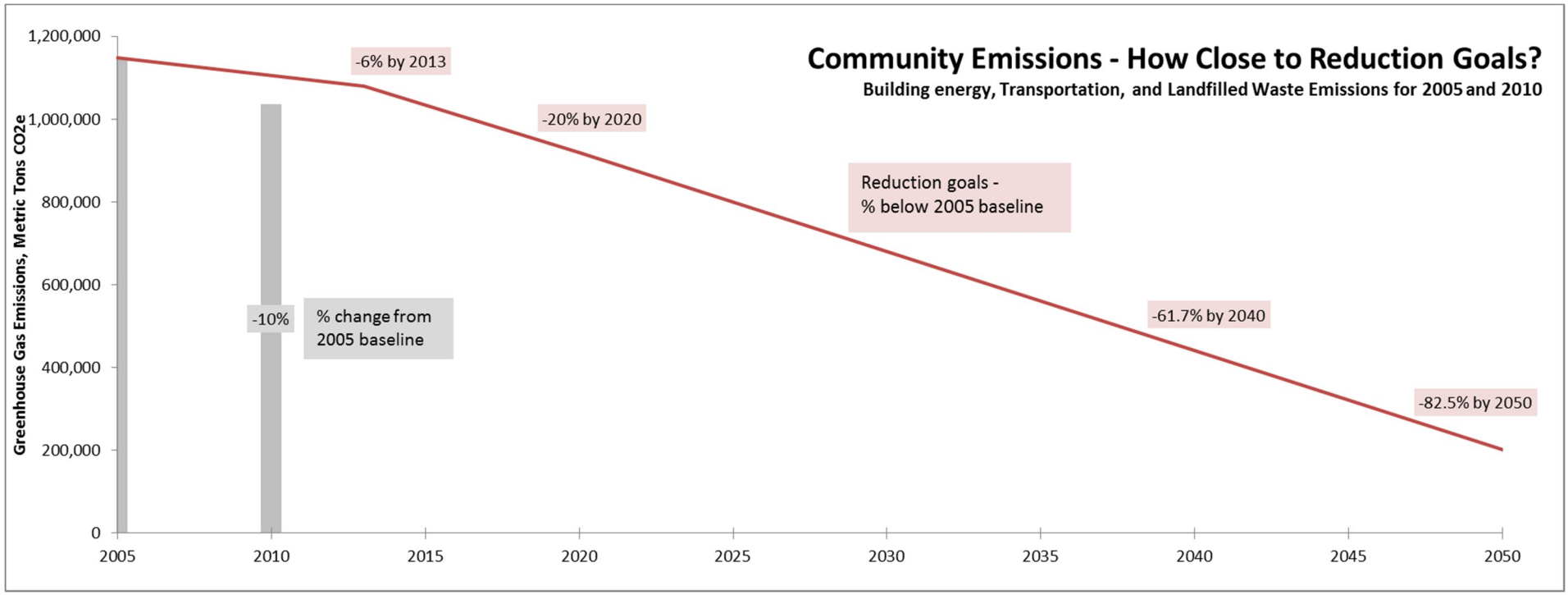
Attachments:

Attachment I	2005 and 2010 GHG Inventory Comparison Chart
Attachment II	Building Energy Emissions: 2010 - 2015 Charts
Attachment III	Building Energy Consumption: 2010 - 2015 Charts

ATTACHMENT I

2005 and 2010 GHG Inventory Comparison Chart

Chart 1: Community Emissions – How Close to Reduction Goals?



ATTACHMENT II

Building Energy Emissions: 2010 – 2015 Charts

Chart 2: Building Energy Emissions – How Close to Reduction Goals?

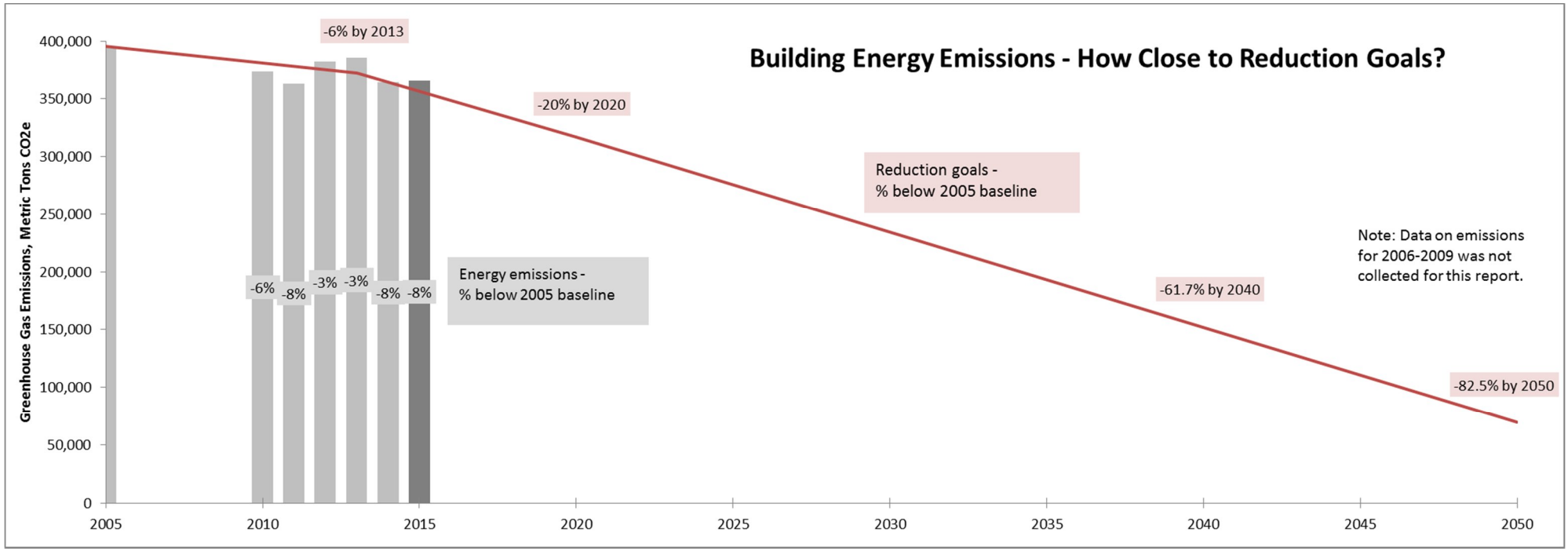


Chart 3: Building Energy Emissions

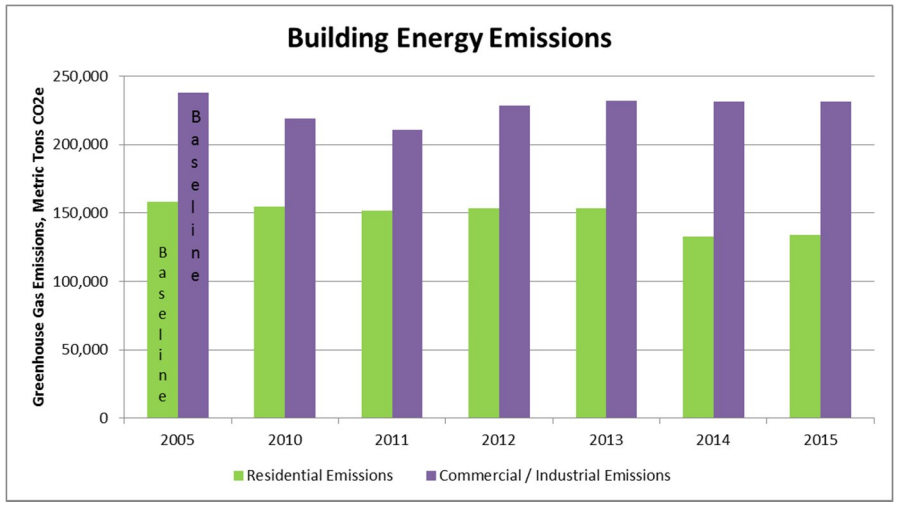


Chart 4: Residential Building Energy Emissions – How Close to Reduction Goals?

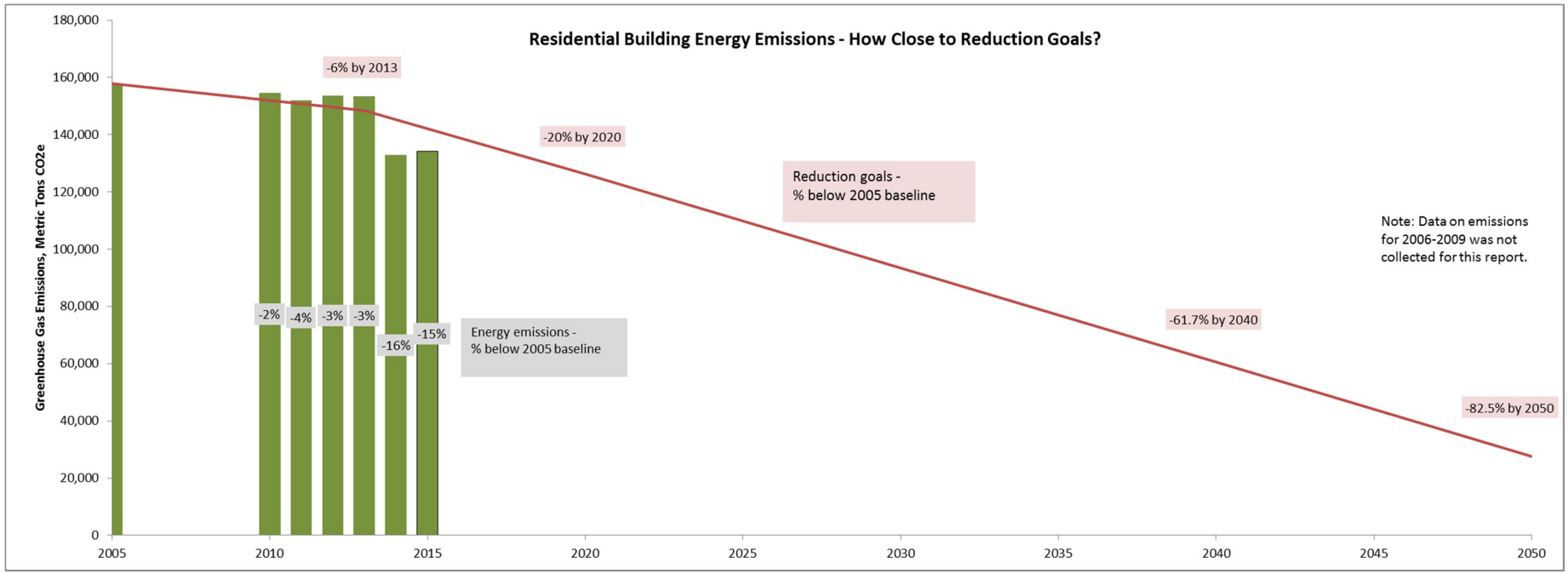
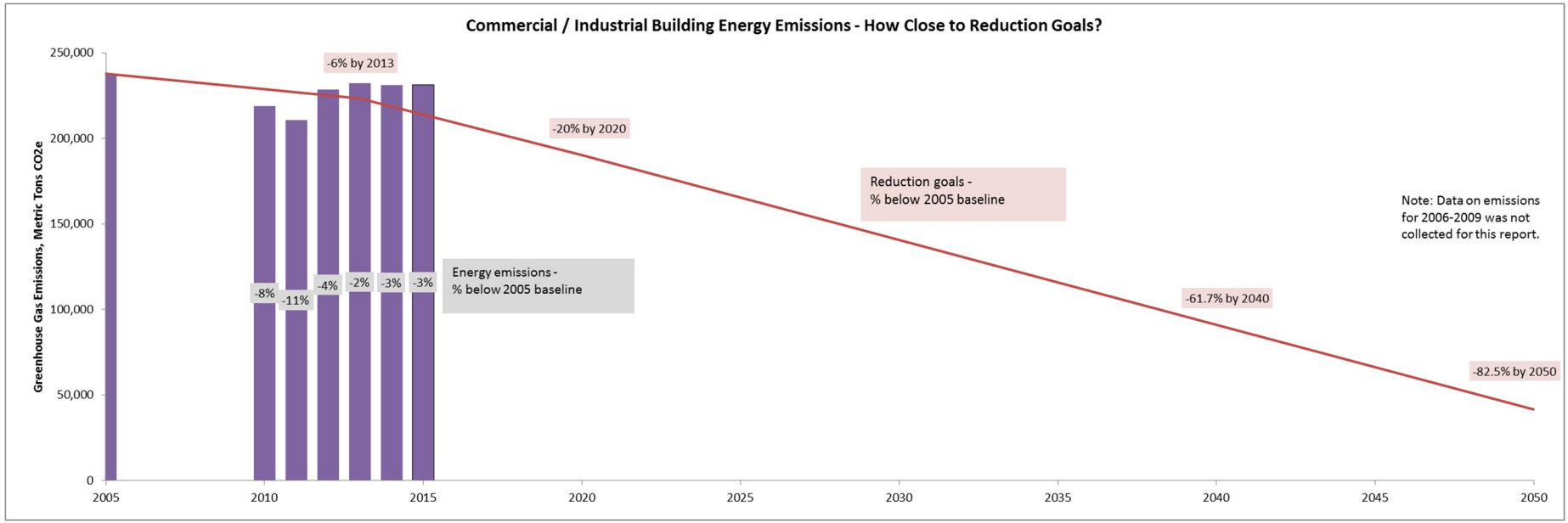


Chart 5: Commercial / Industrial Building Energy Emissions – How Close to Reduction Goals?



