CITY OF BEVERLY HILLS
455 North Rexford Drive
Beverly Hills, CA 90210

Telephonic / Video Conference Meeting

CLIMATE ACTION AND ADAPTATION PLAN COMMUNITY ADVISORY COMMITTEE

AGENDA

Tuesday, November 30, 2021
2:00 p.m.

https://beverlyhills-org.zoom.us/my/climate
Meeting ID: 410 081 2952
Passcode: 90210

+1 346 248 7799 US
+1 833 548 0276 US Toll-free

One tap mobile
+13462487799,,4100812952#,,*90210# US
+18335480276,,4100812952#,,*90210# US Toll-free

Pursuant to Government Code Section 54953(e)(3), members of the Beverly Hills Climate Action and Adaptation Plan Community Advisory Committee and staff may participate in this meeting via a teleconference. In the interest of maintaining appropriate social distancing, members of the public can participate in the meeting by using the link or phone numbers above.

Anyone who participates at the meeting and/or enters the City Council Chamber or Commission meeting room is subject to having their image and/or voice displayed. These recordings will remain publicly accessible in perpetuity.

How to Submit a Public Comment:
Audio/oral: Please see Zoom information above
Email: bhcaap@beverlyhills.org
To watch video live: Please see Zoom information above

It is recommended that written public comments be submitted to the Climate Action and Adaptation Plan Community Advisory Committee Recording Secretary by 11:30 AM on the meeting date. Public comments will also be taken during the meeting when the topic is being reviewed by the Climate Action and Adaptation Plan Community Advisory Committee. Written comments should identify the Agenda Item number or topic in the subject line of the email.

In order to be read at the meeting, written comments will be allowed with a maximum of 350 words, which corresponds to approximately three (3) minutes of speaking time. If a comment is received after the agenda item is heard, it will not be a part of the record.
The Committee may act on any item listed on the agenda.

AGENDA

OPEN MEETING

ROLL CALL

COMMUNICATIONS FROM THE AUDIENCE
Comment: Members of the public will be given the opportunity to directly address the Committee regarding any items not on the Agenda that are within the subject matter jurisdiction of the Committee. By State law, the Committee may not discuss or vote on items, not on the Agenda.

1. APPROVAL OF OCTOBER 19, 2021 HIGHLIGHTS

2. A RESOLUTION OF THE CLIMATE ACTION AND ADAPTATION PLAN COMMUNITY ADVISORY COMMITTEE OF THE CITY OF BEVERLY HILLS AUTHORIZING PUBLIC MEETINGS TO BE HELD VIA TELECONFERENCING PURSUANT TO GOVERNMENT CODE SECTION 54953(E) AND MAKING FINDINGS AND DETERMINATIONS REGARDING THE SAME
Comment: Staff and the City Attorney’s office recommend that the Climate Action and Adaptation Plan Community Advisory Committee adopt a resolution making the following findings so that meetings of the Climate Action and Adaptation Plan Community Advisory Committee will be subject to the special Brown Act requirements for teleconference meetings: (1) the Climate Action and Adaptation Plan Community Advisory Committee has reconsidered the circumstances of the COVID-19 state of emergency; (2) the state of emergency continues to directly impact the ability of the members to meet safely in person; and (3) state or local officials continue to impose or recommend measures to promote social distancing.

3. CITY OF BEVERLY HILLS INVOLVEMENT IN THE CLEAN POWER ALLIANCE
Comment: The presentation today by Council Member Gold is to share the City’s involvement with the Clean Power Alliance and upcoming discussions at the City Council. Council Member Gold serves as a Director for the Clean Power Alliance Board.

4. BACKGROUND INFORMATION ON CITY’S SUSTAINABLE POLICIES AND PROGRAMS
Comment: Staff will present the City’s sustainability accomplishments and successes related to greenhouse gas (GHG) emissions. The information will help future committee discussions regarding GHG reduction measures and target settings.

5. GHG EMISSIONS BASELINE, INVENTORY, AND FORECAST
Comment: This item is for information to explore further the methodology behind Greenhouse Gas Emissions Inventory.

6. EMISSIONS GOALS AND TIME FRAMES
Comment: The Co-chairs have requested an agenda item to allow for an ongoing general discussion regarding greenhouse gas (GHG) emission goals and target settings.

7. MEASURES TO ACHIEVE REDUCTIONS
Comment: The co-chairs have requested an agenda item to allow for a general discussion regarding measures to be considered to achieve carbon neutrality goals.

8. COMMUNITY ENGAGEMENT
Comment: This agenda item is a committee discussion on community engagement topics and will serve as a rolling agenda item.
9. SETTING THE NEXT MEETING DATE
   Comment: Staff requests the committee select the next meeting date and share any future meeting topics.

10. CHAIR’S REPORT

11. DIRECTOR’S REPORT

ADJOURNMENT

If there are any questions about this agenda, please contact Melissa Gomez at 310-288-2864 or mgomez@beverlyhills.org.
CITY OF BEVERLY HILLS
455 North Rexford Drive
Beverly Hills, CA 90210
Video Teleconference

The Beverly Hills Climate Action and Adaptation Plan (CAAP) Community Advisory Committee

MEETING HIGHLIGHTS
Tuesday, October 19, 2021
2:00 PM

MEETING CALLED TO ORDER
Date / Time: October 19, 2021 / 2:00 PM

IN ATTENDANCE:


COMMUNICATIONS FROM THE AUDIENCE
Members of the public were allowed to directly address the Committee on any item listed on the agenda.

Speakers: None

1) COMMUNITY ADVISORY COMMITTEE GUIDELINES

Director of Public Works Shana Epstein welcomed members of the Committee to the first committee meeting and introduced the Environmental Compliance and Sustainability Program Manager Josette Descalzo. Josette Descalzo reviewed the meeting agenda.

Melissa Gomez, Senior Management Analyst provided information on guidelines for the Committee including Brown Act considerations.

2) PURPOSE OF THE COMMUNITY ADVISORY COMMITTEE

Josette Descalzo, Environmental Compliance and Sustainability Program Manager provided background information on the purpose of the Community Advisory Committee.
Background and Purpose of the Committee

- Represent the community in the CAAP Process.
- Gain a deeper understanding of climate and GHG emissions-related issues in Beverly Hills.
- Inform and engage the community of CAAP topics.
- Participate and raise awareness around CAAP community engagement opportunities.
- Develop strategies to reduce GHG emissions and improve resiliency towards climate change.
- Provide consensus recommendations to the commission and City Council in the CAAP process.
- Staff will be providing information about CAAP resources. Committee members can recommend resources to staff.

3) COMMUNITY ADVISORY COMMITTEE CHAIR

Committee members had an opportunity to introduce themselves. Josette Descalzo, Environmental Compliance and Sustainability Program Manager led the discussion to elect a Chair.

Nominations

- Myra Demeter nominates Peter Ostroff.
- Wendy Nystrom self-nominates.
- Sharona Nazarian nominates/requests Peter Ostroff and Wendy Nystrom to a Co-Chair position.
  - Request accepted by Wendy Nystrom and Peter Ostroff.

Community Advisory Committee Co-Chairs

- Wendy Nystrom and Peter Ostroff

4) A RESOLUTION OF THE CLIMATE ACTION AND ADAPTATION PLAN COMMUNITY ADVISORY COMMITTEE OF THE CITY OF BEVERLY HILLS AUTHORIZING PUBLIC MEETINGS TO BE HELD VIA TELECONFERENCING PURSUANT TO GOVERNMENT CODE SECTION 54953(E) AND MAKING FINDINGS AND DETERMINATIONS REGARDING THE SAME

Motion: MOVED by Lee Hilborne, SECONDED by Myra Lurie to approve the Resolution as presented (14/0).

AYES: All members of Committee verbally approved Resolution.

ABSTAIN: None

NOES: None

CARRIED
5) GREENHOUSE GAS EMISSIONS (GHG) AND FORECAST AND APPROACHES TO GHG REDUCTION MEASURES AND TARGET GOAL SETTING

Raimi Consultants Walker Wells and Sami Taylor present information on the municipal and community-wide greenhouse gas (GHG) emission information and forecast.

Meeting Objectives

- Rincon Consultant Walker Wells reviewed the meeting objectives.
- The objective of the meeting was to facilitate an open and transparent dialogue about the Climate Action and Adaptation Plan.
- The Committee will discuss meeting state requirements and planning our Climate Action and Adaptation Plan around current and future regulatory frameworks.
- Further, the City's emissions profile, so they know more about current greenhouse gas emissions.
- The Committee will decide on GHG targets, and by the end of our meetings, we will develop a plan that will outline the strategies that will allow us to achieve targets.

Background and Process

Raimi Consultant Sami Taylor discussed the purpose of a CAAP. The City is creating a plan to reduce citywide greenhouse gas (GHG) emissions and prepare for climate change impacts. The plan will provide background information and policy recommendations that will assist the City in meeting GHG reduction goals. The importance of a CAAP is to address Climate Change threats to health and economic growth, reduce the City's "fair share" of emissions, create a resilient strategy for climate change, and adaptation will allow the community to mitigate the hazards of climate change. The CAAP process involves ongoing community and stakeholder input and engagement.

Beverly Hills GHG Emissions

Raimi Consultant, Walker Wells reviewed the results of the City of Beverly Hills GHG Inventory and Forecast to contextualize the successes and changes made since the 2015 community-wide GHG inventory.

Requests from the Committee:
- Request from Co-Chair Ostroff for added Committee meetings and background information.
- Request for presentations to provide an analysis of staff report rather than a review.
Request for background information posted on the CAAP webpage for increased transparency.

Questions from the Committee
- What is the goal for the next meeting?
  - To have an idea of possible interim targets that the City can set.
- What are the penalties for not meeting state targets SB32 goals?
  - SB32 is in the legislation, so if the City demonstrates that a local government can emulate a state regulation, it will streamline future development projects.

Review of CAAP Sectors and Implementable Measures
- Building + Energy
  - Increased renewable energy + CPA.
  - Energy efficiency.
  - New and existing building electrification.
- Transportation + Land Use
  - Reduce vehicles miles traveled. Mode shift to biking, walking, and public transportation.
  - Clean vehicles miles traveled.
- Solid Waste
  - SB 1383: Divert 75% of food scraps and other organic material from landfill disposal by 2025 and implement an edible food waste recovery program.
- Water
  - Increase non-potable water supply.
  - Strengthen outdoor water use efficiency standards.
  - Encourage water-efficient landscape.
  - Encourage rainwater capture.
- Sequestration
  - Carbon storage on protected lands.
  - Tree planting and protection of existing trees.

6) PROMOTING THE COMMUNITY ENGAGEMENT MEETING
Josette Descalzo provided information on next steps and community engagement.

ADJOURNMENT
Date / Time: October 19, 2021/ 4:16 PM
Item 2
STAFF REPORT

Meeting Date: November 30, 2021

To: Climate Action and Adaptation Community Advisory Committee

From: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

SUBJECT: A Resolution of The Climate Action and Adaptation Plan Community Advisory Committee of the City of Beverly Hills Authorizing Public Meetings to be held via Teleconferencing Pursuant to Government Code Section 54953(e) and Making Findings and Determinations Regarding the Same

ATTACHMENT: 1. Proposed Resolution

RECOMMENDATION

Staff and the City Attorney’s office recommend that the Climate Action and Adaptation Plan Community Advisory Committee adopt a resolution making the following findings so that meetings of the Climate Action and Adaptation Plan Community Advisory Committee will be subject to the special Brown Act requirements for teleconference meetings: (1) the Climate Action and Adaptation Plan Community Advisory Committee has reconsidered the circumstances of the COVID-19 state of emergency; (2) the state of emergency continues to directly impact the ability of the members to meet safely in person; and (3) state or local officials continue to impose or recommend measures to promote social distancing.

