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GREENHOUSE GAS EMISSIONS GOALS  
(Environmental Programs Manager Doug Krauss)

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Date	Ver.	Action By	Action	Result
11/6/2021	1	City Council		

### Honorable Mayor and Members of the Hermosa Beach City Council Special Meeting of November 6, 2021

#### STATUS UPDATE AND DISCUSSION OF CITY'S GREENHOUSE GAS EMISSIONS GOALS (Environmental Programs Manager Doug Krauss)

#### Recommended Action:

Staff recommends City Council discuss the City's emissions reduction goals, review measures and strategies to achieve these goals, and provide strategic direction regarding future reduction strategies.

#### Executive Summary:

The City has a long history of addressing greenhouse gas (GHG) emissions reduction, both to achieve sustainability and to lower the cost of City operations. The City's 2016 Municipal Carbon Neutral Plan describes a pathway for achieving carbon neutrality for municipal operations. PLAN Hermosa identifies goals for community-wide emissions reductions and prescribes regular progress evaluations. This report, and the corresponding presentations from the City Council Retreat, will help inform a discussion of potential next steps for the City to achieve these goals.

#### Background:

In 2006, the City of Hermosa Beach endorsed the U.S. Mayors Climate Protection Agreement (the "Cool Cities Program"), committing itself to aligning with the greenhouse gas emissions reductions

spelled out in the Kyoto Protocol. This began a series of actions by the City Council to address GHG emissions reduction. These include: development of a Sustainability Plan in 2011; both a Carbon Neutral Scoping Plan and a Municipal Carbon Neutral Plan (**Attachment 1**) in 2016; and 2017's PLAN Hermosa that details actions the City can and commits to take to achieve various emission-reduction goals. PLAN Hermosa additionally serves as the City's Climate Action Plan (CAP).

In 2013, the City secured a team from the UCLA Institute of the Environment and Sustainability to assess the City's ability to achieve carbon neutrality by 2030. This Carbon Neutral Scoping Plan was accompanied by a separate Municipal Carbon Neutral Plan targeting only municipal operations. Together, these plans identified a number of strategies for reducing emissions and achieving Carbon Neutrality at various scales. The Municipal Carbon Neutral Plan was accepted by the City Council in 2015 and identified a goal of achieving carbon neutrality in municipal operations by 2020 (**Attachment 2**). The plan suggested a number of possible strategies to reach carbon neutrality including:

- On-site electricity generation;
- Utilizing carbon credits/offsets and renewable energy certificates; and
- Community Choice Aggregation.

Since acceptance, the City has implemented many measures recommended in the plan. These include:

- Installation of additional electric vehicle chargers for both the public and for City fleet. The City now maintains 34 chargers citywide, 28 of which are for public use;
- Installation of a 99kW solar photovoltaic system on the Community Center. The installation cost the City approximately \$200,000 but has saved the City almost \$70,000 in electricity costs to date while reducing energy use by more than half;
- Retrofitting over 900 streetlights from low-pressure sodium vapor bulbs to LED technology, reducing energy consumption by approximately 360,000 kWh over the last three years; and
- The City revised its Clean Fleet policy in 2017 to align with the City's municipal carbon neutral plan and commit to a progressive transition to zero and low-emissions vehicles and equipment.

The State set goals for reducing GHG emissions by 2020 and 2050 through AB 32 and Executive Order (EO) S-3-05, respectively. The State has also provided guidance to local jurisdictions as "essential partners" in achieving the State's goals by identifying a 2020 recommended reduction goal. That goal, stated in the AB 32 Scoping Plan, was for local governments to achieve a 15 percent reduction below 2005 levels by 2020. The City's 2017 General Plan, "PLAN Hermosa," spelled out the following City goals:

1. A Community emissions reduction target of *at least* 66 percent reduction below 2005 levels by 2040; and
2. A Municipal emission reduction target that meets or exceeds 80 percent below 2005 levels by 2030.