Building Energy Consumption: 2010 – 2015 Charts

Chart 6: Building Energy Usage Compared to 2005 Baseline

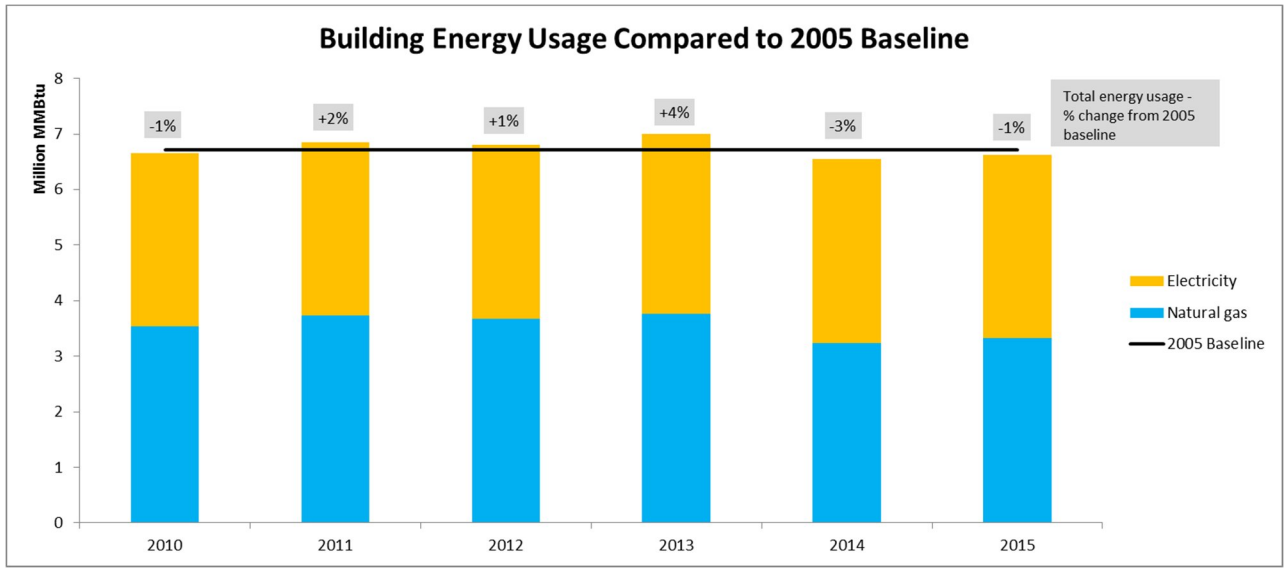


Chart 7: Residential Building Energy Usage Compared to 2005 Baseline

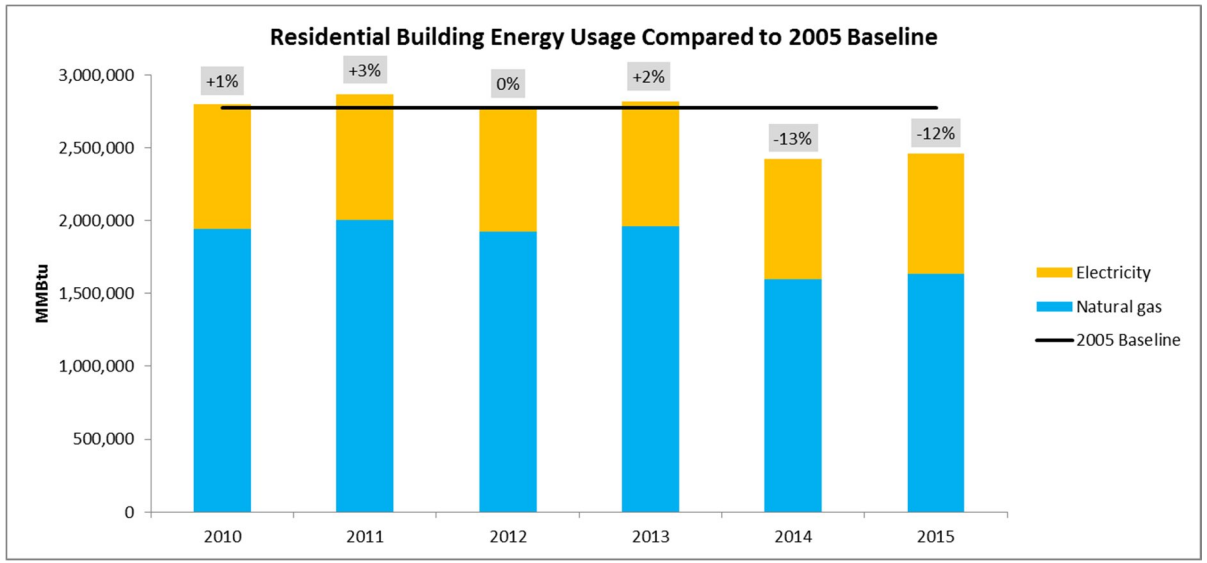


Chart 8: Residential Building Natural Gas Usage – How Close to Reduction Goal?

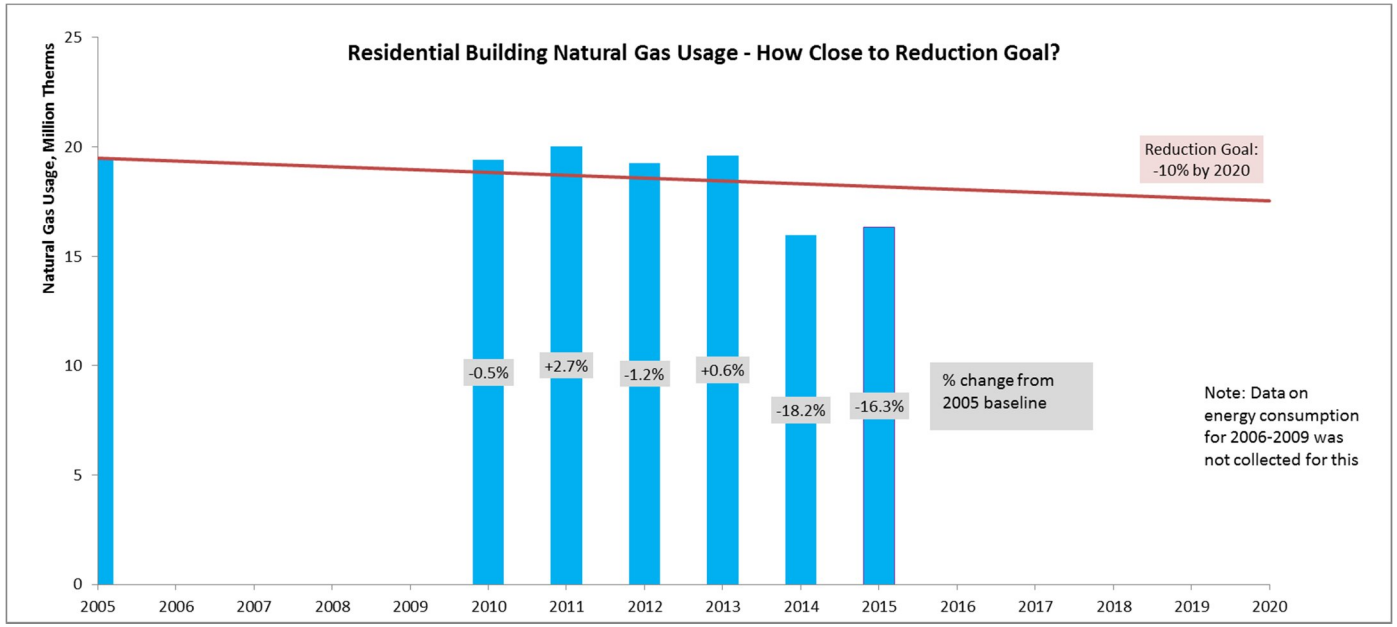


Chart 9: Residential Building Electricity Usage – How Close to Reduction Goal?

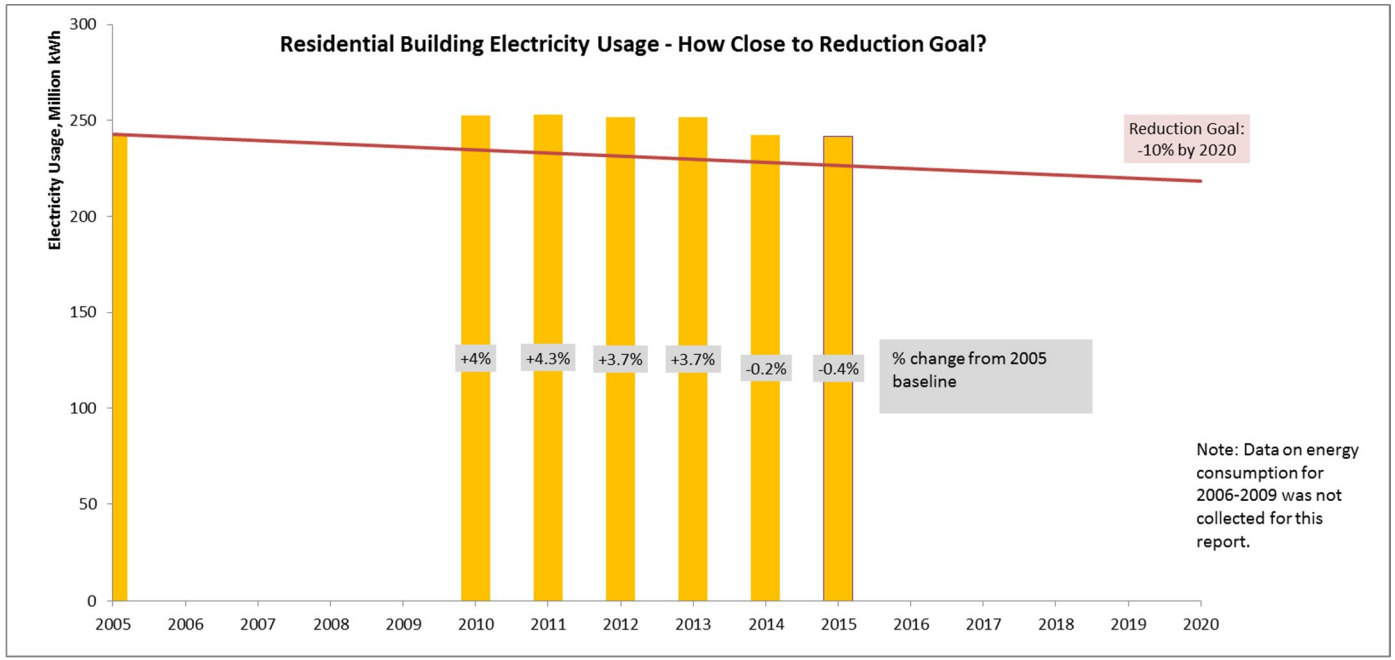
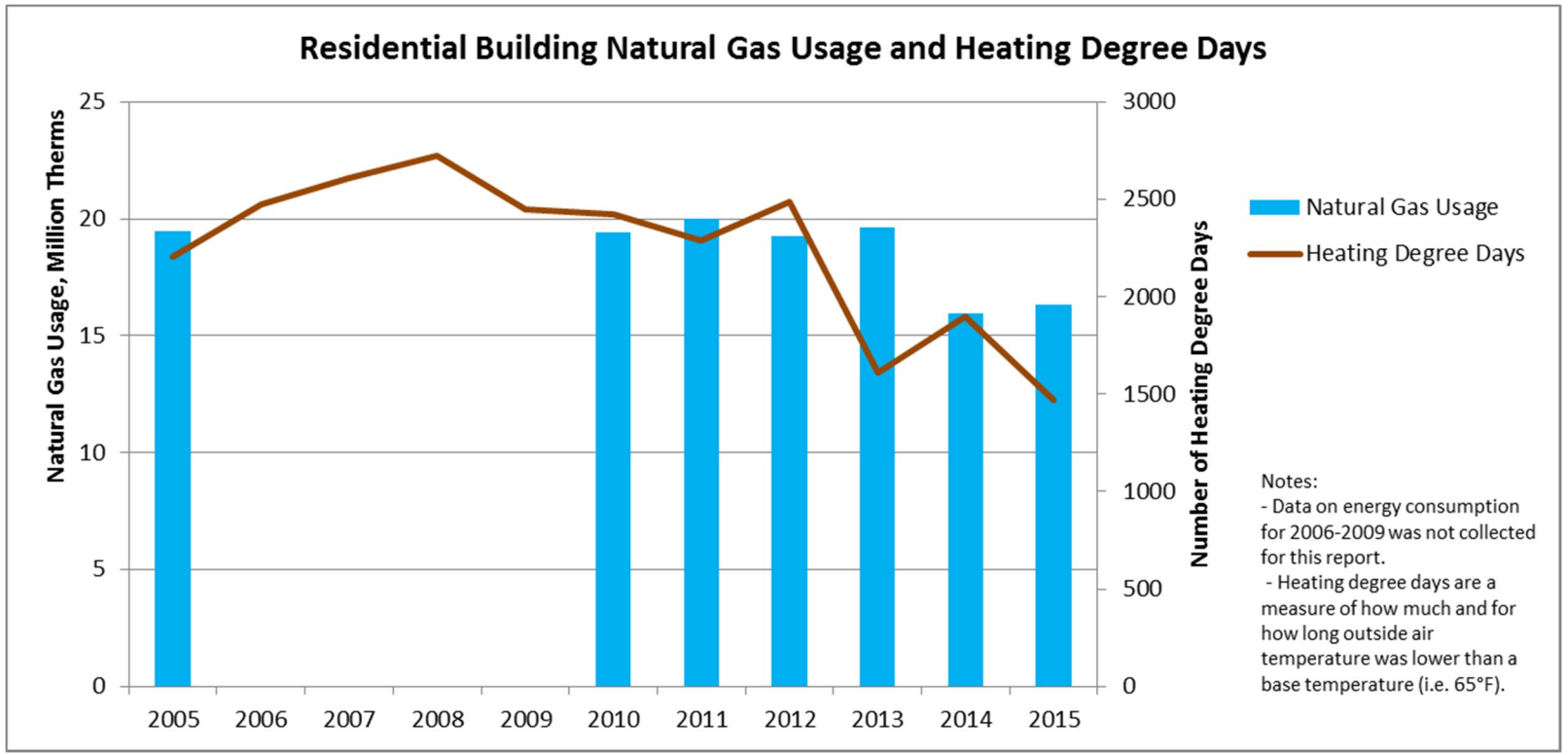