INTRODUCTION

Governor Newsom recently signed new legislation (AB 361) allowing the Climate Action and Adaptation Plan Community Advisory Committee to continue virtual meetings during the COVID-19 declared emergency subject to certain conditions. These special requirements give the City greater flexibility to conduct teleconference meetings when there is a declared state of emergency and either social distancing is mandated or recommended, or an in-person meeting would present imminent risks to the health and safety of attendees.

BACKGROUND

On March 4, 2020, Governor Newsom proclaimed a state of emergency to exist in California due to the spread of COVID-19. The Governor subsequently issued numerous executive
orders suspending or modifying state laws to facilitate the response to the emergency. Among other things, these executive orders superseded certain Brown Act requirements and established special rules to give local public agencies greater flexibility to conduct teleconference meetings. Those special rules expired on September 30, 2021.

On September 16, 2021, in anticipation of then-imminent expiration of his special rules for teleconference meetings, the Governor signed AB 361. In key part, this bill amends the Brown Act to establish special requirements for teleconference meetings if a legislative body of a local public agency holds a meeting during a proclaimed state of emergency and either state or local officials have imposed or recommended measures to promote social distancing, or the body determines, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

AB 361 builds upon Executive Order (“EO”) N-29-20, issued by the Governor on March 17, 2020, which relaxed the teleconferencing requirements of the Brown Act to facilitate virtual meetings during the COVID-19 declared emergency. EO N-29-20’s provisions concerning public meetings applied through September 30, 2021.

AB 361 authorizes local agencies to continue meeting remotely without following the Brown Act’s standard teleconferencing provisions if the meeting is held during a state of emergency proclaimed by the Governor and either of the following applies: (1) state or local officials have imposed or recommended measures to promote social distancing; or (2) the agency has already determined or is determining whether, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

EO N-29-20 required legislative bodies to make remote public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the local legislative body, and to make reasonable efforts to adhere as closely as reasonably possible to the provisions of the Brown Act. AB 361 adds new procedures and clarifies the requirements for conducting remote meetings as follows:

- **Public Comment Opportunities in Real Time**: A legislative body that meets remotely pursuant to AB 361 must allow members of the public to access the meeting via a call-in option or an internet-based service option, and the agenda for the remote meeting must provide an opportunity for members of the public to directly address the body in real time. Although the agency may still ask for public comments to be submitted in advance, the agency cannot require public comments to be submitted in advance of the meeting. If an agency does not provide a timed public comment period, but takes public comment separately on each agenda item, it must allow a reasonable amount of time per agenda item to allow members of the public the opportunity to provide public comment, including time to “be recognized for the purpose of providing public comment.”

- **No Action During Disruptions**: In the event of a disruption that prevents the local agency from broadcasting the remote meeting, or in the event of a disruption within the local agency’s control that prevents members of the public from offering public comments using the call-in option or internet-based service option, AB 361 prohibits the legislative body from taking any further action on items appearing on the meeting agenda until public access to the meeting via the call-in or internet-based options is restored.
• **Periodic Findings:** To continue meeting remotely pursuant to AB 361, an agency must make periodic findings that: (1) the body has reconsidered the circumstances of the declared emergency; and (2) the emergency impacts the ability of the body’s members to meet safely in person, or state or local officials continue to impose or recommend measures to promote social distancing. These findings should be made not later than 30 days after teleconferencing for the first time pursuant to AB 361, and every 30 days thereafter.

**DISCUSSION**

To continue to hold meetings under these special teleconferencing requirements, the Climate Action and Adaptation Plan Community Advisory Committee needs to make two findings pursuant to Government Code Section 54953(e)(3). First, there must be a declared state of emergency and the Climate Action and Adaptation Plan Community Advisory Committee must find that it has reconsidered the circumstances of such emergency. Second, the Climate Action and Adaptation Plan Community Advisory Committee must find that such emergency continues to directly impact the ability of the Climate Action and Adaptation Plan Community Advisory Committee members to meet in person. Alternatively, for the second finding, the Climate Action and Adaptation Plan Community Advisory Committee must find that state or local officials continue to impose or recommend social distancing measures. These findings must be made within 30 days after the Climate Action and Adaptation Plan Community Advisory Committee teleconferences for the first time under AB 361 and every 30 days thereafter.

The declared emergency is still in effect. Furthermore, the State of California and the County of Los Angeles have recommended measures to promote social distancing. The Centers for Disease Control and Prevention continue to advise that COVID-19 spreads more easily indoors than outdoors and that people are more likely to be exposed to COVID-19 when they are closer than 6 feet apart from others for longer periods of time. Additionally, the Los Angeles County Department of Public Health still encourages people at risk for severe illness or death from COVID-19 to take protective measures such as social distancing and, for those not yet fully vaccinated, to physically distance from others whose vaccination status is unknown. The County Health Department also continues to recommend that employers take steps to support physical distancing.

Please note that AB 361 applies to all legislative bodies. Therefore, Commissions and standing committees will need to also comply with the requirements of AB 361.

**FISCAL IMPACT**

The proposed resolution allowing the Climate Action and Adaptation Plan Community Advisory Committee greater flexibility to conduct teleconference meetings is unlikely to cause a greater fiscal impact to the City.
Attachment 1
RESOLUTION NO. ______

RESOLUTION OF THE CLIMATE ACTION AND ADAPTATION PLAN COMMUNITY ADVISORY COMMITTEE OF THE CITY OF BEVERLY HILLS CONTINUING TO AUTHORIZE PUBLIC MEETINGS TO BE HELD VIA TELECONFERENCING PURSUANT TO GOVERNMENT CODE SECTION 54953(e) AND MAKING FINDINGS AND DETERMINATIONS REGARDING THE SAME

WHEREAS, the Climate Action and Adaptation Plan Community Advisory Committee is committed to public access and participation in its meetings while balancing the need to conduct public meetings in a manner that reduces the likelihood of exposure to COVID-19 and to support physical distancing during the COVID-19 pandemic; and

WHEREAS, all meetings of the Climate Action and Adaptation Plan Community Advisory Committee are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code Sections 54950 – 54963), so that any member of the public may attend, participate, and watch the Climate Action and Adaptation Plan Community Advisory Committee conduct its business; and

WHEREAS, pursuant to Assembly Bill 361, signed by Governor Newsom and effective on September 16, 2021, legislative bodies of local agencies may hold public meetings via teleconferencing pursuant to Government Code Section 54953(e), without complying with the requirements of Government Code Section 54953(b)(3), if the legislative body complies with certain enumerated requirements in any of the following circumstances:

1. The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.
2. The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

3. The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

WHEREAS, on March 4, 2020, Governor Newsom declared a State of Emergency in response to the COVID-19 pandemic (the “Emergency”); and

WHEREAS, the Centers for Disease Control and Prevention continue to advise that COVID-19 spreads more easily indoors than outdoors and that people are more likely to be exposed to COVID-19 when they are closer than 6 feet apart from others for longer periods of time; and

WHEREAS, the Los Angeles County “Responding together at Work and in the Community Order (8.23.21)” provides that all individuals and businesses are strongly encouraged to follow the Los Angeles County Public Health Department Best Practices. The Los Angeles County Public Health Department “Best Practices to Prevent COVID-19 Guidance for Businesses and Employers”, updated on September 13, 2021, recommend that employers take steps to reduce crowding indoors and to support physical distancing between employees and customers; and

WHEREAS, the unique characteristics of public governmental buildings is another reason for continuing teleconferenced meetings, including the increased mixing associated with bringing people together from across several communities, the need to enable those who are
immunocompromised or unvaccinated to be able to safely continue to fully participate in public meetings and the challenge of achieving compliance with safety requirements and recommendations in such settings; and

WHEREAS, the Beverly Hills City Council has adopted a resolution that continues to recommend steps to reduce crowding indoors and to support physical distancing at City meetings to protect the health and safety of meeting attendees; and

WHEREAS, due to the ongoing COVID-19 pandemic and the need to promote social distancing to reduce the likelihood of exposure to COVID-19, the Climate Action and Adaptation Plan Community Advisory Committee intends to continue holding public meetings via teleconferencing pursuant to Government Code Section 54953(e).

NOW, THEREFORE, the Climate Action and Adaptation Plan Community Advisory Committee of the City of Beverly Hills resolves as follows:

Section 1. The Recitals provided above are true and correct and are hereby incorporated by reference.

Section 2. The Climate Action and Adaptation Plan Community Advisory Committee hereby determines that, as a result of the Emergency, meeting in person presents imminent risks to the health or safety of attendees.

Section 3. The Climate Action and Adaptation Plan Community Advisory Committee shall continue to conduct its meetings pursuant to Government Code Section 54953(e).

Section 4. Staff is hereby authorized and directed to continue to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and
public meetings in accordance with Government Code Section 54953(e) and other applicable provisions of the Brown Act.

Section 5. The Climate Action and Adaptation Plan Community Advisory Committee has reconsidered the circumstances of the state of emergency and finds that: (i) the state of emergency continues to directly impact the ability of the members to meet safely in person, and (ii) state or local officials continue to impose or recommend measures to promote social distancing.

Section 6. The Secretary of the Climate Action and Adaptation Plan Community Advisory Committee shall certify to the adoption of this Resolution and shall cause this Resolution and her certification to be entered in the Book of Resolution of the Climate Action and Adaptation Plan Community Advisory Committee of this City.

Adopted:

__________________________________________
Wendy Nystrom
Co-Chair of the Climate Action and Adaptation Plan Community Advisory Committee of the City of Beverly Hills, California

__________________________________________
Peter Ostroff
Co-Chair of the Climate Action and Adaptation Plan Community Advisory Committee of the City of Beverly Hills, California
Item 3
TO: Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)

FROM: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

DATE: November 30, 2021

SUBJECT: City of Beverly Hills Involvement in the Clean Power Alliance

ATTACHMENT: 1. CPA Model  
2. CPA Member Profile  
3. CPA Participation by City and County

RECOMMENDATION

The presentation today by Council Member Gold is to share the City’s involvement with the Clean Power Alliance and upcoming discussions at the City Council. Council Member Gold serves as a Director for the Clean Power Alliance Board.

INTRODUCTION

The City of Beverly Hills is a member of the Clean Power Alliance (CPA) that provides renewable electricity to the community. Members are required to select a Default Energy Rate. The options are Lean Power (40% carbon-free hydropower), Clean Power (50% renewable/carbon-free power), or 100% Green Power (100% renewable energy). This rate is applied to customers in each jurisdiction, and Beverly Hills is currently set at Clean Power.

The City of Beverly Hills has an opportunity to change its Default Energy Rate to 100% Green Power. From the request of Council Member Gold, staff will be presenting its findings and seeking City Council direction to change 100% Green Power. The potential change to 100% Green will reduce the City’s overall greenhouse gas (GHG) emissions by 12%, but slightly increase rates by about 2-3%.

BACKGROUND

CPA is a Joint Powers Authority (JPA) comprised of 30 cities plus the unincorporated areas of Los Angeles and Ventura counties. CPA was established to provide cost competitive electrical rates, reduce greenhouse gas (GHG) emissions through the availability of renewable electricity, stimulate renewable energy reduction programs and sustain long-term rate stability for residents and businesses through local control. CPA purchases renewable electricity on behalf of its members while SCE manages the transmission and distribution of the power purchased by the CPA through the existing power lines and also continues to provide customer billing (Attachment 1). CPA is the largest community choice aggregator (CCA) in California serving more than 3 million customers through approximately 1 million customer accounts. CPA has more customers on 100% renewable energy than any other energy provider in the United States. CPA plays a critical role in accelerating the distribution of clean energy by creating programs that support local and resilient renewable energy. To learn more about the CPA’s
members profile and participation rate, please refer to Attachment 2 and Attachment 3. The committee will see in Attachment 3 that Beverly Hills has a 99.6% customer participation rate, one of the highest in the CPA.