Municipal emissions result from City-owned facilities and operations while community emissions result from all the privately-owned facilities and activities in the City, both residential and commercial. Understandably, the City has greater control over municipal emissions while community emissions represent a much greater amount of emissions from a more complex mix of sources. PLAN Hermosa also requires the City evaluate its progress at 5-year intervals and take corrective action as needed to stay on track to reduce its municipal emissions. Inventories of municipal and community emissions were performed in 2005 and 2012. These inventories were analyzed as part of the City's Energy Efficiency Climate Action Plan, developed by the South Bay Cities Council of Governments in 2015 (**Attachment 3**) and show progress towards the City's goals:

- The community of Hermosa Beach decreased emissions 7.7 percent from 2005 to 2012, from 137,160 MTCO<sub>2</sub>e to 126,611 MTCO<sub>2</sub>e;
- Under the Adjusted Business-as-Usual (BAU) forecast, emissions will be 111,690 MTCO<sub>2</sub>e in 2020 and 94,162 MTCO<sub>2</sub>e in 2035. These emissions levels are 19 percent lower in 2020 than 2005 and 31 percent lower than 2005 by 2035; and
- Municipal emissions have decreased 9 percent from 2005 to 2012, from 1,501 MTCO<sub>2</sub>e to 1,372 MTCO<sub>2</sub>e.

These most recent emissions inventories also indicate that electricity use accounts for approximately 40 percent and 60 percent of the City's community and municipal emissions, respectively. Though these inventories demonstrate much progress has been made, the City must do more to achieve the emissions reduction goals committed to in PLAN Hermosa. Due to the COVID-19 pandemic, City staff were unable to dedicate the resources necessary to perform the anticipated 2020 assessment of progress towards municipal carbon neutrality. This Council Retreat serves in part to understand these goals, assess our progress, and discuss possible next steps.

#### ***Past Council Actions***

<b>Meeting Date</b>	<b>Description</b>
February 24, 2015	Accepted Carbon Neutral Municipal Plan
August 22, 2017	Adopted Plan Hermosa

#### **Discussion:**

As mentioned above, there are a number of possible programs and strategies the City could implement to further its progress toward carbon neutrality for its municipal and community operations. Below is a discussion of some of the more impactful options:

#### **Community Choice Aggregation (CCA)**

CCA was made possible in California in 2002 with the passage of AB117. CCA provides public agencies the opportunity to procure their own energy for their customers - the residents and businesses in their jurisdiction. A CCA is able to purchase power and sell it to its customers, utilizing

the infrastructure (poles and wires) of the existing Investor-Owned Utility (IOU). This results in bills that are split between the IOU's delivery costs and the CCA's energy ("generation") costs. Typically, the billing would continue to be done by the IOU with a description of the CCA's charges included on bills.

One of the biggest benefits a CCA offers is the ability to control the energy portfolio. This has been used most commonly to increase the percentage of renewable energy in the portfolio compared to that currently offered by the IOUs. Another unique feature of a CCA is that once an agency chooses to form or join a CCA, every customer is automatically enrolled into the program pursuant to State law. The agency sets a default initial renewable energy level for both its municipal accounts and all other community accounts. Customers then have the option of opting out of the CCA and going back to their original IOU for energy along with the option of changing their individual renewable energy level, or remaining at the original default level. The jurisdiction also has the option of changing its default renewable energy level as the program evolves.

Hermosa Beach was one of the first cities in the South Bay to seriously consider a CCA. In its Municipal Carbon Neutral Plan, the City identified CCA as a viable strategy for reducing the City's overall carbon emissions. At the time, the only established CCA in Southern California was Lancaster Choice Energy, which was also the first to be formed as a standalone CCA. Most CCAs in California are formed as Joint Powers Authorities (JPA) between multiple public agencies. A number of CCAs had been operating successfully in Northern California beginning in 2010 including California's first CCA, Marin Clean Energy.

After these early considerations of the CCA model, the City hosted three study sessions on the topic and staff has produced multiple reports concerning the topic of CCA. On November 10, 2015, the City Council gave direction to staff to pursue two avenues for implementing Community Choice Aggregation: 1) as part of the Los Angeles County JPA model (which evolved into the Clean Power Alliance, or CPA); and 2) as a standalone CCA in partnership with Lancaster Choice Energy. At that meeting the Council authorized a consulting agreement between Hermosa Beach and the City of Lancaster for a feasibility study and preparation of an Implementation Plan.

In June 2016, a draft technical feasibility study was completed and presented to City Council at a special study session. Following a discussion of the results, City Council directed staff to continue pursuing establishment of a City of Hermosa Beach CCA - Hermosa Beach Choice Energy (HBCE). City Council also requested information on the timing and costs associated with the Los Angeles County JPA model (now CPA).

In 2016, Council confirmed their preference that the HBCE procure energy that provides 100 percent renewable energy for municipal accounts, 50 percent renewable energy for all other accounts, with an option for customers to voluntarily opt up to 100 percent renewable energy with a premium. The Council also expressed its desire to exclude the use of Renewable Energy Certificates (RECs) from its energy portfolio. RECs are credits for renewable energy produced elsewhere that can be

purchased to be used towards the purchaser's renewable energy portfolio.