Chart 10: Residential Building Natural Gas Usage and Heating Degree Days



Staff Report

File #: RPT 16-078

DATE: July 11, 2016

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT
Net Energy Metering 2.0 Regulations

RECOMMENDATION
That the Committee reviews this report and provides comments.

BACKGROUND

This report is informational only. The purpose is to inform the Committee about the state of distributed solar in Hayward and recent Net Energy Metering (NEM) proceedings by the California Public Utilities Commission (CPUC).

What is Net Energy Metering?
NEM is a utility billing structure (tariff) that is intended to encourage the adoption of solar and other distributed generation systems. These systems have high up-front costs and NEM rate structures are intended to make the investment more cost-effective for property owners.
Energy customers rely on the electrical grid to provide consistent, around-the clock service. Because solar systems do not generate electricity at all times, customers with solar systems purchase electricity from the grid at night and on cloudy days.

NEM allows consumers with solar systems or other renewable energy systems to "sell" electricity back to the grid when they are overproducing (during the middle of the day) and use this as a credit to offset the electricity that they purchase from the grid when they are under-producing or inactive (at night). Any surplus credit is rolled over to the following billing period.

In some states, such as California, if a NEM customer has produced surplus power at the end of a twelve month billing period, then the utility company gives the customer a Net Surplus Compensation check. The CPUC has set the Net Surplus Compensation rate based on current market prices, which is between $0.03 and $0.04 per kilowatt-hour (kWh).

Virtual Net Metering, which is a variation to NEM for multifamily and multi-tenant buildings, allows certain customers that generate their own electricity to credit that electricity towards additional accounts. Under VNM, electricity produced by a single solar installation on a multifamily building may be

credited toward multiple tenant accounts.

Each state's Public Utilities Commission (PUC) determines the structure of the NEM tariff for the large Investor Owned Utilities (IOUs) in that state. In California, the CPUC determines the NEM tariff structure for Pacific Gas and Electric (PG&E), San Diego Gas and Electric, Southern California Edison, and a handful of smaller IOUs.

Relevant General Plan Policies

NR-4.6 Renewable Energy
The City shall encourage and support the generation, transmission, use, and storage of locally-distributed renewable energy in order to promote energy independence, efficiency, and sustainability. The City shall consider various incentives to encourage the installation of renewable energy projects (i.e. reduced permit fees and permit streamlining).

NR-4.10 Public Renewable Energy Generation
The City shall ensure that all new City-owned facilities are built with renewable energy, as appropriate to their functions, and shall install renewable energy systems at existing City facilities where feasible.

PFS-8.8 Renewable Energy Integration
The City shall encourage energy providers (e.g., PG&E) to offer their support and assistance in integrating individual renewable energy systems (e.g., solar systems) into the electricity grid.

Solar Systems in Hayward
Attachment I displays the number of permits issued for solar permits in Hayward each year from 2008 to the present (note that the data for 2016 is through June 21). From 2012 to 2015, the number of annual solar permits grew by 485%.

To make the solar permitting program easier, the City launched its solar permit program, "Solar Tuesday," on September 23, 2014. Through this program, applicants can come to the permit center and receive a same-day solar permit over the counter. This program has been a success. In 2015, 86% of solar permits were issued on Solar Tuesday.

Solar Capacity in Hayward
According to PG&E data, at the end of 2015, Hayward had 1,061 residential solar sites interconnected to the PG&E grid with a combined capacity of 4,005 kilowatts (kW). In addition, Hayward had sixty non-residential solar sites with a combined capacity of 10,278 kW.

Therefore, if all solar systems in Hayward were to be operating at their full capacity, the combined output would be 14,283 kW. For comparison, the average community demand for all Hayward PG&E accounts in 2015 was 110,599 kW. However, note that solar systems are often under-producing or inactive for large parts of the day.

DISUCUSSION

The NEM tariff structure in California expires by July 1, 2017 or when NEM capacity reaches 5% of an IOU's peak demand. Last summer, the IOUs warned that they were getting close to their 5% caps. As a result, the CPUC conducted hearings to adopt a NEM Successor Tariff last fall. Attachment II provides a summary of the hearings.

PG&E reached its 5% cap in June 2016, so all new solar customers in Hayward will now be enrolled under the Successor NEM Tariff.

Major highlights of NEM Successor Tariff for new solar customers: (paraphrased from the CPUC website)

- The Successor Tariff maintains the retail rate for NEM successor customers. This means that NEM customers will continue to be able to "sell" electricity back to the grid at the same rate that they purchase electricity. This arrangement is beneficial for solar customers because it allows them to reduce or break even on their electricity bills.

- New NEM customers will be grandfathered into the successor tariff for twenty years after their connection. This protects solar customers from any future CPUC decisions.

- The Successor Tariff does not add any new demand charges or grid access fees for solar customers. The IOUs advocated for these charges, but the CPUC ruled in favor of solar advocates, who argued that these charges would put solar out of reach for some families.

- The Successor Tariff adds a new interconnection fee for customers with systems under one megawatt (MW), which is a one-time flat fee likely to be approximately $75-$150.

- The Successor Tariff defines which fixed ("non-bypassable") charges NEM customers are required to pay on each kWh of electricity they consume. These charges primarily fund low income and energy efficiency programs. The Solar Energy Industries Association estimates that the average new solar customer will pay eight to ten dollars more a month than existing solar customers due to these charges. The rationale behind this increase is that previous solar customers were paying for their fair share of the "public good" by being earlier adopters of solar. As the price of solar has come down, solar customers are being required to contribute more to these other public good programs.

- The Successor Tariff requires that new solar customers use time-of-use (TOU) rates. TOU rates are favorable to solar customers because they allow the customer to sell electricity to the grid when it is more expensive (during the day) and purchase electricity from the grid when it is less expensive (at night).

- The Successor Tariff requires IOUs to make solar available to residents of multi-tenant buildings through Virtual Net Metering

In summary, new residential and small commercial solar customers between now and 2019 will have a similar NEM rate structure to existing solar customers, with an added interconnection fee of $75-$150 and an estimated eight to ten dollars in additional monthly charges for public good programs.

Large commercial customers will pay more each month for public good programs because those charges are based on kWhs consumed. However, large customers will pay the same flat interconnection fee of $75-$150 as long as their solar system does not exceed one MW. Customers with solar systems over one MW must pay for all distribution upgrade costs triggered by their system.

FISCAL IMPACT

The City is currently a NEM customer for several PG&E accounts that are attached to buildings with solar, such as the Animal Shelter and Utility Center on Soto Road. These accounts are grandfathered into the previous NEM structure and will not be impacted by the CPUC's current and future decisions. The new library and any other new solar installations will be subject to the Successor NEM Tariff and will be subject to the new interconnection fees as well as the monthly charges for public good programs. These fees will be factored into the financial analysis of future solar projects.

ECONOMIC IMPACT

NEM pricing can dramatically impact the number of new solar installations, which has a direct impact on the health of the local solar industry. For example, in December 2015, the Nevada PUC passed a decision to triple the fixed charges for NEM customers and reduced the credit received for surplus generation by 75%. As a result of these NEM changes, new solar installation permits dropped by 92% in the first quarter of 2016 and the state's three largest solar providers left the market.

The Solar Foundation, an independent nonprofit organization, conducts an annual State Solar Jobs Census. According to the Foundation, the solar industry accounted for 75,598 jobs in California in 2015 and 4,619 jobs in Alameda County. Sixty percent of these workers were employed as solar installers. This data can be found at www.solarstates.org <http://www.solarstates.org>.

SUSTAINABILITY FEATURES

Energy:

The NEM Successor Tariff continues to be favorable to solar customers and thus encourages adoption of distributed solar. This is policy goal of the Hayward's General Plan. Staff will continue to promote financing programs for solar installations, such as PACE Financing. Staff will be hosting a workshop this fall on several solar programs that are available to Hayward residents, including low-income homeowners.

Air:

Continued adoption of distributed solar as an energy source offsets more polluting forms of energy, which improves regional air quality. Solar improves local air quality when it is used as a fuel source for electric vehicles that replace the use of gas-powered cars and when it offsets the use of natural gas (for example, by switching from a gas powered water heater to an electric water heater).

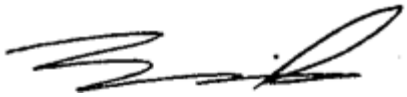
Purchasing:

All City purchases associated with distributed solar are consistent with the City's Environmentally Preferred Purchasing Policy.