**DISCUSSION**

CPA’s 100% Green Power product is procured from non-polluting, clean and renewable sources such as solar, wind, geothermal and small hydroelectric power. The green power sources are located in California and connected to the western grid. Each year, CPA procures an amount of renewable electricity sufficient to meet the demands of the service area. CPA has a policy that allows member agencies to change its Default Energy Product. A member agency can change its Default Energy Product once every two years. CPA requires the member agency to provide notice by January 1 of a calendar year, with the actual change for customers being implemented in October 1 of that same year.

Based on this policy and the City’s continuous efforts to reduce greenhouse gas (GHG) emissions, the City of Beverly Hills has an opportunity to change its Default Energy Product to 100% Green Power.

The remainder of the report will present the environmental benefits, customer rate impacts, municipal fiscal impacts and available financial assistance to customers. Lastly, staff is also outlining the community outreach and engagement process if the City Council chooses to change the Default Energy Product to 100% Green Power.

**Climate Action and Benefits**

Cities are on the front lines when it comes to climate change. Cities are leading in climate action by reducing carbon emissions through aggressive policies and using cleaner technologies. The City of Beverly Hills has committed to environmental stewardship by adopting aggressive policies such as the Green Building Standards, availability of renewable electricity from CPA, water conservation and waste diversion. The City has also invested in green infrastructure to reduce electricity demands such as LED Street Lights, solar and battery systems in City facilities and the use of renewable fuel and EV for its fleet.

As part of the Climate Action and Adaptation Plan (CAAP), Rincon Consultants completed the 2015 and 2019 greenhouse gas (GHG) emissions inventory. The 2019 GHG emissions inventory shows that energy (gas and electric) used in buildings make up 45% of the community’s emissions. There were 192,897 metric tons of carbon dioxide equivalent (MT CO₂e) emitted from energy use, of which 103,836 MT CO₂e (25% of energy) came from electricity use.

Upgrading to 100% renewable electricity is one of the easiest and most effective mechanisms to reduce the community’s GHG emissions. If City Council chooses to change its Default Energy Product to 100% Green, it would reduce the City’s electricity-based GHG emissions by approximately 52,000 MT CO₂e. This will reduce the total community GHG emissions by at least 12%. This reduction is equivalent to:

1. Removing 11,186 passenger vehicles driven for one year.
2. Replacing 1,953,742 incandescent light bulbs to LEDs.
3. Planting 850,574 trees and grown for 10 years.
In addition, 100% renewable energy will be powering all of the City’s facilities including EV charging stations and the LED streetlights.

**Rate Analysis**

Electricity rates have increased in recent years. Rate increases are generally attributed to electricity market costs, regulatory procurement requirements and approval of rate increases by the California Public Utilities Commission (CPUC) for investor-owned utilities (IOUs) like SCE. CPA rates have been affected by the same factors. Beverly Hills CPA customers have experienced these rates increases as shown in Table 1 and have remained with the CPA despite these rate increases.

As of October 2021, CPA rates are at a premium compared to SCE’s Base Rate. Please note that SCE’s Base Rate contains about 35% renewable content compared to CPA’s three renewable electricity products.

**Table 2: Average Monthly Bill Difference Compared to SCE Base Rate as of October 2021**

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>40% Lean Power</th>
<th>50% Clean Power</th>
<th>100% Green Power</th>
<th>Difference Between 50% and 100% Renewable Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>6.3%</td>
<td>7.1%</td>
<td>9.8%</td>
<td>+2.7%</td>
</tr>
<tr>
<td>Residential-CARE</td>
<td>2.7%</td>
<td>3.7%</td>
<td>3.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Small Business</td>
<td>6.9%</td>
<td>7.9%</td>
<td>10.1%</td>
<td>+2.2%</td>
</tr>
</tbody>
</table>

**Monthly Premium or (Savings) for Typical Customer Bill**

<table>
<thead>
<tr>
<th>Customer Class</th>
<th>Residential</th>
<th>Residential-CARE</th>
<th>Small Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$10.42</td>
<td>$3.05</td>
<td>$15.24</td>
</tr>
<tr>
<td>Residential-CARE</td>
<td>$11.76</td>
<td>$4.19</td>
<td>$17.32</td>
</tr>
<tr>
<td>Small Business</td>
<td>$16.23</td>
<td>$4.19</td>
<td>$22.34</td>
</tr>
<tr>
<td></td>
<td>$4.47</td>
<td>$0</td>
<td>$5.02</td>
</tr>
</tbody>
</table>

Even though CPA rates are at a premium, the cost difference between the 50% and 100% renewable products is between 2-3%. The typical residential increase on average is $4.47 and $5.02 increase for a small business. This difference was not the case in 2018 when City Council set the Default Energy Rate at 50% renewable. During that time, CPA customers had a 0-1% discount rate for 50% Clean Power; and there was a 7-9% premium if it was set at 100% Green Power. If the City Council elected to go 100% Green Power back in 2018, customers would have experienced a higher rate increase than what they were accustomed to. This would have affected the City’s participation rate.

Changing the Default Energy Product to 100% Green Power at this time is smaller and would not significantly influence the customer participation rate.

As a CPA customer, there is a surcharge added to customers by SCE called Power Charge Indifference Adjustment (PCIA). The PCIA is an “Exit Fee” permitted by the CPUC and allows SCE to recoup its incurred costs such as power procurement from customers leaving their
service. The PCIA is included in the cost comparisons above. SCE projects that in March 2022, the PCIA cost will be reduced and CPA customer rates will be reduced by 5-6% from its current levels. This would lessen the bill impact to Beverly Hills customers if the City's Default Energy Product is changed to 100% Green Power.

Fiscal Impact to City Accounts going 100% Green Power

Currently, all 522 municipal accounts are enrolled in the 50% Clean Power rate with CPA. Based on historical usage, the estimated 2021 annual cost is at $2,404,977. If City Council chooses to transition to 100% Green Power, it is estimated at $2,470,161 (approximately 3% increase) a cost premium of $65,184 annually. This estimate doesn’t include the anticipated rate decrease from the PCIA changes.

Financial Assistance and Discount Programs

The latest data shows that approximately 2,000 Beverly Hills customers are enrolled in a financial assistance program such as the California Alternate Rates for Energy (CARE) or Medical Baseline program. The CARE program provides income-qualified customers a discount of about 30% on their monthly electric bill. For CARE customers in CPA member agencies with 100% Green Power as their default rate, CARE customers are offered 100% renewables at a rate that matches CPA's Clean Power rate and include their low-income discount. This program avoids automatically increasing costs for CPA’s most vulnerable customers by spreading the incremental cost of renewables for CARE customers across all 100% renewable rate customers in those jurisdictions.

Public Outreach and Communications

If City Council chooses to change the Default Energy Product to 100% Green Power, CPA would work closely with staff on a communications campaign that clearly informs customers about their ability to still choose one of CPA’s lower rate options or leaving the program. Customers who have already made an elective choice to opt-down or opt-out will not be impacted by the change in the Default Energy Product. CPA will lead, with support from the City, the development and distribution of customer notices. Any customer accounts subject to the change will be sent a minimum of two notifications. A minimum of one notice shall be sent prior to the change going into effect with another being sent within 30 days of the change going into effect. In addition to the two required notices, CPA will cover the cost of the required customer notices for the first Default Energy Product change and any subsequent Default Energy Product change will be charged to the City. CPA will coordinate with the City to develop additional communications materials such as on-bill messaging, bill inserts, social media campaigns, jurisdictional newsletter, etc. Besides print and social media advertisement, CPA and staff will coordinate public presentation at commission meetings, Chamber of Commerce and other local organizations.
Attachment 1
How does it work?

It’s simple!

Clean Power Alliance is your electricity supply provider, offering **clean, renewable energy at competitive rates** to our community.

Clean Power Alliance purchases clean power and Southern California Edison (SCE) delivers it.
Customers are automatically enrolled at the default rate selected by their community

- **Lean Power**
  - 7 Communities
  - 154,047 Customers
  - 96.1% Participation Rate
  - Arcadia
  - Camarillo
  - Hawthorne
  - Paramount
  - Simi Valley
  - Temple City
  - Westlake Village

- **Clean Power**
  - 10 Communities
  - 506,149 Customers
  - 96.3% Participation Rate
  - Alhambra
  - Beverly Hills
  - Carson
  - Claremont
  - Downey
  - Hawaiian Gardens
  - Los Angeles County
  - Moorpark
  - Redondo Beach
  - Whittier

- **100% Green Power**
  - 15 Communities
  - 336,840 Customers
  - 94.6% Participation Rate
  - Agoura Hills
  - Calabasas
  - Culver City
  - Malibu
  - Manhattan Beach
  - Ojai
  - Oxnard
  - Rolling Hills Estates
  - Santa Monica
  - Sierra Madre
  - South Pasadena
  - Thousand Oaks
  - Ventura County
  - Ventura
  - West Hollywood

*Low-income customers in 100% Green default communities receive 100% renewable energy at no extra cost.*
Attachment 3
## Participation by City and County

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Default Option</th>
<th>Participation Rate</th>
<th>Active Accounts</th>
<th>Lean %</th>
<th>Clean %</th>
<th>100% Green %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agoura Hills</td>
<td>100% Green</td>
<td>94.66%</td>
<td>8,183</td>
<td>0.55%</td>
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<tr>
<td>Alhambra</td>
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<td>33,844</td>
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<td>18,605</td>
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<td>9,807</td>
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<td>99.32%</td>
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<td>Camarillo</td>
<td>Lean</td>
<td>95.64%</td>
<td>28,374</td>
<td>98.80%</td>
<td>0.26%</td>
<td>0.95%</td>
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<tr>
<td>Carson</td>
<td>Clean</td>
<td>97.29%</td>
<td>29,307</td>
<td>1.06%</td>
<td>98.41%</td>
<td>0.54%</td>
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<tr>
<td>Claremont</td>
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<td>95.14%</td>
<td>12,654</td>
<td>1.74%</td>
<td>97.82%</td>
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<td>Culver City</td>
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<td>97.83%</td>
<td>19,129</td>
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<td>Hawaiian Gardens</td>
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<td>3,626</td>
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<td>Hawthorne</td>
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<td>28,324</td>
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<td>Los Angeles County</td>
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<td>296,181</td>
<td>1.44%</td>
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<td>Malibu</td>
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<td>97.37%</td>
<td>6,876</td>
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<td>15,375</td>
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<td>Moorpark</td>
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<td>89.91%</td>
<td>11,454</td>
<td>2.15%</td>
<td>96.98%</td>
<td>0.88%</td>
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<td>Ojai</td>
<td>100% Green</td>
<td>93.25%</td>
<td>3,480</td>
<td>5.89%</td>
<td>1.54%</td>
<td>92.57%</td>
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<tr>
<td>Oxnard</td>
<td>100% Green</td>
<td>95.62%</td>
<td>54,704</td>
<td>7.38%</td>
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<td>Paramount</td>
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<td>15,616</td>
<td>99.46%</td>
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<td>0.51%</td>
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<td>Redondo Beach</td>
<td>Clean</td>
<td>99.24%</td>
<td>33,198</td>
<td>1.66%</td>
<td>98.09%</td>
<td>0.26%</td>
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<td>Rolling Hills Estates</td>
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<td>3,342</td>
<td>4.94%</td>
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<td>47.63%</td>
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<td>98.41%</td>
<td>53,248</td>
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<td>4.45%</td>
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<td>Simi Valley</td>
<td>Lean</td>
<td>93.12%</td>
<td>43,040</td>
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<td>0.10%</td>
<td>0.23%</td>
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<td>South Pasadena</td>
<td>100% Green</td>
<td>98.22%</td>
<td>11,678</td>
<td>2.58%</td>
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<td>0.03%</td>
<td>0.08%</td>
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<td>Thousand Oaks</td>
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<td>44,170</td>
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<td>32,199</td>
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<td>Westlake Village</td>
<td>Lean</td>
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<td>3,671</td>
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</tr>
<tr>
<td>Whittier</td>
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<td>95.82%</td>
<td>30,472</td>
<td>2.02%</td>
<td>97.84%</td>
<td>0.14%</td>
</tr>
</tbody>
</table>

### Total

<table>
<thead>
<tr>
<th>Default Option</th>
<th>Participation Rate</th>
<th>Active Accounts</th>
<th>Lean %</th>
<th>Clean %</th>
<th>100% Green %</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Green</td>
<td>94.61%</td>
<td>957,036</td>
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<td>95.69%</td>
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<td>95.69%</td>
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<tr>
<td>Lean</td>
<td>96.16%</td>
<td>95.69%</td>
<td></td>
<td></td>
<td></td>
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</table>

## Overall Participation by Default Option
Item 4
CITY OF BEVERLY HILLS
PUBLIC WORKS DEPARTMENT
MEMORANDUM

TO: Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)

FROM: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

DATE: November 30, 2021

SUBJECT: Background Information on City’s Sustainable Policies and Programs

RECOMMENDATION

This item is for information to present the City’s sustainability policies and programs related to greenhouse gas (GHG) emissions. The information will help future committee discussions regarding GHG reduction measures and target settings.