Much of the discussion at the time was centered on potential risk to the City of forming its own CCA and associated costs. Amidst this discussion, in September 2016, Council approved an Ordinance and associated Implementation Plan and Statement of Intent allowing for the formation of a Hermosa Beach CCA. Though it was made clear by Council that this was not a commitment to form a CCA, the Implementation Plan was filed with the California Public Utilities Commission to allow the City the option to proceed with the process. Ultimately though, the City has yet to create its own CCA or join a CCA. LA County's JPA model became the Clean Power Alliance, formed in 2017, which now has 32 member agencies, including neighboring Manhattan Beach and Redondo Beach.

Manhattan Beach and Redondo Beach have set their default clean energy levels at 100 percent and 50 percent, respectively. These defaults apply to all commercial and residential customers in these agencies and ensures that both are using an energy portfolio that is cleaner than that of Southern California Edison (SCE), which has a renewable energy level of approximately 33 percent. Currently, CPA customers pay a premium of approximately 3 percent over their prior SCE bills for the 100 percent renewable rate. These rates should achieve greater parity over time as some of CPA's cost factors are reduced or eliminated. One example is the Power Charge Indifference Adjustment (PCIA) which is an "exit fee" charged to CCA customers to compensate the IOU for energy already purchased for those customers.

#### On-Site Generation and Energy Efficiency

On-site generation of electricity is a way for the City to not only reduce its energy consumption and emissions of energy generated outside of Hermosa Beach, but it can generate more energy than the City's operations consume, and consequently offset other emission sources that cannot be easily made carbon neutral (e.g., natural gas use, emissions from employee commuting, etc.). Photovoltaic solar power systems are the most common type of on-site generation. The City installed a 99kW photovoltaic system on its Community Center in 2017, which has cut offsite electricity consumption for the facility by over half. Additionally, battery storage of energy from such installations offers a way to further reduce consumption of offsite energy and develop resiliency among City facilities by providing a source of backup energy in the event of power outages, such as those expected to occur following a natural disaster such as an earthquake - when municipal operations will be needed for emergency services. On-site generation and energy efficiency improvements typically require an upfront financial commitment that is repaid over the life of the improvement. Grants are also sometimes available, particularly for multiple benefit projects (such as public safety microgrids) that extend beyond simply improving City facilities.

Energy efficiency improvements can also be made to existing facilities and equipment. These include: more efficient HVAC systems, lighting retrofits, and more significant green construction practices during remodels and new builds of facilities. The City is currently working to incorporate solar panels in the upcoming upgrades planned for the Clark Building. Another strategy to consider is revisions to building codes and policies to require more ambitious energy efficiency installations on

public and private projects. For instance, Manhattan Beach recently began developing a plan to require solar panel installations on all new public and private commercial buildings.

**Next Steps:**

Staff continues to explore options for reducing emissions and funding such activities. Specific strategic direction from Council will allow a better assessment of potential costs and schedules. The City has separate carbon reduction goals for both municipal and community operations. While a CCA would achieve significant reductions across both sectors, other strategies can be explored to target each specifically to achieve the City's goals.

**General Plan Consistency:**

This report and associated recommendations have been evaluated for their consistency with the City's General Plan. Relevant Policies are listed below:

*Sustainability and Conservation Element*

**Goal 1. Hermosa Beach is a low-carbon municipal organization, reducing greenhouse gases at a rate that meets or exceeds 80% below 2005 levels by 2030.**

Policies:

**1.1 Low-carbon municipality.** Demonstrate environmental leadership and reduce greenhouse gas emissions from municipal facilities and operations by at least 80% below 2005 levels by 2030.

**Goal 2. Hermosa Beach is a low-carbon community meeting State greenhouse gas reduction goals by 2040**

Policies:

**2.1 State targets and goals.** Reduce greenhouse gas emissions at a rate that meets long-term State targets and goals to reduce emissions by at least 66% below 2005 levels by 2040.

**Fiscal Impact:**

The fiscal impact of achieving these emissions and carbon neutrality goals is unknown at this time and will be further researched based on Council's direction.

**Attachments:**

1. Municipal Carbon Neutral Plan
2. Resolution 15-6940
3. Energy Efficiency Climate Action Plan

**Respectfully Submitted by:** Doug Krauss, Environmental Programs Manager

**Approved** Suja Lowenthal, City Manager