Prepared by: Mary Thomas, Management Analyst

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:

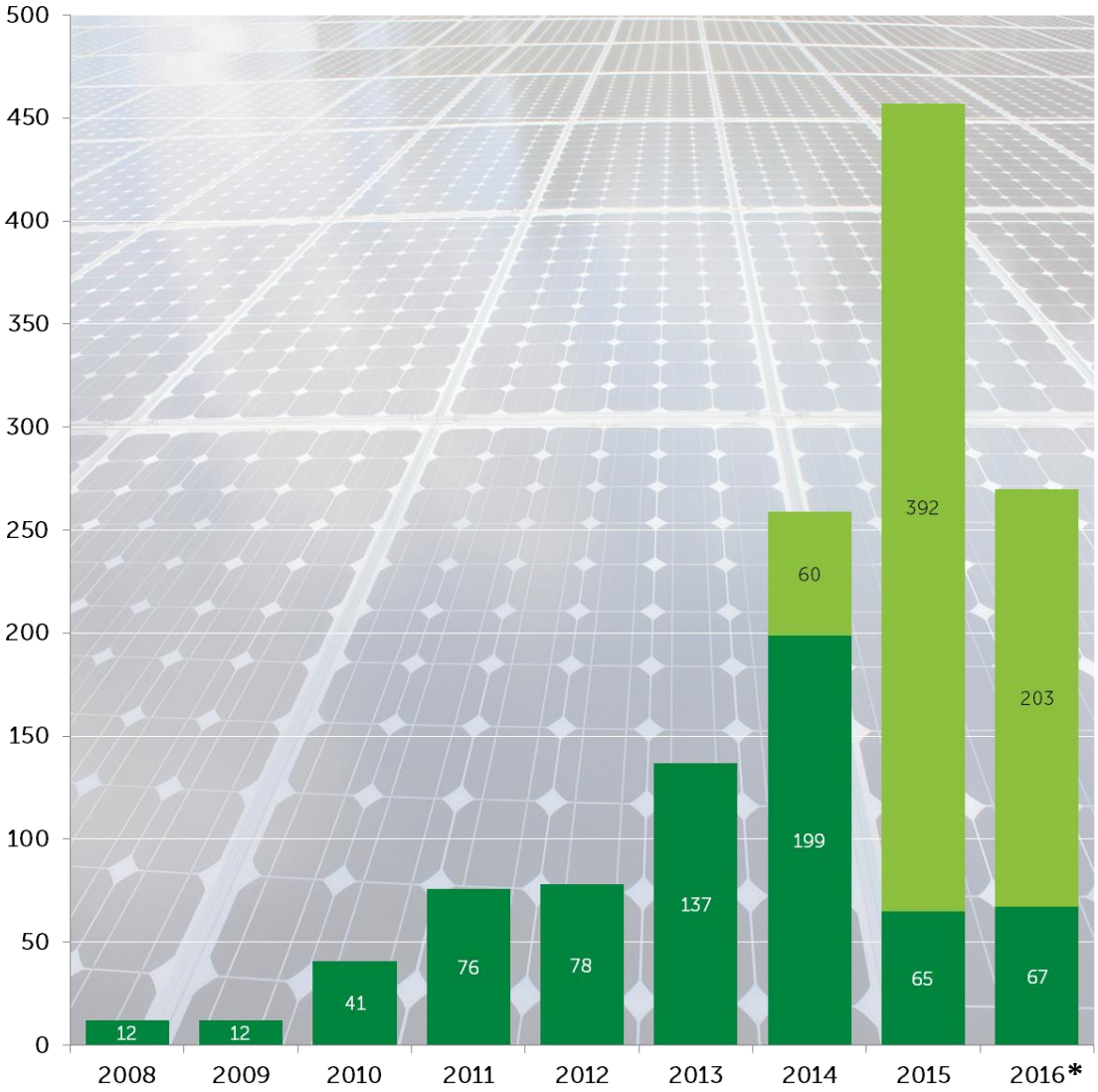


Fran David, City Manager

Attachments:

Attachment I	Solar Permit Data
Attachment II	Summary of CPUC Hearings

City of Hayward - Number of Solar Permits



*2016 data is from January 1- June 21.

The same-day solar permit program, "Solar Tuesday," began on September 23, 2014.

= Solar permits issued through the normal permit process

= Solar permits issued through the Solar Tuesday program

Summary of the CPUC Hearings on the NEM Successor Tariff

Arguments in favor of maintaining the previous NEM Tariff Structure
During the CPUC hearings, solar advocates argued that the previous NEM structure should be maintained to continue to encourage market adoption of distributed solar. The up-front cost of installing a solar system has dropped, but remains high for the average California household or business. Advocates fear that reducing the NEM rate to the wholesale rate or adding additional fixed charges will make solar cost prohibitive.

In addition, advocates argue that all benefits of distributed solar should be included in the CPUC's cost-benefit analyses. These potential benefits include:

- Reduction of electricity prices due to the displacement of more expensive power sources
- Reduction of air and climate pollution
- Reduction in maintenance costs for the electricity grid
- Increase in energy security

The Brookings Institute published a much-cited paper in May 2016 that that provides a review of cost-benefit analyses of NEM from around the country. The report concluded that these studies increasingly find that "the economic benefits of net metering actually outweigh the costs and impose no significant cost increase for non-solar customers."
The paper can be found here: http://www.brookings.edu/research/papers/2016/05/23-rooftop-solar-net-metering-muro-saha

Arguments against the current NEM Tariff Structure
During the hearings, IOUs argued that the previous NEM structure is unfair because they claim that non-solar customers end up paying more for grid maintenance than solar customers. This is because the rates that non-solar customers pay incorporate traditional costs like maintenance, planning, and risk management.

Utilities are particularly concerned with two issues:

- The rate that NEM customers are allowed to "sell" electricity back to the grid is currently set at the retail rate. This means that NEM customers sell electricity to the grid at the same rate that it costs them to purchase electricity from the grid. Some IOUs argue that this rate should be closer to the wholesale rate that IOUs pay to procure energy from other sources. For comparison, the wholesale rate is roughly half of the retail rate.

- NEM customers are currently exempt from many charges, including standby charges, departing load charges, and costs associated with interconnection fees and distribution upgrades. Some IOUs argue that NEM customers should pay higher fees to cover fixed maintenance costs because these customers rely on a functioning grid.

San Diego Gas and Electric estimates that their non-solar customers will be required to pay an additional $300 annually by 2025 due to this "cost shift." However, the Solar Energy Industries Association disputed this number with their own calculation, which estimates the cost shift will increase a non-solar customer's bills by less than 1%.

CPUC Decision on the NEM Successor Tariff

The CPUC hearings happened on the tail of two similar hearings in Hawaii and Nevada. In both states, the PUCs approved successor NEM tariffs that were favorable to the IOUs and disadvantageous to solar customers.

In contrast, the CPUC passed a narrow three-two decision on January 28, 2016 that continues the previous NEM structure in California with some slight changes and clarifications. The decision was widely praised by solar advocates. The CPUC will revisit the issue in 2019.

In their comments, the CPUC Commissioners generally concluded that the successor tariff moves in the right direction, but does not provide a long-term answer to some of the concerns raised by the IOUs. Commissioner Carla Peterman, who voted in favor of the Decision, stated that "It is clear the Commission is not comfortable with the variety of value and cost estimates." The Commission directed staff to conduct more definitive analysis of alternative compensation structures and the true impact of the cost-shift from NEM to non-NEM customers.

The 140 page decision can be found here:
http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf
CPUC's summary of the previous NEM tariff can be found here:
http://www.cpuc.ca.gov/General.aspx?id=3800
CPUC's summary of the changes made as part of the successor tariff can be found here:
http://www.cpuc.ca.gov/General.aspx?id=3934

Staff Report

File #: WS 16-048

DATE: July 11, 2016

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT
East Bay Community Energy - Presentation of Technical Study

RECOMMENDATION
That the Committee reviews and comments on this report.

SUMMARY

The County of Alameda and the cities within the County are exploring the possibility of establishing a community choice aggregation (CCA) program also known as a community choice energy (CCE) program. The purpose of this report is to provide an overview of the technical study that has been prepared by the County to determine the feasibility of establishing a CCE program.

BACKGROUND

In June 2014, the Alameda County Board of Supervisors, allocated $1.3 million to exploring the possibility of establishing a CCA program, which is being called East Bay Community Energy (EBCE). If established, EBCE would be a joint powers authority (JPA) that aggregates electricity demand within participating Alameda County jurisdictions in order to procure electricity for its customers. Pacific Gas & Electric Company would continue to provide customer billing, transmission, and distribution services.

On June 28, 2016, Council received an overview of the draft joint powers agreement and a brief overview of the technical study. The June 28 report and several other reports provided to Council and the Council Sustainability Committee are available at <http://www.hayward-ca.gov/cce> . Also available on this webpage is the June 29 letter sent to the County with Council's comments on the draft JPA.

DISCUSSION

On July 6, 2016, the County provided a revised draft of the JPA that addresses all three of the concerns identified in the City's June 29 letter. Section 4.2.1 was revised to state that both Directors and alternate Directors must be elected officials. Section 4.13 was revised to include term limits for the Chair and Vice Chair of the Board. The third item in the City's letter requested a change to the provision related to the possible withdrawal of a city prior to program launch may be of particular interest to the Committee.

After cities join the JPA in October this year, the Authority will receive bids from potential power suppliers. In the most recent draft of the JPA, Section 7.3 was revised as shown below:

> "After receiving bids from power suppliers for the CCA Program, the Authority must provide to the Parties a report from the electrical utility consultant retained by the Authority comparing the Authority's total estimated electrical rates, the estimated greenhouse gas emissions rate and the amount of estimated renewable energy to be used with that of the incumbent utility. Within ~~15~~30 days after receiving this report, through its City Manager or a person expressly authorized by the Party, any Party may immediately withdraw its membership in the Authority by providing written notice of withdrawal to the Authority if the report determines that any one of the following conditions exists: (1) the Authority is unable to provide total electrical rates, as part of its baseline offering to customers, that are equal to or lower than the incumbent utility, (2) the Authority is unable to provide electricity in a manner that has a lower greenhouse gas emissions rate than the incumbent utility, or (3) the Authority will use less renewable energy than the incumbent utility."

Regardless of the time allowed to make a decision, Hayward should be prepared to decide whether to remain a member of the JPA once the information related to the three criteria listed above is available. Would the Committee support remaining in the JPA if rates would be higher than PG&E for only a short period of time? Would the Committee recommend remaining in the JPA if EBCE would provide electricity with more GHG emissions or less renewable content than PG&E? What if EBCE is able to provide cleaner electricity than PG&E after the first few years? Staff would appreciate the Committee's input on these questions.

Voting Shares Voting - Section 4.11.2 previously stated that two or more Directors may request a voting shares vote. The July 6, 2016 version of the JPA has been changed to state that four or more Directors may request a voting shares vote. Hayward's objection to this change was voiced during a steering committee meeting on July 6 and during a meeting of city attorneys on July 7. If the JPA is not changed back to "two Directors", staff could raise the issue on August 2, 2016, when the County Board of Supervisors will consider adoption of the JPA.

Technical Study - The County commissioned a Technical Study to determine the feasibility of establishing a CCA in Alameda County. The report (available at <http://www.hayward-ca.gov/cce>) addresses the electric load the program would need to serve, the carbon intensity of electricity that could be provided in comparison with that of PG&E, and the rates that would be charged in comparison to PG&E rates. The Study includes the following chapters:

Executive Summary
1 Introduction
2 Economic Study Methodology and Key Inputs
3 Cost and Benefit Analysis
4 Sensitivity of Results to Key Inputs
5 Macroeconomic Impacts
6 Other Risks
7 Other Issues Investigated
8 Conclusions

The Renewable Portfolio Standard (RPS), per State law, requires that electricity providers source at least 33% renewable energy by 2020 and at least 50% by 2030. The EBCE Study considered three scenarios with varying levels of renewable energy:

1. Minimum RPS Compliance: EBCE would meet the minimum 33% RPS requirement in 2020 and the 50% RPS requirement in 2030.

2. Accelerated RPS: EBCE would provide 50% renewable energy starting in the first year. The other 50% would be from large hydroelectric power to further reduce GHG emissions. However, large hydroelectric generation is not considered "renewable" for purposes of meeting the RPS.

3. Ultra-Low GHG: EBCE would provide 50% renewable energy in the first year and 80% by the fifth year.

Chapter 3 provides rate comparisons between PG&E and EBCE only for residential customers. No rates or rate comparisons are provided for commercial or industrial customers. Following is a brief summary:

	Scenario 1 Minimum RPS Compliance	**Scenario 2** More Aggressive	**Scenario 3** Ultra-Low GHG
Renewable Content	33% in 2020 & 50% in 2030	50% from 1st year	50% from 1st year & 80% by 5th year
GHG compared to PG&E	Higher in every year	Higher for 1st few years	Lower in every year
Anticipated Residential Rate Savings	7%	6.5%	3%

As shown in Figure 16 in the Technical Study, Scenario 1 provides no advantage over PG&E in terms of GHG emissions. Figure 18 in the Technical Study shows that Scenario 2 has higher or almost equivalent GHG emissions compared to PG&E in 2017 through 2024. This leaves Scenario 3 as the one option that provides for significant, near term GHG savings.