DISCUSSION

The goals of the Climate Action and Adaptation Plan (CAAP) is to reduce the community’s overall greenhouse gas (GHG) emissions; and plan to manage the effects of climate change. The foundation to accomplish these goals are in the 2009 City Sustainability Plan (Plan). Since 2009, the City has continued to implement the guiding principles and elements of the Plan. The report summarizes the implemented policies, programs and projects. This information can be used to develop additional GHG reduction measures as part of the CAAP.

For background, the 2009 City Sustainability Plan (Plan) has five (5) CAAP related factors. These are:

1) Climate Protection & Air Quality: To set policies and programs to meet the objectives of AB 32 to reduce and encourage the reduction of air emissions in City operations and citywide.

2) Energy: To encourage the use of energy in a clean and efficient manner and the use of renewable energy sources by reducing the use of non-renewable fuels through efficiency and increase use of renewable energy.

3) Water: To set policies and programs that reduce water use and expand its water resource portfolio to achieve sustainability. A part of this potential portfolio is to manage stormwater and wastewater in a beneficial manner.

4) Land-use, Transportation & Open Space: To lessen vehicular dependency and provide a mode of transportation that is environmentally and economically beneficial to the community, improve access to goods and services to the transportation disadvantaged, set policies and practices requiring best management practices on construction waste, reduce air pollution and energy consumption on new developments, set policies to preserve and improve parks and open space that provide environmental, social and economic benefits to the community.
5) Materials & Waste: To set programs and policies to reduce the amount of non-recyclable waste in the landfill and to increase the amount of recyclable materials produced from waste and reduce the use of non-recyclable materials in the community. Processing waste is associated with the production of carbon dioxide and methane in the environment. By reducing waste, lesser carbon dioxide and methane are emitted in the environment.

Below is a list of implemented policies, programs and projects based on these factors.

**Climate Protection & Air Quality**

**Policies and Programs:**

1. Carpooling and organized scheduling of trips between facilities occurs by staff to be more efficient with time and resources.
2. Continue to implement the City’s Street Tree Master Plan
3. Adoption of the Urban Forest Management Plan
4. Prohibit oil fracking within city limits.

**Projects:**

1. Climatec Energy and Water Efficiency Study completed the energy audit at 40 City facilities as well as the City-wide lighting systems (i.e. street lights, traffic signage and park lighting) to identify opportunities to reduce energy and water consumption and improve efficiency. The study estimates that 3.0 million pounds per year of greenhouse gas emissions can by reduced by implementing the recommendations. This equates to annual green equivalents of:
   a. 38,087 trees planted
   b. 126,544 gallons of gasoline saved
   c. 233 cars removed from the road
   d. 167 homes powered
   e. 59779 people provided drinking water

   The summary of projects and recommendations total approximately $2.9M in one-time capital costs and results in energy savings estimated at $5.5M over the life of the new equipment.

2. Upgraded fleet to include 127 Alternative Fuel Vehicles (AFVs), compressed natural gas (CNG) and including 20 heavy duty AFVs and 107 light-duty AFVs.
3. AFVs are fueled by Renewable Natural Gas or Renewable Diesel
4. Operate 37 electric vehicles (EV) fuel stations and 1 CNG station.
5. Own 7 diesel powered back-up generators that meet South Coast Air Quality Management District (AQMD) standards.
6. Installed energy efficient pumps and motors at various water facilities.
Energy

Policies and Programs:

1. Continually adopting the State's Green Building Codes. The latest CA Green Building Code (2019) requires cooling towers to have enhanced filtration systems to reduce the use of makeup water. Install a separate irrigation meter for new landscape irrigation. New single-family homes are designed to use 53% less energy than homes designed in 2016. New homes built are also required to install solar panels. Commercial energy used will be reduced by 30% primarily due to new lighting requirements. Joined the Clean Power Alliance (CPA) in 2017. The CPA is providing 40%, 50% and 100% renewable electricity to residential and non-residential customers in the City. Currently, Beverly Hills default energy rate is at 50% Clean Power.

Projects:

1. Installed solar panel arrays at the following facilities: Civic Center Parking Structure, Library, Police Station, 331 N. Foothill Road, Public Works Warehouse (9357 W. 3rd Street), Roxbury Community Center and the Beverly Hills Chamber of Commerce (9400 Santa Monica Blvd).
   - The solar panel arrays installed at the Civic Center Parking Structure, Library and Police Station is projected to generate more than 2,545,000-kilowatt hours (kWh) of electricity over their entire lifespan, representing an offset of an estimated 6,365,561 pounds of carbon dioxide, which is equivalent to conserving 135,000 gallons of gasoline or planting 3,060 trees annually.
2. Completed the LED Street Light Project where it converted approximately 5,800 streetlights to LEDs. The project has reduced energy consumption by 65% and provided cost savings of 68% in its first year of operation.
3. The Cilmatec Project retrofitted 16 municipal facilities to become more energy efficient which includes motion detected lighting, LED lighting, battery storage and HVAC systems. The improvements has saved 2,500,000 kWh of electricity.

Water

Policies and Programs:

1. Adopted the State’s Model Water Efficient Landscape Ordinance (MWELO)
2. Hired a Water Conservation Administrator to provide water conservation services to the community, such as leak notification, water-use audits and water efficient landscape workshops.
3. Achieved water conservation goal of 20% water reduction by 2020 - equal to 233.4 gallons per capita per day, established in Senate Bill X7-7.
4. Adopted a Low Impact Development (LID) Ordinance requiring development projects to capture run-off generated from the site, preventing pollutants from entering the storm drain system and eventually, the surface waters of the United States while also providing potential water supply for irrigation. Completed projects have retained 0.17 acre-ft. per rain event of urban runoff.
5. Adopted a Green Streets Policy that is intended to prevent contaminated urban
runoff from entering the storm drain system and eventually the waters of the US.

6. Implementing the Ballona Creek Enhanced Watershed Management Program (EWMP) Plan/Stormwater Compliance Master Plan that is intended to implement control measures to reduce pollutants in the watershed as a member of the Ballona Creek Watershed Management Group.

7. Adopted the water and wastewater capacity fees. These capacity fees provide revenue to reinvest on the reliability of the water and wastewater infrastructure. These capacity fees also encourage developers to incorporate water-saving features into project designs.

8. Adopted a water supply fee. The fee pays for the development of alternative water sources in order to reduce the City’s reliance on imported MWD water, specifically a high-capacity groundwater well in the Central Basin. It also helps fund the capture and development of non-potable sources of irrigation. Lastly, the fee encourages developers to incorporate water-saving features into project designs.

9. Adopted the Sanitary Sewer Management Plan (SSMP), which includes a preventative maintenance program, emergency response procedures, a construction and restaurant inspection program and pollution-mitigating program. Continue to inspect and upgrades the City’s sewer infrastructure to minimize subterranean contamination and reduce sewer overflow events.

10. Adopted the Water Enterprise Plan (WEP). The WEP is a ten-year plan that would increase local water supply, thus increasing the City water system reliability.

11. Adopted the Integrated Water Resources Master Plan (IWRMP) which provides a 5-year CIP plant to enhance the drinking water, wastewater and stormwater systems.

Projects:

1. Planted California Native water efficient landscape in city facilities at Civic Center and Greystone Mansion.

2. Implemented Water Tracker to allow water customers to monitor their water consumption set customized consumption targets and alerts and receives alerts when potential water leaks are occurring on their property.

3. Completed City-wide change-out of water Meter Transmitting Units (MTUs) to provide more frequent water consumption readings in Water Tracker.

4. Completed irrigation system improvements at city parks and medians to eliminate leaks and irrigate more efficiently by having 92 automated controllers that is linked to evapotranspiration (ET) system.

5. Installed 697 full capture screens in the catch basins to prevent debris larger than 5 millimeter from entering the storm drain system and eventually, the surface waters of the U.S.

6. Constructing the Burton Way Median Green Streets and Water Efficient Landscape project has 7.6 acre-ft. capacity which will treat and capture urban runoff from a 211 acres drainage area. The project also includes of replacing traditional grass turf to water efficient landscape. The conversion will reduce potable water irrigation demand by 75%
and the remainder can be irrigated by treated urban runoff from the project.

7. Cost-shared with Culver City to construct the Culver Median Stormwater Regional Project. The partnership help fund and construct a 19.5 acre-ft. stormwater regional project for the Ballona Creek Watershed. The project will help reduce contaminants entering Ballona Creek.

8. Installation of the bioswales to capture urban runoff as part of the Santa Monica Blvd. Reconstruction project.

9. Completed the feasibility for the La Cienega Park/Frank Fenton Field stormwater capture regional project. The project has the potential to capture 21 acre-ft. of urban runoff during dry and wet seasons.

10. Developed two additional shallow groundwater wells at the Maple Yard facility to provide additional local water supply.

11. Planning to develop additional groundwater wells in the Central Basin.

12. Reconstructed 5 steel tank reservoirs and Coldwater Canyon Reservoir to improve water reliability and meet seismic requirements.

13. Completed the LADWP inter connection water system. This will provide water reliability for emergency events such as firefighting or during a main break.

14. Installed waterless urinals in City facilities that are guaranteed to save water and reduce carbon dioxide emission associated with the treatment of water and wastewater.

15. Installed energy efficient reservoir mixing systems to help maintain water quality standards. These systems also helps us run the water utility more efficiently with less water loss.

16. Completed disinfectant booster systems in the City’s reservoir system to maintain water quality standards.

Land-use, Transportation & Open Space

Policies and Programs:

1. Adopted the Complete Streets Plan. Pursuing plan implementation of multi-modal projects that improve mobility, access, and environmental sustainability; for example, bikeway and bicycle parking projects, new and upgraded pedestrian crossings, streetscape and walkability enhancements, mobility hubs, transit infrastructure and operational improvements, traffic calming, traffic signal upgrades, and preparation for autonomous vehicles.

2. Operate free senior shuttle service – the Beverly Hills Dial-A-Ride Program- for Beverly Hills residents age 62 and older and disabled residents of any age. The shuttle service provides curb-to-curb pick-up and drop-off to and from home for transit service within the City, and five adjacent medical centers.

3. Administer On-Demand Transportation program for Beverly Hills resident age 62 or older and disabled residents of any age for the purchase of monthly credits for rideshare services.