Chapter 4 includes a rate sensitivity analysis that shows how rates could be impacted by various factors, which is shown graphically on page twenty-nine. The base case assumes that the Diablo Canyon nuclear power plant will not continue to operate beyond 2025. On June 21, 2016, PG&E confirmed that Diablo Canyon will close by 2025. If Diablo Canyon did relicense, the sensitivity analysis shows that PG&E's generation costs would increase and EBCE would be at a competitive advantage. The worst case scenario in the sensitivity analysis combines all the negative conditions, including the closing of Diablo Canyon, and shows the EBCE would have higher rates than PG&E starting in 2024.

Perhaps a larger concern with the closure of Diablo Canyon will be the fact that PG&E intends to replace Diablo's generating capacity, about 2,160 megawatts, with new renewables. PG&E could have as much as 55% renewables by 2031. This means that EBCE will have a greater challenge competing with PG&E in terms of renewable content and meeting the RPS.

The Technical Study concludes that "a CCA in Alameda County appears favorable" in that rates would likely be competitive with PG&E. The report also concludes that providing electricity with fewer GHG emissions than PG&E may be somewhat challenging. Because PG&E sources much of its electricity from large hydroelectric and nuclear generators, the CCA will need to provide large percentages of renewable and/or hydroelectric in order to outperform PG&E in terms of emissions.

The County established a deadline of June 15 for comments on the technical study. Staff submitted comments asking the County to include rate comparisons for commercial and industrial customers.

Comments from Others - The following entities have submitting written comments (available at <http://www.hayward-ca.gov/cce>) on the Technical Study:

The City of San Leandro has requested changes to the voting Shares Vote. Also, San Leandro has hired a consultant to do a peer review of the Technical Study.

East Bay Clean Power Alliance:

- Not enough local renewable generation is expected
- Most of job creation identified in the economic model is due to customers' bill savings
- The ability to forecast market conditions out to 2030 is questionable

IBEW 1245:

- Future PG&E rates and cost of solar power cannot be substantiated
- Future electric load is not accurate
- The study provides no assurance that EBCE can balance supply and demand
- There is no limitation on use of RECs (and there should be)
- The study does not anticipate sufficient local renewable generation
- A high PCIA should not be a "sensitivity". It should be expected.
- The inputs to the economic and jobs analysis are incorrect.

ECONOMIC IMPACT

As described in Chapter 5 of the Technical Study, construction of local generation facilities within Alameda County would have very little impact on the County's overall economic activity. The economic model shows that a much larger impact on the local economy would be caused by the bill savings experienced by individual customers. The report notes that when a household has a lower utility bill, there may be increased spending in other sectors of the local economy. Depending on the scenario selected, projected job creation could range from 731 to 1,322 new jobs. According to the California Economic Development Department, as of April 2016, there were 790,800 jobs in Alameda County. The job creation from EBCE could amount to a 0.09% to 0.17% increase, depending on the scenario implemented.

SUSTAINABILITY FEATURES

The EBCE program is directly in line with General Plan policy NR 4.8, which states, "The City shall assess and, if appropriate, pursue participation in community choice aggregation, or other similar programs.

The City shall seek partnerships with other jurisdictions to minimize start up and administration costs."

In addition, the program would likely have the following sustainability features or benefits:

Energy: Electricity/natural gas/other fossil fuels.

A primary goal of the EBCE program would be to provide electricity from clean and renewable sources that reduces our reliance on fossil fuels.

Air: Air emissions of pollutants.

EBCE would minimize pollutants and has the potential to reduce GHG emissions, helping Hayward to meet its Climate Action goals.

Purchasing: Consistent with the City's Environmentally Preferred Purchasing Policy.

EBCE would meet the environmental and economic priorities of its member agencies.

NEXT STEPS

The tentative deadline to join the JPA is October 31, 2016. In September/October, staff will present for Council's consideration an ordinance to join the JPA. The County's goal is to launch EBCE in the spring of 2017. Staff will continue to update the Committee as new information becomes available.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:

Fran David, City Manager

Staff Report

File #: RPT 16-081

DATE: July 11, 2016

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT
Sustainability Education and Outreach Update

RECOMMENDATION
That the Committee reviews this report and provides comments.

BACKGROUND

At the September 2015 Sustainability Committee Meeting, staff presented a two-year Sustainability Education and Outreach Plan for calendar years 2016 and 2017. The Plan is included as Attachment I. The purpose of this report is to provide an update on the related activities for the first half of 2016 and the goals for the second half of the calendar year.

The Plan is intended to address the following General Plan Implementation Programs:

NR7 - Energy Reduction Initiative and Annual Report. The City shall develop and implement a public information and education campaign to encourage every household and every business to reduce their energy consumption by 10% by 2020. The City shall evaluate and report to the City Council annually on the community's progress in achieving the ten percent goal, and recommend additional efforts as necessary to ensure the goal is met. (2014-16 and Annually)

NR16 - Green Portal. The City shall develop and maintain a stand-alone Green Portal, or website, that serves as the City's hub for all things green. (2014-16 and Ongoing)

NR17 - Business Engagement in Climate Programs. The City shall engage local businesses and business organizations (e.g., Chamber of Commerce, the Keep Hayward Clean and Green Taskforce, the Alameda County Green Business Program) in climate-related programs. (Annually)

NR18 - Environmental Education Programs. The City shall coordinate with Alameda County, Pacific Gas & Electric Company, non-profit organizations, and other agencies and businesses to develop and implement an Environmental Education Program. (2017-19)

DISCUSSION

The categories below are taken from the Sustainability Education and Outreach Plan, which is included as Attachment I. A check mark (√) indicates a completed task and a check box ( ) indicates an ongoing or future task.

Update Sustainability Website

The City's new website launched in February 2016. Staff worked to ensure that sustainability topics are fully integrated into the new site.

- √ The "Your Environment" section of the website serves as the City's Green Portal and includes sustainability news, events, and a blog: <http://www.hayward-ca.gov/environment>. A screenshot is included as Attachment II.
  The site will be continuously updated with current information.

Create Sustainability Dashboard

A dashboard displays performance data and infographics that depict the City's sustainability goals and our progress toward those goals.

- √ The City's primary six sustainability metrics are now displayed on a static online dashboard: <http://www.hayward-ca.gov/sustainabilitydashboard> A screenshot is included as Attachment III.
  Staff is participating in a pilot program called Connected Cities for municipal sustainability metrics. The program uses a cloud-based platform to automatically gather billing data, such as electricity usage, and display it visually on a website. Once staff has connected the City's municipal gas, electric, and water utility accounts, the platform will automatically update municipal metrics on the City's dashboard. By the end of CY 2016, the platform will have the ability to automatically chart the City's progress towards its municipal goals.

Increase Communication Channels

Staff has worked to advertise events and programs through new communication channels with the goal of reaching as many segments of the Hayward community as possible. Each year, the Department sends out bill inserts and mailers that explain the City's sustainability programs to solid waste services and water customers. Over the past six months, staff has also used the following channels to communicate sustainability messages:

- √ In-person updates at community meetings, such as the South Hayward Collaborative, the Youth Commission, and the Keep Hayward Clean and Green Taskforce
- √ Placing a poster in the lobby of the downtown movie theater that advertised a community photo contest and directed community members to the City's social media sites
- √ Advertising events through Nextdoor, Facebook, and Twitter social media
- √ Advertising events through partner listservs, such as the Cal State East Bay faculty listserv, Chabot's student listserv, and Hayward Unified School District's (HUSD) parent communication portal

Communicating online is the most cost effective (and environmentally sustainable) way to keep in regular contact with community members. Therefore, staff is particularly focused on providing ways for community members to sign up for updates through social media and an e-newsletter.

- √ In the past six months, 800 subscribers have been added to the environment listserv and the first

four newsletters have been sent. The newsletter from April is included as Attachment IV. Past newsletters can be seen at: <http://www.hayward-ca.gov/environmentnews>
Staff has the goal of adding another 1,000 subscribers over the next year at community events and through promotions.

Expand Volunteer and Internship Programs

In the past twelve months, the Environmental Services Division hosted four interns. This increased staff's capacity to do additional outreach and provided growth opportunities for young people.

- √ Civic Spark AmeriCorps Fellow: CivicSpark is a California Governor's Initiative dedicated to building capacity for local governments to address climate change and water management issues in California. By the end of her term in December, Hayward's Fellow will have provided 1,300 hours of service to the City. Her work has been focused on compiling the City's greenhouse gas emissions data and assisting with outreach events.
- √ Cal State University East Bay "Pioneers for Change": The Utilities and Environmental Services Department hosted two undergraduate students for eight hours each week. Both students were bilingual Spanish speakers and assisted with marketing green programs, event planning, and direct outreach to Hayward's Latino community.
- √ Coro Fellow: The Coro Fellowship is a year-long, post-graduate leadership program. Over the course of the program, Fellows are placed in six different sectors, including local government. Hayward's Fellow collected datasets for the dashboard and helped launch the #HaywardFresh photo contest during her six-week placement.

Leverage Community Partners:

- √ Unite2Green is a pilot program that is training high school, college, and community leaders to educate their neighbors in the Jackson Triangle about the effect that climate change will have on their health, finances, and security. Staff partnered with ICLEI and the Hayward Promise Neighborhood to train six Unite2Green Hayward Leaders, who led four bi-lingual workshops on water and energy conservation and composting. The workshops reached over 300 residents.
- √ Staff presented to the Cal State University East Bay (CSUEB) sustainability student group and coordinated advertising for Earth Day campaigns.
  The City will launch the Sustainable City Year Program in the fall, in partnership with CSUEB. The model was developed by the University of Oregon. The pilot program will link University students and faculty with City staff to complete specific sustainability projects that are part of the City's work plan.
  Staff will present on green programs at business group meetings, such as the Chamber of Commerce and the Rotary Club.

Run Coordinated Messaging Campaigns:

Over this summer, staff will be conducting a campaign to encourage greater use of the Hayward Household Hazardous Waste Facility.
Through the Sustainable City Year Program, staff will be working with several CSUEB classes in the fall to design messaging campaigns around composting, anti-litter, and energy reduction.

Streamline Outreach at Community Events

- √ Staff has set performance metrics to measure the success of our outreach at community events.

These include the number of emails collected and the number of surveys completed.

√ Staff has condensed and updated outreach materials to focus on the most relevant programs, such as the combined water conservation rebates flyer in Attachment II.
Staff will train volunteers to assist with tabling so we can attend more events over the summer and fall of 2016.

Scale Up City-Sponsored Events and Workshops

√ In addition to the annual Water Efficient Landscaping classes, the City hosted two workshops on energy upgrade programs. Fifty-seven home owners and seventeen multifamily property owners attended. Staff met over the phone with an additional thirty property owners who were unable to attend the workshops.

√ Staff hosted the first-ever Bike to Work Day energizer station at South Hayward BART. Cyclepath, CSUEB, and Life Chiropractic College West also hosted stations in Hayward.

√ Staff partnered with the City Library on the Book to Action events, including a sustainable resource fair and the screening of the documentary *Can You Dig This*, which follows the journey of four gardeners in South Central Los Angeles.
Staff will expand the environmental film series to include two additional films in the fall - one on food waste, and one on water resources.
Staff will continue to run workshops on energy programs, in line with General Plan Implementation Program NR7 - Energy Reduction Initiative. In 2016, there will also be workshops on PACE Financing for energy and water conservation and programs that assist with solar installation.

IMPLEMENTATION IN 2017

Launch Go-Green Challenges

Staff is preparing to run community challenges in 2017 that result in concrete, measurable behavior changes. These challenges will be modeled on community based social marketing principles, which stress neighbor-to-neighbor outreach and creatively removing barriers to participation. To provide motivation, participants will be given opportunities and tools to make pledges and track their progress alongside their peers.

FISCAL AND ECONOMIC IMPACTS

Staff time and other costs for outreach activities have been and will continue to be absorbed into the existing budget for the Utilities and Environmental Services Department. Sustainability education and outreach activities generally have a positive impact on the local economy. Reducing the use of energy and water can save residents and businesses money.

SUSTAINABILITY FEATURES

The outreach and education activities have the end goal of encouraging and increasing participation in sustainability practices, which would likely have the following benefits:

Energy:

Increasing participation in energy efficiency and solar programs in order to reduce energy use and increase the use of renewable energy

Water:

Increasing participation in water conservation programs in order to reduce water consumption

Solid Waste:

Increasing participation in composting and recycling programs in order to reduce waste sent to the landfill

Air and Transportation:

Increasing use of alternative transportation options in order to reduce greenhouse gas emissions and air pollution

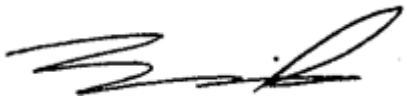
Purchasing:

All purchases associated with the above activities will be consistent with the City's Environmentally Preferred Purchasing Policy.

Prepared by: Mary Thomas, Management Analyst

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I	Sustainability Outreach Plan
Attachment II	Screenshot of "Your Environment" Webpage
Attachment III	Screenshot of Sustainability Dashboard
Attachment IV	April Newsletter
Attachment V	Water Conservation Rebate Combined Handout

Utilities & Environmental Services
2016-17 Sustainability Outreach Plan

CONTENTS

DESIRED OUTCOME

Behavior changes throughout the Hayward community that result in:

- ✓ Decreased greenhouse gas emissions
- ✓ Decreased resource consumption
- ✓ Decreased litter and pollution

"Initiatives to promote behavior change are often most effective when they are carried out at the community level and involve direct contact with people…Numerous studies document that education alone often has little or no effect upon sustainable behavior."

-Doug McKenzie-Mohr[1]

[1] *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing.* New Society Publishers, 2011. Online book at http://www.cbsm.com/pages/guide/preface/.

Relevant General Plan Policies and Programs

The following are the General Plan policies and implementation programs that are related to sustainability outreach and education.

GENERAL PLAN POLICIES

NR-2.4 Community Greenhouse Gas Reduction. The City shall work with the community to reduce community-based GHG emissions by 20 percent below 2005 baseline levels by 2020, and strive to reduce community emissions by 61.7 percent and 82.5 percent by 2040 and 2050, respectively.

NR-2.14 Air Quality Education. The City shall educate the public about air quality standards, health effects, and efforts they can make to improve air quality and reduce greenhouse gas emissions.

HQL-2.3 Education about Walking, Cycling and Using Public Transit. The City shall partner with schools, employers, transit agencies, HARD, and community groups to teach bicycle and pedestrian safety in schools and workplaces and to educate residents and businesses about the health and environmental benefits of walking, bicycling, and using public transit.

HQL-7.3 Home Use of Hazardous Materials. The City shall encourage and educate residents, non-profits, and businesses to implement integrated pest management principles, reduce or discontinue the use of pesticides, herbicides, and toxic cleaning substances.

HQL-9.6 Energy Resiliency. The City shall continue to encourage residents and businesses to use less gasoline for transportation, and improve energy efficiency in and renewable energy generation from buildings and industry processes to reduce impacts from rising oil and energy prices.

PFS-7.13 Residential Recycling. The City shall encourage increased participation in residential recycling programs, and strive to comply with the recycling provisions approved by the Alameda County Waste Management Authority Board. The City shall work with StopWaste.org to monitor participation in residential recycling programs and educate the community regarding actual composition of waste sent to landfills.

PFS-7.23 Consumption Reduction. The City shall educate the community about the benefits of reducing overall consumption.

GENERAL PLAN IMPLEMENTATION PROGRAMS

NR-7. Energy Reduction Initiative and Annual Report. The City shall develop and implement a public information and education campaign to encourage every household and every business to reduce their energy consumption by 10 percent by 2020. The City shall evaluate and report to the City Council annually on the community's progress in achieving the ten percent goal, and recommend additional efforts as necessary to ensure the goal is met. (2014-16 and Annually)

NR-16. Green Portal. The City shall develop and maintain a stand-alone Green Portal, or website, that serves as the City's hub for all things green. (2014-16 and Ongoing)

NR-17. Business Engagement in Climate Programs. The City shall engage local businesses and business organizations (e.g., Chamber of Commerce, the Keep Hayward Clean and Green Taskforce, the Alameda County Green Business Program) in climate-related programs. (Annually)

NR-18. Environmental Education Programs. The City shall coordinate with Alameda County, Pacific Gas & Electric Company, non-profit organizations, and other agencies and businesses to develop and implement an Environmental Education Program. (2017-19)

Update Sustainability Website

Lay the Groundwork

WHAT?

Create a website that will house all sustainability related programs and include the following features:

- A calendar of green events
- Photo and video galleries
- Maps of green initiatives that are happening throughout Hayward
- A dynamic dashboard displaying sustainability metrics
- Audience specific pages for individuals, businesses, and the community
- A green government page outlining municipal efforts and celebrating the City's success stories
- A short and simple URL for easy reference

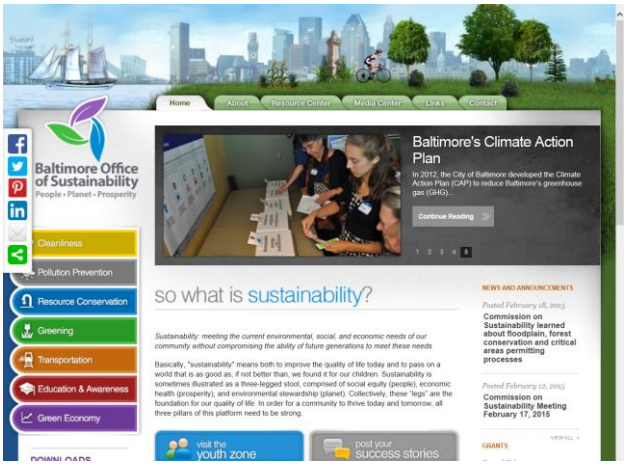
WHY?

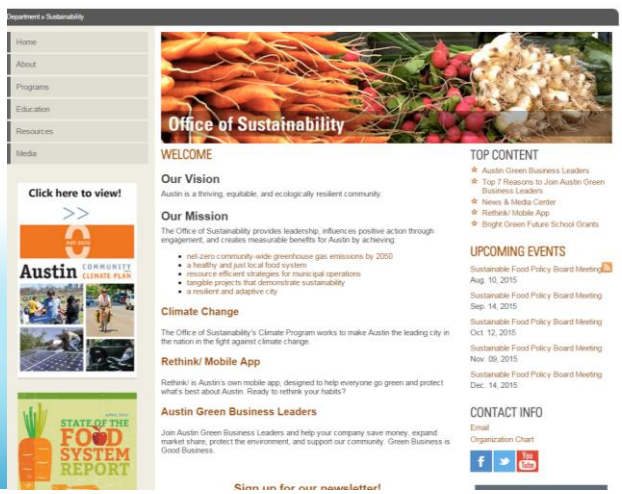
A well-maintained website is an essential building block for an outreach campaign. First, this will be a one-stop hub that community members can go for information and updates. Second, the dashboard will keep track of the City's progress towards meeting its sustainability goals. Third, this will help staff from multiple departments keep information organized by centralizing all campaigns and documents.

WHEN?

The Sustainability Website will be created as part of the overall update of the City's website, which will launch in December, 2015.

EXAMPLES (from Baltimore, MD, Santa Monica, CA, Seattle, WA, and Austin, TX)





Create Sustainability Dashboard

Lay the Groundwork

WHAT?

Create datasets and infographics that measure and depict the City's sustainability goals. The metrics will be displayed in an online dashboard on the website, in presentations, and on posters. The dashboard will also include historic data and regional comparisons when possible.

The datasets will be updated as frequently as data collection methods allow. Real-time monitoring of metrics is a long-term goal. As technology makes this possible through smart meters and other means, staff will work to incorporate real-time monitoring into the online dashboard.

The City does not currently have the capacity to compile all desired datasets. Staff will create a metric wish list to distribute to professors at Hayward colleges and universities who are interested in creating service-learning projects.

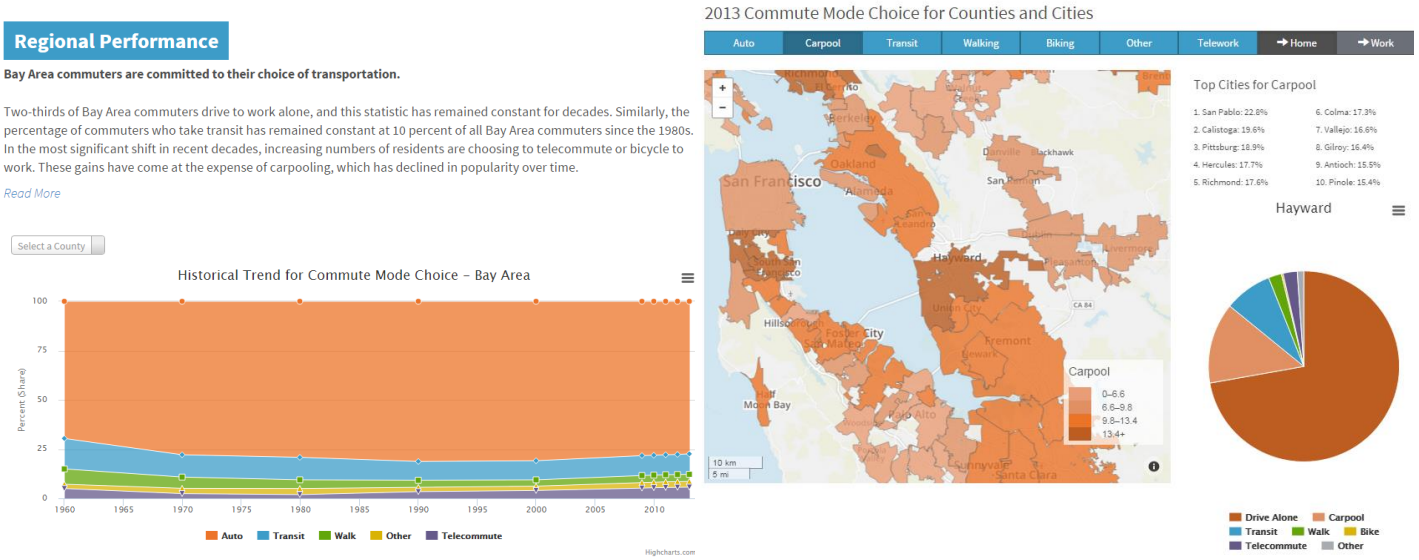
WHY?

A dashboard serves as an information piece about Hayward's current performance and a reminder of the City's goals. Also, a dashboard can also be a motivator for community members who would like to see improvement.

WHEN?

Datasets for the dashboard are currently being compiled. The online dashboard and infographics will be created as part of the overall update of the City's website, which will launch in December, 2015. Staff will report on the primary metrics at each Council Sustainability Committee (CSC) meeting.

EXAMPLE (from MTC's Vital Signs)

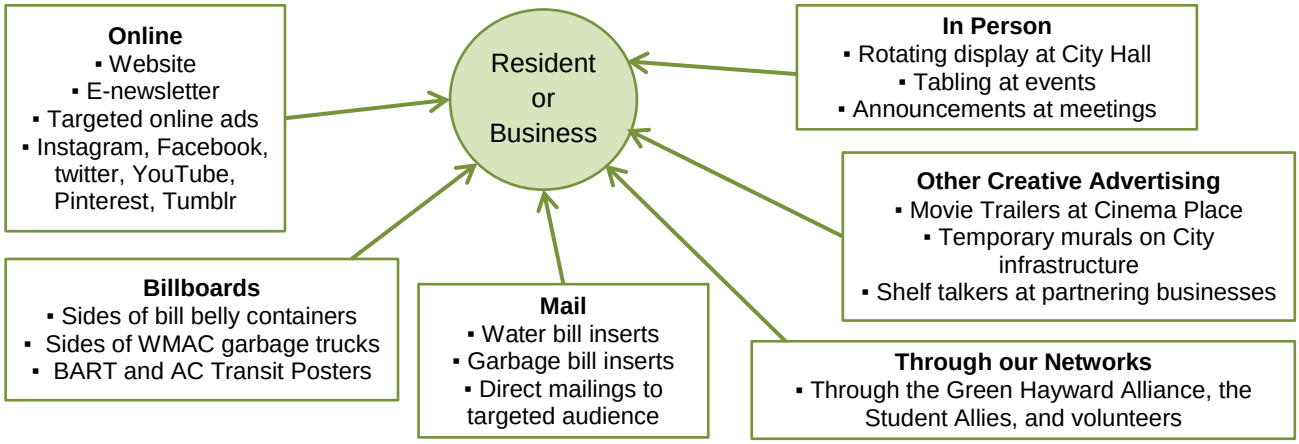


Increase Communication Channels

Lay the Groundwork

WHAT?