4. Provide 30-day discounted bus passes as part of the MTA Bus Passes Senior Discount Program for residents age 62 or older and disabled residents.
5. Continued to support work on the Metro Purple Line Extension, which will provide a transportation alternative and will include two stops in Beverly Hills, at Wilshire/ La Cienega and Wilshire/Rodeo.

6. Continue to administer Beverly Hills “Bike Rack-On-Request” Program, which allows residents businesses to request a bike rack be installed in the public right-of-way adjacent to their business free of charge.

7. Maintain bikeways on Crescent Drive, Burton Way, North Santa Monica Boulevard, South Santa Monica Boulevard, and Roxbury Drive and are actively designing more to implement the Complete Streets Plan.

8. Increased bike parking throughout the City by installing bike racks/corrals and converting bike share stations to public bike parking.

9. Operated 8 large parks and 7 mini parks that provide amenities and open space.

Projects:

1. Incorporated sustainability elements into the North Santa Monica Boulevard Reconstruction Project, which reconstructed approximately 1.5 miles of deteriorating roadway, included upgrading the storm drain system, replacing curb and gutters, upgraded ramps to ADA standards, installed new LED street lights, and installed eleven bioswales segments.

2. Installed 100 bike racks throughout the City and maintain bike routes along Crescent Drive from Wilshire Blvd. to Sunset Blvd. and Burton Way from the City limits to Crescent Dr.

Materials & Waste

Policies and Programs

1. Utilize a two-stream refuse system that allows residents to sort green waste from the mixed waste. The mixed waste is sent to a material recovery facility (MRF) where recyclables are sorted from the disposed refuse mixture. The City’s diversion (recycling) rates are at average 60%.

2. Provide bi-monthly bulky item pick-up as part of the alley maintenance program and construction roll-off bins.

3. Administer food waste and recycling program where the City’s waste hauler sorts recyclable food wastes from the waste stream.

4. Host annual household hazardous waste collection event in partnership with Los Angeles County.

5. Adopted a Citywide Plastic Bag Ban Ordinance.

6. Adopted the Disposable Foodware Accessories Upon Request Ordinance.


8. Hold community paper shredding events.

9. Adopted Green Building Code requiring the use of reduced levels of VOCs chemicals in building materials.
10. Expanded the use of on-line publicity and e-marketing rather than utilizing printed materials

11. Complete library event registrations online, reducing use of paper and consumption of fuel.

12. Increased use of e-books, e-magazines and e-journals.

13. Using water filling stations in City facilities and sponsored events to discourage the use of disposable water bottles.

Staff has also prepared additional resources for the Committee to review or reference at their leisure. It can be found at:

www.beverlyhills.org/BHCAAP click on “Project Resources.”

The “Project Resources” page contains master plans, building codes, staff reports and other resources that maybe pertinent to future CAAP discussions. To provide some context, below is a brief description of each resources in the website:

**City of Beverly Hills Initiatives**

**Buildings**

*Green Building Code*

**Beverly Hills 2019 Green Building Code**
- The Green Building Code of the City of Beverly Hills adopts the California Green Building Standards Code. This code aims to increase water and energy efficiency. This code includes provisions set by the City of Beverly Hills.

**Energy**

*Light Emitting Diode Street Light Replacement Program*

**2018 City Council Staff Report**
- This report includes an overview analysis of the LED street light replacement project. Additionally, the report provides information on selection, cost projection, and public process for an LED street light replacement project. Additionally, the report attached January-June 2018 Public Works Commission staff reports.

**2021 City Council Report - LED Street Light Contract Acceptance**
- This report requests approval from the Beverly Hills City Council for the contract work to purchase and install light-emitting diode (LED) street light fixtures to produce energy savings for the City of Beverly Hills by Express Energy Services Inc.

**LED Street Light Project Update - August 2019 - Public Works Commission**
- This update provides background, installation, operation, energy and cost-saving projections, contingency considerations, as well as community feedback, and the project’s next steps. The update was presented to the Public Works Commission regarding the replacement of 5,300 street lights and 500 Intersection lights.

**LED Street Light Replacement Program - January 2018 - Public Works**
- This presentation for the Public Works Commission provides background information on the City of Beverly Hills street light system, LED street lights, details about an LED street light replacement program, benefits, and next steps. The presentation includes a staff
recommendation for the implementation of an LED street light replacement program.

**Community Choice Energy**

*Consideration to Join Clean Power Alliance, Community Choice Aggregation - 2017 City Council Staff Report.*

- In this Beverly Hills City Council Report, Staff requests direction in joining the Community Choice Aggregation Program. Community Choice Aggregation is a program in which local jurisdictions and special districts can pool their electricity needs and purchase electricity on behalf of the residents, businesses, and municipal agencies. The report includes the January and February 2017 City Council Report. Subsequently, these reports attach an executive summary of the Los Angeles County Community Choice Association Business Plan and the County of Los Angeles Community Choice Energy Public Workshop Presentation.

**Urban Forest Management**

*Beverly Hills Urban Forest Management Plan - 2021*

- The Urban Forestry Management Plan (UFMP) is a long-term planning document that provides the framework to progress the City of Beverly Hills towards a sustainable urban forest resilient to climate change. The plan outlines guiding principles, goals, objectives, and strategies aimed to improve the health of the urban forest and expand canopy cover while meeting the safety and economic goals of the City of Beverly Hills.

*Beverly Hills - Street Tree Master Plan - 1996*

- The Street Tree Master Plan aims to manage the future growth of trees in the City of Beverly Hills. The Plan includes maps, an inventory of trees, proposed species, and potential future street tree replacements.

**Cool Pavements**

*Cool Pavements Presentation - Public Works Commission - 2019*

- This presentation for the Public Works Commission provides information on the benefits and drawbacks of implementing cool pavements and includes City staff recommendations.

*Public Works Commission - Meeting Minutes - Cool Pavements 2019*

- This Public Works Commission meeting minutes includes the discussion on Cool Pavements and highlights key issues discussed.

*Cool Pavements - Memorandum - Public Works Department 2019*

- This Public Works Department Memorandum provides detailed background information on cool pavements and a discussion on performance, impacts, costs, maintenance, followed by a recommendation from City staff.

**Water**

*Integrated Water Resources Master Plan*


- Part I of the plan addresses the City of Beverly Hills' major water resources strategy, including imported water, groundwater, and other potential supply sources. Additionally, part 1 addresses emergency storage for the water systems and stormwater compliance.

*Integrated Water Resources Master Plan Part 2: Water, Sewer, Storm Drain 2020*
• Part 2 is a master plan of the water, sewer, and storm drain systems. The document addresses the existing system and service area, evaluation, design criteria, system analysis, and capital improvement for each system.

**Stormwater Capital Improvement**

**Stormwater Capital Improvement Program 2019**

• This report provides the City with a recommended 20-year Stormwater Capital Improvement Program (CIP) to satisfy the Enhanced Watershed Management Program compliance strategy for Ballona Creek. The objectives of the CIP are to identify optimal project sites in the City Of Beverly Hills, develop concepts with planning level opinions of cost, and establish a 20-year implementation timeline of prioritized projects.

**Sustainability Planning**

**Beverly Hills Sustainability Plan**

**Beverly Hills Sustainable City Plan - 2009**

• The Sustainable City Plan is a tool kit that the City can use to help address sustainability issues. The Sustainable City Plan does not direct the implementation of any specific actions. Still, it provides a list of potential programs and a foundation on which the City can build a unified sustainability strategy.

**Sustainability Plan Update Report - Memorandum - Public Works Department, City of Beverly Hills**

• This Public Works Department Memorandum on the Sustainability Plan Update Report provides the commission a summary of the City Sustainability Plan goals, objectives, policies, and implemented programs and projects supporting the Sustainability Plan. The report will also provide the commission with the next steps needed to establish monitoring and reporting programs that are essential in updating the City’s Sustainability Goals.

**Waste**

**Waste Diversion**

**Senate Bill 1383 Report**

• This Public Works Department Memorandum addresses a mandatory organic waste disposal reduction ordinance based on Senate Bill 1383 (SB1383). Attached are a Mandatory Organic Waste Disposal Reduction Ordinance Draft, Commercial Customers with Existing Organics Collection Services, and Beverly Hills/Athens Commercial Recycling Brochure.

**Solid Waste Diversion Report**

• The Solid Waste Diversion Report includes data on solid waste tonnage collected from January-December 2020. The report displays residential, water, and streets diversion data and commercial tons disposed of, recycled, and percentage diverted.

**Transportation**

**City Fleet Vehicles**

**City of Beverly Hills Fleet Information**
- This Public Works Department Memorandum regarding the City of Beverly Hills fleet vehicles provides information on the City of Beverly Hills fleet and facilities services overview, accomplishments, and challenges.

**Renewable Natural Gas (RNG) for Fleet Division**

- This report requested the Beverly Hills City Council approval of an agreement between the City of Beverly Hills and Clean Energy Renewable Fuels, LLC for the supply of renewable natural gas (rnf) and low carbon fuel standard (lcfs) credit management; and approval of a purchase order to Clean Energy Renewable Fuels, LLC for the supply of rng and lcfs credit management.

**Other CA Cities**

**CAAPs, General Plans, GHG Inventories, Sustainability Plans**

**Culver City**

*2019 Community GHG Inventory Report – General Plan 2045*

- This document presents the City of Culver City’s greenhouse gas emissions inventory for community-wide activities. The purpose of this community greenhouse gas inventory is to show source types, distribution, and amount of greenhouse gas emissions from using electricity and natural gas, transportation, solid waste, off-road equipment, industrial sources, water supply, and wastewater treatment within Culver City by residents, businesses, and local government operations.

**City of West Hollywood**

*City of West Hollywood – Climate Action Plan*

- The City Of West Hollywood’s Climate Action Plan addresses climate change and reduces the community’s greenhouse gas emissions at the local level. This Plan recommends a series of actions West Hollywood can take to reduce its contributions to global climate change by reducing greenhouse gas emissions.

**City of Santa Monica**

*Climate Action & Adaptation Plan – City of Santa Monica, 2030 Community Plan*

- Santa Monica’s Climate Action & Adaptation Plan aims to move the City closer to carbon neutrality by establishing an interim goal of reducing carbon emissions 80% below 1990 levels by 2030. The Plan focuses on eight objectives in three sectors to reduce emissions.

**City of Los Angeles**

*L.A’s Green New Deal – Sustainable City Plan 2019*

- This report is the first four-year update to the 2015 Plan. It augments, expands, and elaborates in more detail L.A.’s vision for a sustainable future, and it tackles the climate emergency with accelerated targets and new aggressive goals.

**Los Angeles County**

*Unincorporated Los Angeles County Community Climate Action Plan 2020*

- This Community Climate Action Plan (CCAP) describes the County’s plan for reducing greenhouse gas emissions by at least 11% below 2010 levels by 2020. The Plan includes specific strategy areas for each of the major emissions sectors and provides details on the 2010 and projected 2020 emissions in the unincorporated areas.
Zero Waste Plans

City of San Diego
City of Sand Diego Zero Waste Plan - 2015
• This Plan provides a framework of potential strategies to increase the City of San Diego's diversion rate and ensure compliance with current state diversion requirements. Zero Waste is a principle that calls for handling discarded materials as commodities for reuse rather than disposal and conserving those commodities through waste prevention, recycling, composting, and other technologies.

City of Santa Monica
Zero Waste Plan Update – 2020-2040 Roadmap
This Zero Waste Plan Update reviews the implementation status and outcomes of the waste reduction and diversion strategies included in the 2014 Zero Waste Plan, is consistent with the City’s CAAP, and recommends priorities for implementation in the following years.

Building Reach Codes

City Of Santa Monica
Local Energy Reach Code 2020 – Santa Monica
• This presentation promotes The City of Santa Monica’s 2020 Energy Reach Code. The presentation provides information on reach codes, options, solar requirements, electric vehicle requirements, and additional resources on reach codes.

2019 Reach Code Cost-Effectiveness Studies – Santa Monica Energy Reach Code
• This report documents cost-effective combinations of measures that exceed the 2019 Building Energy Efficiency Standards, for new single-family and low-rise multifamily residential construction. The analysis includes an evaluation of both mixed fuel and all-electric homes.

Climate-Friendly Buildings Construction Guide – Santa Monica
• This guide supports compliance with the City of Santa Monica Energy Reach Code by providing guidance for meeting all of the Reach Code requirements, including all-electric design, energy efficiency, and renewable energy. It also includes materials on-grid integration, which the Reach Code does not require, but will become an increasingly important part of decarbonizing buildings and the electrical grid. Additionally, it includes a handful of case studies to display characteristics of a zero-emissions building.

Residential Zero Net Energy Guide for New Construction – Santa Monica
• This guide focuses on the general elements of zero net energy homes and provides links to the specific details and requirements of Title 24 (energy code) and Home Energy Rating System verification.
Item 5
CITY OF BEVERLY HILLS
PUBLIC WORKS DEPARTMENT
MEMORANDUM

TO: Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)

FROM: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

DATE: November 30, 2021

SUBJECT: GHG Baseline Emissions, Inventory and Forecast


RECOMMENDATION
This item is for information to explore further the methodology behind Greenhouse Gas Emissions Inventory.

DISCUSSION
The core subjects of the Climate Action and Adaptation Plan (CAAP) are greenhouse gas (GHG) emissions inventory and forecast, reduction measures, reduction target settings and adaptation (managing the effects of climate change). In order to enhance committee discussions, the technical memo is being provided to explain the methodologies and data sources used to produce the emissions inventory and forecast. Data includes municipal and community, regional data related to energy (gas and electric consumption), fleet fuel type and consumption and vehicle mileage, City employee commuting mileage, water production, wastewater production, solid waste and tree inventory.

Highlights of the technical memo includes the following:
1. Inventory Methodologies
2. 2015 and 2019 GHG Inventories
3. GHG Emission Forecast
4. Provisional Target Settings

Inventory Methodologies
The municipal and community GHG emission inventories were developed based on methodologies outlined in ICLEI’s Local Government Operations Protocol (LGOP) and Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, respectively. Both the LGOP and Community Protocol state that local governments should assess emissions of all six internationally recognized GHGs. This inventory was prepared in conformance with International Organization of Standardization (ISO) 14064-1 and therefore, incorporates the latest 100-year GWP values published in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5). The GWP refers to the ability of each gas to trap heat in the atmosphere.
Using these standard methodologies, the emissions were calculated and grouped by sectors. These sectors are energy (gas and electric), transportation, and water. These groups can be used to organize GHG reduction measures in future committee meetings.

**2015 and 2019 GHG Inventories and Purpose**

The 2015 and 2019 GHG emission inventories are total emissions resulting from activities occurring in Beverly Hills. The results identified that energy and transportation sectors are the major contributors. The emissions inventory also shows that the City reduced its overall emissions by 8% and attributed to reductions in energy and vehicles miles traveled (VMT) within the community. The inventory results will help with the discussions about reductions measures, prioritization of those measures the target settings.

**GHG Emissions Forecast**

A GHG emission forecast estimates future GHG emissions by accounting for projected community growth. The Business As Usual (BAU) and Legislative Adjusted Scenarios were used to create two types of forecast. The BAU Scenario shows the city’s future emissions if it did not apply any reduction measures. The Legislative Adjusted Scenario accounts for state’s contribution (state mandate) to reducing local emissions. To reflect the future conditions, the Legislative Adjusted Scenario will be used as the forecast baseline for the CAAP. This forecast will be used to enhance committee discussions about reduction measures and target settings.

**Provisional Target Settings**

GHG Target Setting is an iterative process that identifies the amount of GHG reductions needed to reach carbon neutrality. The provisional target applies state regulations on top of the Legislative Adjusted Scenario to illustrate a pathway towards carbon neutrality by 2045. The provisional target settings is not the reduction targets for the CAAP. It is intended to illustrate the GHG reduction gap between the Legislative Adjusted forecast and state regulations. The GHG reduction gap can be a starting point for committee discussion on prioritizing reduction measures and evaluate different target setting goals for the CAAP.

**Conclusion:**

The technical memo provides the foundation to understand the results of the GHG inventories and forecast. The results also provides key future discussions regarding reduction measures and target settings. The committee will be discussing these which is critical to the development of the CAAP.
Attachment 1
August 25, 2021  
Rincon Project No: 20-09714  
Josette Descalzo, Programs Manager  
Environmental Compliance and Sustainability  
City of Beverly Hills  
345 Foothill Road  
Beverly Hills, California 90210  
Via email: jdescalzo@beverlyhills.org  

Subject: City of Beverly Hills 2019 Greenhouse Gas Emissions Inventory, Forecast, and Provisional Minimum Reduction Targets Memorandum

Dear Mr. Descalzo,

Rincon Consultants Inc. (Rincon) has prepared this 2019 greenhouse gas (GHG) emission inventory, a GHG emissions forecast, and GHG emission reduction targets to inform development of the City of Beverly Hills (City) Climate Action and Adaptation Plan (CAAP). The GHG emission inventory for is based on the most recent full year of available activity data (2019) and calculates the GHG emissions associated with transportation, energy usage (electricity and natural gas), water consumption and waste and wastewater generation. The inventory was competed using the (ICLEI) United States Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (Community Protocol)¹ and includes a comprehensive community inventory that addresses the GHG emissions generated from activities occurring within the City, and a municipal inventory which is a subset of the community inventory and accounts for the portion of the community GHG emissions that can be attributed directly to the City’s municipal operations. The GHG emissions forecast provides an estimate of how the City’s GHG emissions are expected to change in the years 2030 (Senate Bill 32), 2040, and 2045 (EO B-55-18) as a result of economic and population growth, as well as the impacts state climate related legislation will have on these future GHG emissions.

This memorandum also includes provisional minimum GHG emission reduction targets based on state goals and provides a pathway to determine the quantity of GHG emissions that Beverly Hills needs to reduce to contribute their fair share reduction towards achieving California’s long-term GHG emission reduction goals.² A recalculation of the 2015 GHG inventory, originally conducted as part of the Los Angeles County 2019 OurCounty Sustainability Plan, was developed as part of the CAAP to ensure that methodologies followed for both the 2015 and 2019 inventory years are consistent, and the reduction targets are based on an equivalent comparison of past and future GHG emissions. The reassessment of the 2015 GHG inventory includes updated methodology to be consistent with the Community Protocol³. The following sections provide a summary of the results for the GHG emission inventories, GHG

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² California’s long-term GHG emission reduction goals were established by the landmark Assembly Bill 32, Senate Bill 32, and Executive Order B-55-18. Collectively, these legislative actions provide a GHG reduction trajectory for the state of reducing statewide GHG emissions to 1990 GHG emission levels by 2020, 40% below 1990 GHG emissions levels 2030, and carbon neutrality by 2045.
emission forecast, and the State Minimum GHG Reduction Target Pathway to be included in the City of Beverly Hills CAAP.

Introduction

California considers GHG emissions and the impacts of climate change to be a serious threat to public health, the environment, economic well-being, and natural resources of the state, and has taken an aggressive stance to mitigate the impact on climate change through the adoption of legislation and policies, the most relevant of which are summarized below.

- **Executive Order (EO) S-3-05**, signed by the Governor in 2005, establishes statewide GHG emission reduction targets to achieve long-term climate stabilization as follows: by 2020, reduce GHG emissions to 1990 levels and by 2050, reduce GHG emissions to 80% below 1990 levels. The 2050 target was accelerated by the 2045 carbon neutral target in Executive Order B-55-18, as discussed below.⁴

- **Assembly Bill (AB) 32**, known as the Global Warming Solutions Act of 2006, requires that California’s GHG emissions be reduced to 1990 levels by the year 2020 (approximately a 15% reduction from 2005 to 2008 levels). The AB 32 Climate Change Scoping Plan, 2008, identifies mandatory and voluntary measures to achieve the statewide 2020 emissions goal, and encourages local governments to reduce municipal and community GHG emissions proportionate with state goals.⁵ This State achieved this goal in 2017, reducing GHG emissions below 1990 levels three years before the target.

- **Senate Bill (SB) 32**, signed by the Governor in 2016, establishes a statewide mid-term GHG reduction goal of 40% below 1990 levels by 2030. The California Air Resources Board (CARB) formally adopted an updated Climate Change Scoping Plan in December 2017, establishing the roadmap to achieve the 2030 goal and giving guidance to achieve substantial progress toward the 2050 state goal.

- **Executive Order (EO) B-55-18**, signed by the Governor in 2018, expanded upon EO S-3-05 by creating a statewide GHG goal of carbon neutrality by 2045. EO B-55-18 identifies CARB as the lead agency to develop a framework for implementation and progress tracking toward this goal.

This memorandum identifies the provisional GHG emission reduction targets identified for the City of Beverly Hills CAAP for the years 2030 (SB 32 target year), 2040, and 2045 (EO B-55-18 target year). In identifying these provisional targets, a GHG emissions forecast was developed to estimate future GHG emissions in each of the target years and is based on the GHG emissions level identified in the most recent GHG inventory for 2019.

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⁴ Executive Orders are binding only unto state agencies. Accordingly, Executive Order S-3-05 will guide state agencies’ efforts to control and regulate GHG emissions but will have no direct binding effect on local government or private actions.

⁵ Specifically, the AB 32 Scoping Plan states that CARB, “encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State commitment to reduce GHG emissions by approximately 15% from current levels by 2020” (p. 27). “Current” as it pertains to the AB 32 Scoping Plan is commonly understood as between 2005 and 2008.
Greenhouse Gases

The municipal and community GHG emission inventories were developed based on methodologies outlined in ICLEI’s Local Government Operations Protocol (LGOP) and Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, respectively. Both the LGOP and Community Protocol state that local governments should assess emissions of all six internationally recognized GHGs. These gases are outlined in Table 1, which includes their sources and global warming potential (GWP).6 This inventory was prepared in conformance with International Organization of Standardization (ISO) 14064-1 and therefore, incorporates the latest 100-year GWP values published in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5).7 The GWP refers to the ability of each gas to trap heat in the atmosphere. For example, one pound of methane has 28 times more heat capturing potential than one pound of carbon dioxide. This report focuses on the three GHGs most relevant to local government policymaking: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These gases comprise a large majority of GHG emissions at the community level. Other gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluorides are emitted primarily in private sector manufacturing and electricity transmission and are the subject of regulation at the state level and therefore, have been omitted from this inventory. GHG emissions are reported in metric tons of carbon dioxide equivalent (MT CO₂e) units, per standard practice. When dealing with an array of emissions, the gases are converted to their carbon dioxide equivalents for comparison purposes.