Identify and create a diverse range of communication channels. Staff is currently getting quotes to create a "menu" of communication channels and their associated costs. Staff can refer to this menu to select the appropriate channels for future messaging campaigns depending on the targeted audience and available budget. Communicating online is the most cost effective (and greenest) way to keep in regular contact with community members. Therefore, staff is particularly focused on providing ways for community members to pre-sign up for updates through social media and an e-newsletter.



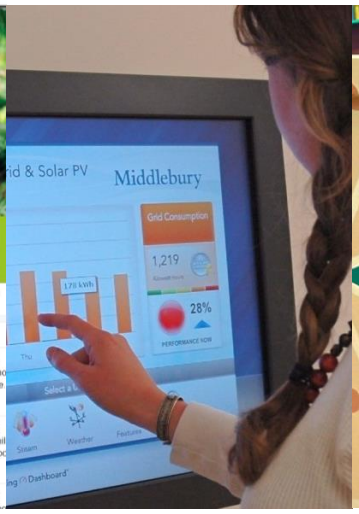
WHY?

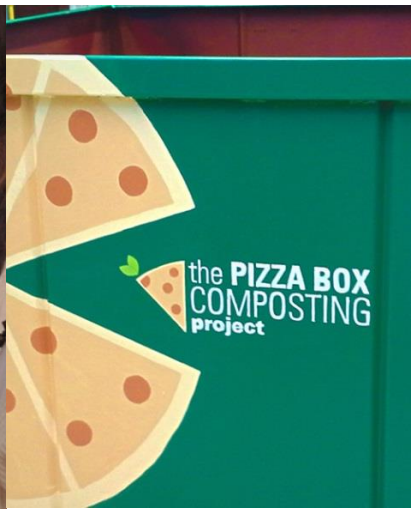
To reach as many segments of the Hayward community as possible.

WHEN?

The e-newsletter will launch in February, 2016. Over the coming year, staff will build the email list by tabling, creating promotional events (such as an opportunity to win a toilet), and allowing people to opt in when they pay their water bill.

EXAMPLES (Brisbane, Australia e-newsletter, Seattle, WA twitter feed, Middlebury College touch screen display, North Carolina State University creative advertising on dumpsters)





Expand Volunteer and Internship Programs

Build Our Capacity

WHAT?

Formalize a volunteer program for community members who are passionate about sustainability and increase opportunities to host local interns.

Staff is exploring several venues to host interns. As part of its budget, the Utilities and Environmental Services Department annually hosts one half-time intern in its Wastewater Division and one half-time intern in its Water Division. Last year, the Water Pollution Source Control Division hosted a Cal State intern through the University's Pioneers for Change program, which pays students to intern as part of their studies. There are also opportunities to host interns through the Civic Spark and Coro Fellowship programs.

Staff is currently working with the Keep Hayward Clean and Green Taskforce to expand their volunteer program to include additional green activities. In specific, staff is looking to train volunteers to help run City-sponsored events and be able to table at community events and meetings. Staff will be offering orientations three times a year, which will introduce volunteers to City programs and review the materials used when tabling.

WHY?

Hayward is fortunate to have a culture of volunteerism and quality institutions of higher education. By formalizing opportunities to contribute, the City can use that energy and passion to scale up our work. In addition, volunteers can help deliver information to community members that City staff would not otherwise reach.

WHEN?

In addition to the budgeted interns, the Environmental Services Division is expecting to host at least one Cal State East Bay intern this school year. Staff will continue to explore other opportunities and host additional interns this school year and summer if funding is available.

Staff plans to host the first formal volunteer orientation in February, 2016.

EXAMPLES (from San Francisco, CA – SF Environment and SFPUC)

Leverage Community Partners

Build Our Capacity

WHAT?

Develop a Green Hayward Alliance for Hayward businesses, schools, HOAs, civic groups, nonprofits, and apartment managers. The time commitment for members will be minimal. Members will receive monthly e-newsletters and be invited to optional workshops and networking opportunities. The benefits of being an Alliance Member are outlined below.

Role of the City

- Manage group communications
- Convene technical assistance trainings and tours
- Forward funding opportunities and assist with grant-writing
- When appropriate, pass resolutions of support for work that is being done by partners

Role of Community Partners

- Make regular updates about Green Hayward programs at their membership meetings
- Spread the word about Green Hayward initiatives through their networks

In addition, convene a Student Allies program, which will have representatives from each of the environmental clubs and councils at Hayward middle schools, high schools, and colleges. The Allies will meet six times a year.

WHY?

Community partners are already passionate about sustainability. The Alliance will enhance their work through sharing of best practices, surfacing opportunities to partner, and creating coalitions to attract funding to Hayward. Non-profit partners are able to apply for foundation funding to do community work, which is often not available to government agencies.

WHEN?

Staff will convene the first class of the Green Student Allies in the fall of 2015. Staff will recruit members for the Green Hayward Alliance this winter and send the first newsletter in March, 2016.

EXAMPLES (from GTECH Strategies, a non-profit in Pittsburgh, PA and Oceanside, CA)

GTECH Strategies is on the ground in Pittsburgh neighborhoods connecting residents to funding, education, and technical resources. They work closely with the City and convene the region's sustainability coalition and Social Capital Council.

The City of Oceanside has an award winning partnership with their educational institutions. Above, Coastal Music Studios and the Discovery Isle Child Development Center celebrate Earth Day with a Recycled Drum Corps and a "Bug Out."

Run Coordinated Messaging Campaigns

WHAT?

Centralize the City's sustainability messaging and focus on four campaigns each year. The purpose of targeting one simple behavior change at a time is to create a gateway for community members to get further involved in conservation and efficiency activities. For each campaign, staff will measure the baseline, use diverse and creative communication channels to reach the targeted audience, and measure the results. The criteria for selecting campaign topics are:

- The behavior change should be concrete ("compost" is too vague, "compost your coffee cups" is better)
- The behavior change should be applicable and attainable for a sizable group of Hayward community members (at least 5,000 residents and/or 100 businesses)
- The behavior change should be a positive action ("bike and walk more" instead of "don't drive")
- The behavior change should be measurable for staff

WHY?

Staff is currently running separate messaging campaigns from within various City departments and divisions. Because of this, community members are receiving many messages from the City. Research shows that too many unrelated messages can lead to tuning out the information. By centralizing the messaging effort and focusing on one message at a time, the campaigns will hopefully make a greater impact on desired behavior changes. By measuring the impact of each campaign, staff can evaluate what is working and what can be improved.

WHEN?

The fist messaging campaign will launch in January, 2016. There will be a new campaign every quarter and staff will report on the previous campaign at each Sustainability Committee meeting.

EXAMPLES (from Livermore, CA and Vancouver, WA)

This Livermore, CA campaign included a marketing video, a photo contest, stickers on pizza boxes of participating busuinesses, tags on green carts, online ads, bill inserts, and social media.

This Vancouver, WA campaign uses a positive message and is displayed in highly relevant public areas.

Streamline Outreach at Community Events

WHAT?

Create three go green pre-assembled tabling kits that can be used by staff or volunteers at community events. One kit will be comprehensive for larger events and two kits will be more compact for community meetings and other small events.

In addition, staff will create a display that will accompany trash and recycling carts at community events. The display will explain the three waste streams and possibly market the City's recycling programs.

WHY?

Intentionally designed, attractive displays are good marketing for the City and its sustainability programing.

Staff currently assembles materials each time there is an event. A pre-assembled kit will allow staff to train volunteers and interns, who can set up and run the tables. This will allow the City to be at more events and spend less time preparing for each event. For 2016, staff is looking to have a table at most of the downtown events, such as Cinco de Mayo and the Blues Festival. By 2017, staff is hoping to have enough volunteers trained to expand the effort to smaller events like the farmer's market and school registration days.

WHEN?

Staff is currently working on creating the tabling kit. Interns and volunteers will be trained on an ongoing basis, starting in the fall of 2015.

EXAMPLE (from the San Francisco Green Festival)

Each tabling kit will include attractive posters, display cases for handouts, signup sheets for the e-newsletter, surveys, giveaways, and other compelling visual elements.

Scale Up City-Sponsored Green Events

Educate

WHAT?

Evaluate existing events to determine high-impact opportunities for growth and involve volunteers and partners to grow and improve each event. Staff will streamline existing events by creating standard procedures that can be replicated by staff, volunteers, and community partners. The ultimate goal of this effort will be to identify and train community partners that are willing to entirely take over and expand the events in the future.

In addition, launch two new events in 2016 with community partners: an environmental film series and an online photo contest. The film series will show three films at several locations throughout Hayward and be followed with panel discussions and an online forum. The Hayward Library has run similar successful events in the past. The photo contest will be run on Instagram, a free social media platform. Winners will be displayed on the website and outside the Council Chambers in City Hall.

City of Hayward staff currently hosts the following green events:

- The annual Environmental Awards
- Water efficient landscape classes and gardening workshops
- The annual citywide cleanup in May
- The environmental poster and essay contest
- An Earth Week display in the rotunda

WHY?

Events are an important outreach tool, but running events can demand large amounts staff time. Standardizing the procedures from year to year will streamline event planning, allowing staff to focus on improving and expanding the events. It will also allow staff to delegate tasks to volunteers, interns, and community partners.

WHEN?

Staff will evaluate and standardize procedures for all 2016 events. The film series will run from February through April. The first photo contest will also launch in February.

EXAMPLES

Earth Day Celebration in Nyack, NY hosted by the Chamber of Commerce
San Diego beach cleanup hosted by the Surfrider Foundation and local surf shops
Summer Film Series in Lafayette, CA hosted by the non-profit Sustainable Lafayette

Launch Go Green Challenges

WHAT?

Launch challenges that result in concrete, measurable behavior changes and environmental results. These challenges will be modeled on community based social marketing principals, which stress neighbor-to-neighbor outreach and creatively removing barriers to participation. To provide motivation, participants will be given opportunities and tools to make pledges and track their progress alongside their peers.

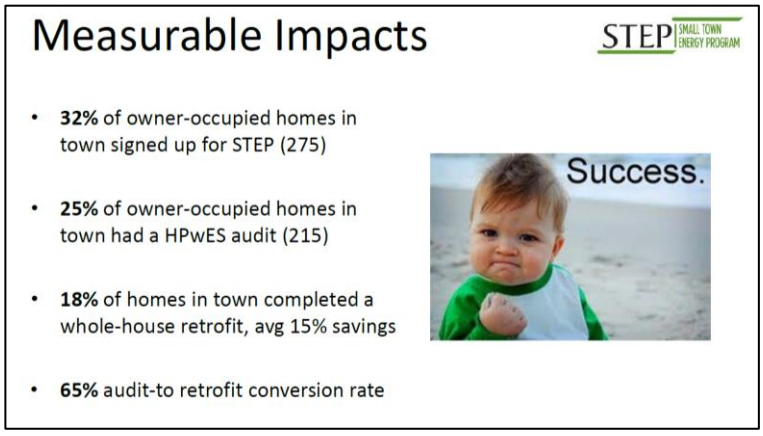
WHY?

The desired outcome of the outreach plan is community behavior changes. The Go Green Challenges will take the community involvement and awareness gained in the first year to that next level. As noted above, "education alone often has little or no effect upon sustainable behavior."

WHEN?

Staff is planning to launch the challenges in 2017.