Table 1   Summary of Greenhouse Gas Emission

<table>
<thead>
<tr>
<th>Greenhouse Gas</th>
<th>Formula</th>
<th>Primary Source(s)</th>
<th>GWP (CO₂e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide</td>
<td>CO₂</td>
<td>Fuel combustion</td>
<td>1</td>
</tr>
<tr>
<td>Methane</td>
<td>CH₄</td>
<td>Fuel combustion, anaerobic decomposition of organic waste (landfills, wastewater treatment plants), fuel handling</td>
<td>28</td>
</tr>
<tr>
<td>Nitrous Oxide</td>
<td>N₂O</td>
<td>Combustion and wastewater treatment</td>
<td>265</td>
</tr>
<tr>
<td>Hydrofluorocarbons</td>
<td>Various</td>
<td>Leaking refrigerants and fire suppressants</td>
<td>4 – 12,400</td>
</tr>
<tr>
<td>Perfluorocarbons</td>
<td>Various</td>
<td>Aluminum production, semiconductor manufacturing, HVAC equipment manufacturing</td>
<td>6,630 – 11,100</td>
</tr>
<tr>
<td>Sulfur Hexafluoride</td>
<td>SF₆</td>
<td>Transmission and distribution of power</td>
<td>23,500</td>
</tr>
</tbody>
</table>


GWP: Global Warming Potential

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6 According to the United States Environmental Protection Agency (USEPA), the GWP was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of one ton of a gas will absorb over a given period of time, relative to the emissions of one ton of carbon dioxide (USEPA 2017; [https://www.epa.gov/ghgemissions/understanding-global-warming-potentials](https://www.epa.gov/ghgemissions/understanding-global-warming-potentials). Accessed August 12, 2021)

7 International Organization for Standardization (ISO) published ISO 14064-1 in 2006 (revised 2018) to provide an international standard for the quantification and reporting of GHG emissions.
2015 and 2019 Greenhouse Gas Inventories Overview

Community-wide GHG emission inventories were conducted for the years 2015 and 2019. The 2015 GHG inventory serves as an assessment of previous GHG emission levels, with the 2019 GHG inventory allowing an understanding of how GHG emissions have changed over time. The 2019 GHG inventory is used here for as the basis for a GHG emissions forecast to estimate how GHG emissions may change in the future. GHG reduction targets are established using the 2015 GHG inventory. This is done by comparing the State’s 2015 GHG inventory with the State’s 1990 GHG inventory, with the percent difference used to estimate Beverly Hills 1990 GHG emissions levels.

The 2019 community GHG inventory includes all emissions occurring within Beverly Hills’s geo-political control (i.e., sources of emissions within the City limits over which the City has significant influence or jurisdictional authority). As such, the community GHG inventory also includes a municipal operations GHG inventory (municipal inventory) which summarizes the emissions resulting from facilities that the City owns and/or operates (e.g., City Hall). The municipal inventory is a subset of the community inventory, meaning that all municipal operations are included in the commercial, transportation, solid waste, or water categories of the community-wide inventory. The municipal inventory should not be added to the community analysis; rather, it should be looked at as a portion of the total community emissions. The municipal inventory allows the City to track its GHG emissions resulting from the City owned facilities and vehicles over which it is able to exert control with GHG reduction policies and ultimately lead by example.

The reporting and calculation of GHG emissions are consistent with the recommendations of ICLEI. The community inventory reports GHG emissions by their source sector, which includes energy, transportation, water, solid waste, and carbon sequestration. The calculation of GHG emissions uses the best available data and guidance of the ICLEI methodologies. A detailed assessment of the data and its sources, calculation methodologies, and GHG emissions reporting by scope and sector is provided in the May 2021 City of Beverly Hills Greenhouse Gas Inventory Methodology and Data Evaluation Memorandum, (Data Evaluation and Methodology Memo), which is included here as Attachment A.

2019 Municipal Operations GHG Inventory

The 2019 municipal inventory assesses the contribution to total community GHG emissions of activities, entities and GHG emission sources under the operational control of the City. The municipal operations sector of the municipal GHG inventory is based upon activity data that are captured in the community inventory and are considered to be a subset of the community inventory.

The results of GHG emission calculations are presented by emissions “scope,” relating to the degree of control the City has over emission sources, and the sector that the emissions sources are associated with in relation the community GHG inventory. Emissions sources are categorized as direct (Scope 1) or indirect (Scope 2 or Scope 3), in accordance with the World Resources Institute and the World Business

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9 The GHG emission reduction potential from carbon sequestration is only assessed for the year 2019, as this is the only year for which data was available.
Council for Sustainable Development’s Greenhouse Gas Protocol Corporate Standard, which are summarized below:

- **Scope 1**: Direct GHG emissions from sources within a local government’s operations that it owns and/or controls. This includes stationary combustion to produce electricity, steam, heat, and power equipment; mobile combustion of fuels; process emissions from physical or chemical processing; fugitive emissions that result from production, processing, transmission, storage and use of fuels; and other sources.

- **Scope 2**: Indirect GHG emissions associated with the consumption of electricity, steam, heating, or cooling that are purchased from a utility provider that also provides energy to other jurisdictions and/or is located outside City boundaries.

- **Scope 3**: All other indirect GHG emissions not covered in Scope 2, such as emissions resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the City (e.g., employee commuting and business travel, outsourced activities, waste disposal, etc.).

2019 Municipal Operations GHG Inventory Results

Municipal operations GHG emissions are considered by the scope of the emission source, as well as the sector. The results of the municipal inventory are provided in Figure 1 as they relate to the GHG emission source scope, and Table 2 as they pertain to GHG emission source scope and sector. A discussion of the emissions by sector follows for the four primary emission sectors of: energy, transportation, water, and waste.

\[\text{\footnotesize 10}\] This Municipal Operations GHG Inventory does not assess upstream GHG emission sources such as the extraction and production of purchased materials and fuels.
Figure 1  2019 Municipal Operations GHG Emission Inventory Results

Table 2  2019 Municipal Operations GHG Emission Inventory Results (MT CO₂e)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Scope 1</th>
<th>Scope 2</th>
<th>Scope 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>292</td>
<td>3,041</td>
<td>N/A</td>
<td>3,333</td>
</tr>
<tr>
<td>Transportation</td>
<td>1,272</td>
<td>N/A</td>
<td>699</td>
<td>1,971</td>
</tr>
<tr>
<td>Water and Wastewater</td>
<td>N/A</td>
<td>N/A</td>
<td>122</td>
<td>122</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>N/A</td>
<td>N/A</td>
<td>134</td>
<td>134</td>
</tr>
<tr>
<td><strong>Cumulative Emissions</strong></td>
<td><strong>1,564</strong></td>
<td><strong>3,041</strong></td>
<td><strong>955</strong></td>
<td><strong>5,560</strong></td>
</tr>
</tbody>
</table>

Notes: All values presented are in units of metric tons of carbon dioxide equivalent (MT CO₂e); N/A = Not applicable
Values may not add due to rounding.
Energy

Energy sector GHG emissions from municipal operations include scope 1 and scope 2 emission sources that relate to the combustion of natural gas in end uses in municipal buildings and facilities (scope 1) and the consumption of electricity in various municipal processes, buildings, and facilities (scope 2). The GHG emissions associated with energy sector sources in the municipal operations GHG emission inventory are provided in Table 3.

Table 3  Electricity Sector Municipal Operations GHG Emissions

<table>
<thead>
<tr>
<th>Sub-Sector</th>
<th>Emissions (MT CO(_2)e)</th>
<th>Emission Source Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Consumption – Buildings and Facilities</td>
<td>292</td>
<td>Scope 1</td>
</tr>
<tr>
<td>Electricity Consumption</td>
<td>2,665</td>
<td>Scope 2</td>
</tr>
<tr>
<td>Streetlights and Traffic Signals</td>
<td>513</td>
<td>Scope 2</td>
</tr>
<tr>
<td>Buildings and Facilities</td>
<td>2,320</td>
<td>Scope 2</td>
</tr>
<tr>
<td><strong>Cumulative Sector Emissions</strong></td>
<td><strong>2,665</strong></td>
<td></td>
</tr>
</tbody>
</table>

Notes: MT CO\(_2\)e = Metric tons of carbon dioxide equivalent

Transportation

Transportation sector GHG emissions from municipal operations include scope 1 and scope 3 GHG emission sources that relate to the combustion of fossil fuels in the City’s fleet vehicles and equipment (scope 1) and City employee commute and business travel (scope 3). The City currently purchases renewable natural gas and bio-diesel for use in a portion of the fleet vehicles and equipment, which has reduced the CO\(_2\) impact of combustion of these fuels. While the combustion of these renewable fuels still contributes some GHG emissions in the form of CH\(_4\) and N\(_2\)O, this impact is minimal in comparison to the use of fossil fuels. The use of renewable fuels has effectively avoided vehicle fleet GHG emissions of approximately 400 MT CO\(_2\)e, or about 24%, as compared to if fossil fuels were used. The GHG emissions associated with transportation sector sources in the Municipal Operations inventory are provided in Table 4.

Table 4  Transportation Sector Municipal Operations GHG Emissions

<table>
<thead>
<tr>
<th>Sub-Sector</th>
<th>Emissions (MT CO(_2)e)</th>
<th>Emission Source Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Fleet – Vehicles and Equipment</td>
<td>1,272</td>
<td>Scope 1</td>
</tr>
<tr>
<td>Gasoline Consumption</td>
<td>1,270</td>
<td>Scope 1</td>
</tr>
<tr>
<td>Bio-Diesel Consumption</td>
<td>1</td>
<td>Scope 1</td>
</tr>
<tr>
<td>Renewable Natural Gas Consumption</td>
<td>1</td>
<td>Scope 1</td>
</tr>
<tr>
<td>Employee Commute</td>
<td>699</td>
<td>Scope 3</td>
</tr>
<tr>
<td><strong>Cumulative Sector Emissions</strong></td>
<td><strong>1,971</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes: MT CO\(_2\)e = Metric tons of carbon dioxide equivalent
Water

Water sector GHG emissions include scope 3 emissions from municipal water consumption in buildings and facilities, and for irrigation and scope 2 emissions from electricity used for water and wastewater pumping and conveyance. GHG emissions associated with municipal water consumption are generated by the electricity used to supply water to municipal facilities. The City of Beverly Hills owns and operates four groundwater wells and a water treatment plant; however, these did not produce potable water in 2019, and only limited groundwater pumping occurred. Electricity consumed under the water sector was primarily used for delivery of imported water and for sewer lift stations. In 2019 the primary source of water for the City was imported water from Metropolitan Water District and as such, there is risk minimal of double counting this electricity consumption with the scope 2 electricity consumption emissions under the energy sector. In 2019 municipal water consumption was 317 acre-feet, generating approximately 122 MT CO$_2$e. The total water sector municipal 2019 GHG emissions are provided in Table 5. It is expected that municipal water related GHG emissions will increase in the future due to the increased pumping of groundwater resources when the City’s water treatment plant becomes operational. While this will increase the GHG emissions for municipal operations, the increased reliance on the local water supply could reduce overall community GHG emissions through reduced reliance on energy-intensive imported water sources.

<table>
<thead>
<tr>
<th>Sub-Sector</th>
<th>Emissions (MT CO$_2$e)</th>
<th>Emission Source Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water and Wastewater Conveyance and Distribution</td>
<td>209</td>
<td>Scope 2</td>
</tr>
<tr>
<td>Imported Water Consumption</td>
<td>122</td>
<td>Scope 3</td>
</tr>
<tr>
<td>Cumulative Sector Emissions</td>
<td>331</td>
<td></td>
</tr>
</tbody>
</table>

Notes: MT CO$_2$e = Metric tons of carbon dioxide equivalent

Solid Waste

Municipal Operations solid waste GHG emissions include scope 3 emissions from waste generated by municipal facilities. These GHG emission occur in the form of methane as disposed waste decays in landfills overtime. The GHG emissions captured here account methane commitment for the waste generated in 2019. In 2019 approximately 353 tons of solid waste was disposed of from municipal operations, generating approximately 122 MT CO$_2$e.
2015 and 2019 Community GHG Inventory Results

The 2015 and 2019 community GHG inventories provide the total GHG emissions resulting from activities occurring within, or attributable to the community within the City of Beverly Hills. The results will be used to estimate future GHG emissions and set GHG reduction targets that align with state legislation. Community GHG emission are reported by emission sector, consistent with the CARB 2017 Climate Change Scoping Plan and the ICLEI Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, which include energy, transportation, water, and solid waste. A detailed description of the activity data, data sources, and calculation methodology for community GHG emission calculations can be referenced in the Data Evaluation and Methodology Memo (Attachment A).