EXAMPLES (University Park, Maryland STEP-UP Program and OneChange's Project Porchlight Program)

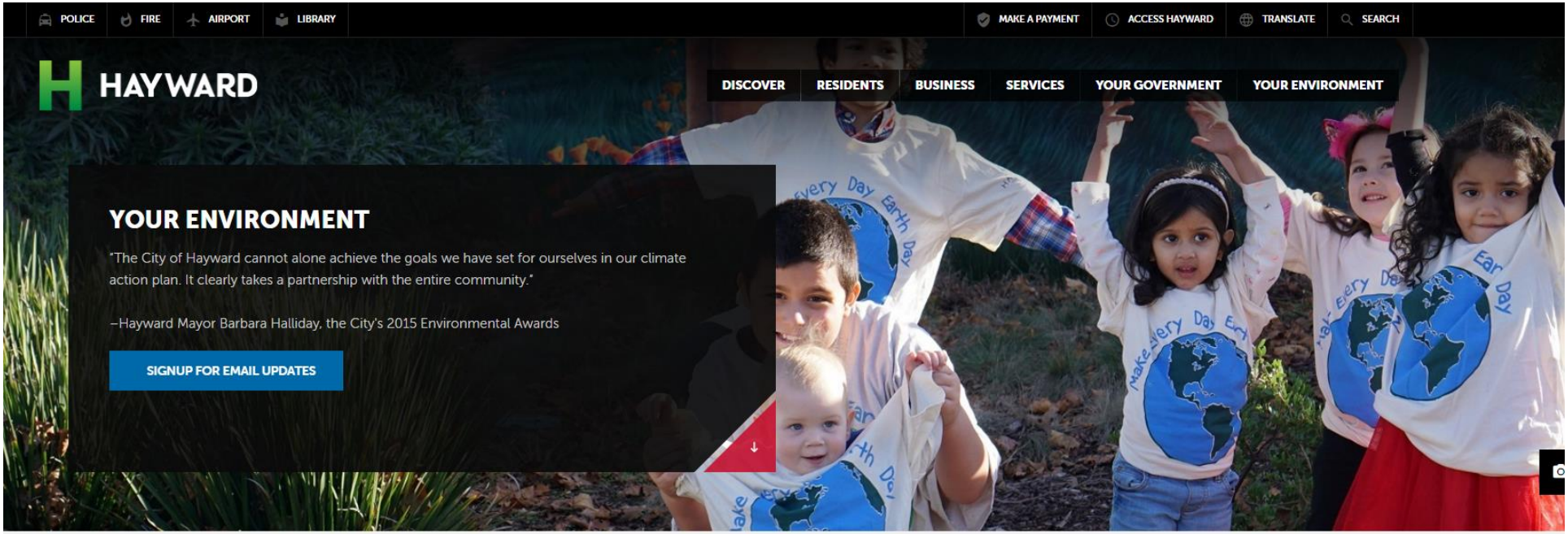


The Small Town Energy Program for University Park (STEP-UP) used town hall meetings and house parties to sign up homeowners for energy audits. The program then used a one-on-one coach to help homeowners find a contractor and financing to complete a retrofit. As a result of their efforts, 18% of homes in the town completed a whole-house retrofit. The US Department of Energy is now working to replicate this model elsewhere.

Project Porchlight partners with utilities and sponsors to provide free CFL bulbs. The bulbs are distributed door-to-door by neighbors and volunteers, who also assist with installation. Their philosophy is that "when people participate in that first simple action (changing a light bulb) they become empowered to believe that their simple actions matter and they can make a difference." Up to this point, Project Porchlight has changed 3,588,000 bulbs.

Timeline

Tasks	2015			2016												2017											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Lay the Groundwork																											
Create content for new sustainability website																											
Collect datasets for dashboard																											
Create menu of communications channels																											
Plan 2016 messaging campaigns																											
Create tabling kit for community events																											
Create internal metrics to evaluate 2016 events																											
Design city hall display																											
Create content for social media and e-newsletter																											
Build Our Capacity																											
Convene Green School Allies																											
Host school year intern(s)																											
Create volunteer program with KHCG taskforce																											
Volunteer/intern orientations																											
Host summer interns																											
Develop and recruit for Green Hayward Alliance																											
Convene Green Hayward Alliance																											
Educate																											
Launch and maintain sustainability website																											
Launch dashboard and maintain datasets																											
Run and evaluate messaging campaigns																											
Publish monthly e-newsletters																											
City-sponsored green events																											
Outreach at other green events																											
Install and update city hall display																											
Evaluate events and tabling and propose updates																											
Engage																											
Design and find funding for go green challenge(s)																											
Launch and measure go green challenge(s)																											



We need everyone's involvement to protect and strengthen Hayward's environment. This site is a one-stop shop for the resources you need to go green at home, at work, and in your community. Thank you for everything you do to keep Hayward great for future generations!

►► Check out Hayward's Sustainability Blog for the latest happenings

GET **INVOLVED**

Join fellow businesses, neighbors, classmates, and coworkers in the effort to strengthen our environment. We have fun and easy ways for everyone to get involved. Photo: Unite2Green Leaders hand out lightbulbs at Light Up the Season

JOIN US→

GREEN YOUR **LIFE**

UPCOMING EVENTS

25 JUN
Saturday, June 25, 2016 - 08:30 - 12:00
KEEP HAYWARD CLEAN AND GREEN TASK FORCE CLEAN-UP & GRAFFITI REMOVAL EVENT
Shiloh Baptist Church

25 JUN
Saturday, June 25, 2016 - 09:00
FARMER'S MARKET
Watkins between B St and C St

2 JUL
Saturday, July 2, 2016 - 09:00
FARMER'S MARKET
Watkins between B St and C St

VIEW CALENDAR OF EVENTS

GREEN YOUR LIFE

Find out about Hayward rebates, financing programs, and other ways to save money and green your home. Photo: Rising Sun Energy Center provides free Green House Calls to Hayward residents each summer

READY, SET, GREEN →

GREEN YOUR BUSINESS

View resources, rebates, and tips on ways to green your Hayward workplace. Get recognized for your leadership by becoming a certified green business. Photo: Hayward Produce Market Taqueria, a 2014 Environmental Award recipient

LET'S GET STARTED →

GREEN YOUR COMMUNITY

Learn about your Hayward environment and what we are doing to keep it healthy. Photo: Students on a watershed education field trip with Hayward employee Elisa Wilfong

YOUR CITY, YOUR ENVIRONMENT →

GREEN GOVERNMENT

Did you know that Hayward has an award-winning Wastewater Treatment Facility? See what your City is doing to lead the way with renewable energy, water conservation, and more. Photo: Hayward solar field by the shoreline

LEADING THE WAY →

VIEW CALENDAR OF EVENTS

LATEST NEWS

CITY HONORED WITH ACTERRA AWARD FOR ENVIRONMENTAL LEADERSHIP →
June 9, 2016

DRAFT 2015 URBAN WATER MANAGEMENT PLAN AVAILABLE FOR REVIEW →
May 24, 2016

2016 EARTH DAY POSTER & WRITING CONTEST WINNERS →
May 19, 2016

SUSTAINABILITY DASHBOARD

The City Council has established ambitious environmental goals for Hayward. The Sustainability Dashboard shows how we are doing and how much further we have to go.

Hayward staff is tracking approximately fifty environmental metrics to measure our progress. The Sustainability Dashboard displays the six priority metrics for the Hayward community.

Greenhouse Gas Emissions

Our goal is a 20% reduction by 2020 compared to 2005 levels. As of 2010, we have achieved an 8% reduction. We update our data every five years.

Water Conservation

The State mandated goal is an 8% reduction compared to 2013 levels. Currently, Hayward has reduced its water use by 27%. **Keep up the good work!**

Waste Diversion

Our goal is to divert 80% of our waste from the landfill by 2018. In 2014, Hayward's waste diversion rate was 76%. This means that we recycled 76% of our waste.

Electricity Reduction

Our goal is a 10% reduction for residents by 2020 compared to 2005 levels. As of 2013, we have achieved a 5% reduction.

Natural Gas Reduction

Our goal is a 10% reduction for residents by 2020 compared to 2005 levels. As of 2013, we have achieved a 3% reduction.

Trash in Our Creeks

Our goal is to reduce trash on streets and in storms drains before it pollutes our creeks by 70% by 2017. As of 2015, we have reduced our trash by 65%.

We love data and we need your help. The City tracks data on each of its goals. Unfortunately, City staff doesn't have the resources to track everything. If you are a teacher, student, or volunteer who loves data, check out our data wish list below. If you are interested in completing a data collection project with us, please contact mary.thomas@hayward-ca.gov or 510.583.4724.

Data Wish List

- Bike mapping - how bike friendly are Hayward streets and what more should we do?
- Survey of community gardens in Hayward
- Residential needs assessment for energy conservation
- Business needs assessment for composting
- Residential and business needs assessments for solar installations

April 19: Hayward Environmental Awards

Tonight! 7pm at City Hall

Join us for a special City Council ceremony that recognizes local businesses, schools, and residents for excellence in environmental practices.

Book-to-Action Series: The Future of Food

Get involved in a great book - and in your community! Learn more...

Keynote Event
April 21 at City Hall
5-7 pm: Sustainable Food Resource Fair
7-9 pm: Panel Discussion

Film Screening: Can You Dig This
April 28, 2 pm at the CSU East Bay Theater
May 5, 7 pm at City Hall

April 30: Gardening Without Toxins Workshop

10:30 am at the Hayward Main Library
Learn how to grow healthy plants, reduce water usage, attract good bugs, and address common pest problems, like gophers, aphids, and powdery mildew.

Register...

May 10: Home Energy Upgrade Workshop

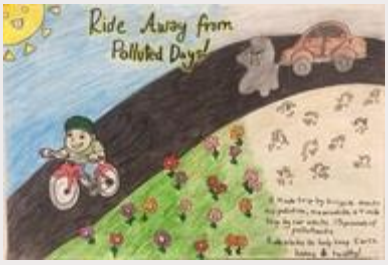
6:30-8 pm at City Hall
Learn how to make your home more comfortable and energy efficient. This workshop for homeowners will provide an overview of incentives and free summer house calls. Learn more and register...

May 14: 33rd Annual Citywide Cleanup

Meet at Weekes Park, 8 am-Noon

Join your neighbors and City staff to clean up neighborhoods throughout Hayward and celebrate with family-friendly activities and lunch.
Learn more and register to help out...

May 17: Poster and Writing Contest



7pm at City Hall

Join us for a special City Council ceremony recognizing student winners of the City's annual Environmental Poster and Writing Contest, including a display of the students' work. Learn more...

Para recibir esta hoja informativa en español, por favor mande un correo electrónico a environment@hayward-ca.gov

Questions? We'd love to hear from you.
hayward-ca.gov/environment
environment@hayward-ca.gov
510-583-4700

This is a monthly newsletter on sustainability

topics from the City of Hayward. See past newsletters.

CITY OF HAYWARD
HEART OF THE BAY

ATTACHMENT V

WATER CONSERVATION REBATES

Lawn Conversion

Convert your water-thirsty lawn into a beautiful, water-efficient landscape.
Front Yards and Areas Visible to the Public:
$0.75 per square foot of lawn converted
Backyards and Areas Not Visible to the Public:
$0.50 per square foot of lawn converted

Rain Barrel

Did you know that 1,000 square feet of roof surface captures 625 gallons of water for every inch of rain fall?
Get $50 per rain barrel. Rebates are limited to 2 per single family water account or 4 per multi-family or commercial account.

High Efficiency Toilets

High efficiency toilets are designed to use at least 20% less water than standard low flow toilets. Get $75 back for an EPA WaterSense toilet and $125 back for a MaP Premium toilet. Rebates are limited to 3 per residential water account or 10 per commercial account.

Clothes Washer

Looking to upgrade your clothes washer?
Get up to $100 back when you buy a qualifying high-efficiency model.
There is a limit of one rebate per household every five years.
Rebates are for residential customers only.

For more information and applications: Hayward-ca.gov/droughtwatch or 510-583-4700

Staff Report

File #: RPT 16-082

March 14
~~Municipal Regional Stormwater Permit~~
~~Update on Community Choice Energy~~
~~WMAC Contract - Annual Review~~
~~City Water Consumption and Water Conservation~~
May 9
~~Reusable Bag Ordinance Expansion - Review Draft Ordinance~~
~~Update on PAYS Program~~
~~Sun Shares~~
July 11
Renewable Energy Generation Potential & Establishment of a Municipal ZNE Goal
Community Choice Energy - Review Draft Ordinance & JPA
GHG Inventory & Sustainability Metrics
Outreach Campaigns - Results
Solar Net Energy Metering (NEM) 2.0 Regulations
September 12
Update on Water Supply, Outlook, Conservation, and Regulations
Downtown Specific Plan
Energy Performance and Disclosure (EPAD)
Stormwater Regulations for New Development & Green Infrastructure
November 14
Bicycle Master Plan
Car Sharing
Annual Update on Administrative Rule 3.9 - Environmentally Preferred Purchasing Policy (combine with CAP & General Plan Update)
Review Agenda Topics for 2017