Due to California Public Utilities Commission data privacy rules, data acquired through the Southern California Gas Energy Data Request Program cannot be published or publicly disclosed. As such, natural gas data had been aggregated into one GHG emissions source. This natural gas GHG emissions source includes both residential and non-residential consumption. The disaggregated data will be used for the development of GHG reduction measures; however, this data must be aggregated into one source for public facing documents.

2015 Community GHG Inventory Results

In 2015, the City of Beverly Hills generated approximately 453,564 MT CO$_2$e. The results of the 2015 community GHG inventory update show the transportation and energy sector GHG emission sources generated nearly equivalent total GHG emissions, contributing 48% and 48%, respectively to the 2015 GHG emissions total. Solid waste and water sector emission sources contributed 3% and 1% of total 2015 GHG emissions, respectively. The results of the 2015 community GHG inventory are provided in Figure 2 as they relate to the GHG emission sector, and Table 6 as they pertain to GHG emission sector and the associated emission sources.

---

11 There are primary sectors from the 2017 Scoping Plan that are excluded from the 2019 Community inventory. Agriculture sector is excluded because there are not significant agricultural activities in Beverly Hills. Industrial emission sources are excluded because GHG emission from these emission sources are regulated by the state under the Mandatory GHG Reporting Program and the Cap-and-Trade Program. High-GWP sector emissions are also excluded due to a lack a reliable community-wide data set encompassing these emission sources. California Air Resources Board (CARB). 2017. California’s 2017 Climate Change Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf?utm_medium=email&utm_source=govdelivery. Accessed August 12, 2021.
Figure 2  2015 Community GHG Emissions Inventory Results

![Figure 2: 2015 Community GHG Emissions Inventory Results](image)

Table 6  Updated 2015 Community GHG Emissions Inventory Results

<table>
<thead>
<tr>
<th>Sector/Emission Source</th>
<th>GHG Emissions (MT CO₂e)</th>
<th>Percentage of Total Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>218,684</td>
<td>48%</td>
</tr>
<tr>
<td>Non-Residential Electricity Consumption</td>
<td>86,261</td>
<td>19%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>78,678</td>
<td>17%</td>
</tr>
<tr>
<td>Residential Electricity Consumption</td>
<td>46,945</td>
<td>10%</td>
</tr>
<tr>
<td>Electricity Transmission and Distribution Losses</td>
<td>6,800</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
<td><strong>215,717</strong></td>
<td><strong>48%</strong></td>
</tr>
<tr>
<td>Passenger On-road Vehicles</td>
<td>186,482</td>
<td>41%</td>
</tr>
<tr>
<td>Commercial On-road Vehicles</td>
<td>18,567</td>
<td>4%</td>
</tr>
<tr>
<td>Off-road Equipment</td>
<td>10,667</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Solid Waste</strong></td>
<td><strong>13,474</strong></td>
<td><strong>3%</strong></td>
</tr>
<tr>
<td>Waste Sent to Landfill</td>
<td>13,021</td>
<td>3%</td>
</tr>
<tr>
<td>Landfilling Process Emissions</td>
<td>453</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td><strong>5,690</strong></td>
<td><strong>1%</strong></td>
</tr>
<tr>
<td>Imported Potable Water Supply</td>
<td>4,396</td>
<td>1%</td>
</tr>
<tr>
<td>Wastewater Treatment Process and Fugitive Emissions</td>
<td>604</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Wastewater Collection and Treatment Energy</td>
<td>690</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Cumulative Emissions</strong></td>
<td><strong>453,564</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Notes: MT CO₂e = Metric tons of carbon dioxide equivalent; Totals may not add due to rounding.
1. GHG emissions generated by the collection and transport of waste generated within the City are captured in the Commercial On-road Vehicle source in the Transportation sector.
2019 Community GHG Inventory Results

In 2019, the City of Beverly Hills generated approximately 418,271 MT CO$_2$e. The City of Beverly Hills 2019 community GHG emissions were largely dominated by the transportation sector emission sources generating 49% of the City’s total GHG emissions, with energy being the second largest source, generating 46% of the City’s total GHG emissions. Solid waste and water sector emissions made a much smaller contribution to overall GHG emissions, at 4% and less than 1%, respectively. The results of the 2019 community inventory are provided in Figure 3 and Table 7.

Figure 3  2019 Community GHG Emissions Inventory Results

![Pie chart showing the distribution of GHG emissions by sector: Energy (46%), Transportation (49%), Solid Waste (4%), Water (1%)](image-url)
### Table 7  2019 Community GHG Emissions Inventory Results

<table>
<thead>
<tr>
<th>Sector/Emission Source</th>
<th>GHG Emissions (MT CO$_2$e)</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>192,897</td>
<td>46%</td>
</tr>
<tr>
<td>Non-Residential Electricity Consumption</td>
<td>66,668</td>
<td>16%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>89,061</td>
<td>21%</td>
</tr>
<tr>
<td>Residential Electricity Consumption</td>
<td>31,786</td>
<td>8%</td>
</tr>
<tr>
<td>Electricity Transmission and Distribution Losses</td>
<td>5,382</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
<td><strong>205,533</strong></td>
<td><strong>49%</strong></td>
</tr>
<tr>
<td>Passenger On-road Vehicles</td>
<td>175,512</td>
<td>43%</td>
</tr>
<tr>
<td>Commercial On-road Vehicles</td>
<td>18,930</td>
<td>5%</td>
</tr>
<tr>
<td>Off-road Equipment</td>
<td>11,242</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Solid Waste</strong>$^1$</td>
<td><strong>15,352</strong></td>
<td><strong>4%</strong></td>
</tr>
<tr>
<td>Waste Sent to Landfill</td>
<td>14,836</td>
<td>4%</td>
</tr>
<tr>
<td>Landfilling Process Emissions</td>
<td>516</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td><strong>4,489</strong></td>
<td><strong>1%</strong></td>
</tr>
<tr>
<td>Imported Potable Water Supply</td>
<td>3,452</td>
<td>1%</td>
</tr>
<tr>
<td>Wastewater Treatment Process and Fugitive Emissions</td>
<td>607</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Wastewater Collection and Treatment Energy</td>
<td>430</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Carbon Sequestration</strong>$^2$</td>
<td><strong>-1,817</strong></td>
<td><strong>&lt;1%</strong></td>
</tr>
<tr>
<td><strong>Cumulative Emissions</strong></td>
<td><strong>416,454</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Notes: MT CO$_2$e = Metric tons of carbon dioxide equivalent
Totals may not add due to rounding.
1. GHG emissions generated by the collection and transport of waste generated within the City are captured in the Commercial On-road Vehicle source in the Transportation sector.
2. The carbon sequestration is calculated from the trees in the City’s right-of-way.

### GHG Emissions Reduction Progress Since 2015

Between the years 2015 and 2019, the City of Beverly Hills has reduced its GHG emissions by a total of 8 percent. The majority of these GHG emissions reduction occurred in the energy sector through a reduction in overall electricity consumption and increased availability of renewable electricity through participation in the Clean Power Alliance (CPA). The water sector also experienced a relatively significant 22 percent GHG emissions reduction through an overall reduction in water consumption city-wide. The Transportation sector experienced a slight decrease in GHG emissions, through improved fuel efficiency standards, while the solid waste sector had a 14 percent increase in GHG emissions, attributable to an increase in waste generation in the City. Table 8 and Figure 4 provide an overview of the GHG emissions reduction in each community emission source and sector between 2015 and 2019.
Table 8  GHG Emissions Reduction between 2015 and 2019

<table>
<thead>
<tr>
<th>Sector/Emission Source</th>
<th>2015 GHG Emissions (MT CO₂e)</th>
<th>2019 GHG Emissions (MT CO₂e)</th>
<th>Change in GHG Emissions since 2015 (MT CO₂e)</th>
<th>Percent Change in GHG Emissions since 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>218,684</td>
<td>192,897</td>
<td>-25,787</td>
<td>-12%</td>
</tr>
<tr>
<td>Non-Residential Electricity Consumption</td>
<td>86,261</td>
<td>66,668</td>
<td>-19,593</td>
<td>-23%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>78,678</td>
<td>89,061</td>
<td>10,382</td>
<td>13%</td>
</tr>
<tr>
<td>Residential Electricity Consumption</td>
<td>46,945</td>
<td>31,786</td>
<td>-15,159</td>
<td>-32%</td>
</tr>
<tr>
<td>Electricity Transmission and Distribution Losses</td>
<td>6,800</td>
<td>5,382</td>
<td>-1,418</td>
<td>-21%</td>
</tr>
<tr>
<td>Transportation</td>
<td>215,717</td>
<td>205,533</td>
<td>-10,183</td>
<td>-5%</td>
</tr>
<tr>
<td>Passenger On-road Vehicles</td>
<td>186,482</td>
<td>175,361</td>
<td>-11,122</td>
<td>-6%</td>
</tr>
<tr>
<td>Commercial On-road Vehicles</td>
<td>18,567</td>
<td>18,930</td>
<td>363</td>
<td>2%</td>
</tr>
<tr>
<td>Off-road Equipment</td>
<td>10,667</td>
<td>11,242</td>
<td>575</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>13,474</td>
<td>15,352</td>
<td>1,879</td>
<td>14%</td>
</tr>
<tr>
<td>Waste Sent to Landfill</td>
<td>13,021</td>
<td>14,836</td>
<td>1,816</td>
<td>14%</td>
</tr>
<tr>
<td>Landfilling Process Emissions</td>
<td>453</td>
<td>516</td>
<td>63</td>
<td>14%</td>
</tr>
<tr>
<td>Water</td>
<td>5,690</td>
<td>4,489</td>
<td>-1,201</td>
<td>-21%</td>
</tr>
<tr>
<td>Imported Potable Water Supply</td>
<td>4,396</td>
<td>3,452</td>
<td>-944</td>
<td>-21%</td>
</tr>
<tr>
<td>Wastewater Treatment Process and Fugitive Emissions</td>
<td>604</td>
<td>607</td>
<td>2</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Wastewater Collection and Treatment Energy</td>
<td>690</td>
<td>430</td>
<td>-260</td>
<td>-38%</td>
</tr>
<tr>
<td>Cumulative Emissions</td>
<td>453,564</td>
<td>418,271</td>
<td>-35,293</td>
<td>-8%</td>
</tr>
</tbody>
</table>

Notes: MT CO₂e = Metric tons of carbon dioxide equivalent; Totals may not add due to rounding.
Energy sector emissions reduction can be directly attributed to increased energy-efficiency and participation in the CPA. Between 2015 and 2019, the Beverly Hills service population (total employment plus residents) increased by approximately 1 percent; however, in the same time period overall electricity consumption decrease by 10 percent. Compounding this is the joining of the CPA in 2019, which allows electricity customers in the City to purchase electricity from more renewable sources. This resulted in an overall impact of reducing electricity consumption associated GHG emissions by an effective 26 percent.

An overall increase in natural gas consumption in the community offset the GHG reduction gains achieved from electricity. Between the two inventory years, GHG emissions from natural gas consumption increased by 13 percent, which can be directly attributed to a respective increase in consumption. With population and employment growing by only 0.5 percent and 1.5 percent, respectively, but natural gas consumption growing by 13 percent and 11 percent, respectively in the same time period, the influence of this substantial increase in natural gas consumption may have resulted from increased heating needs. According to a heating degree day data set published by the National Weather Service Climate Prediction Center, the months of January, February and March in 2019 were substantially cooler than 2015, as measured at the Los Angeles International Airport. The annual number of heating degree days in 2019 were 24 percent higher in 2019 than in 2015, indicating the potential for an increase in energy use for building heating. While this may be a factor in the increase of natural gas use, it is possible that other external factors contributed to the increase in consumption.

Transportation sector GHG emissions reduction can be primarily attributed to reduced vehicle emissions from increased fuel efficiency in the regional on-road vehicle fleet. Passenger vehicle GHG emissions

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12 A degree day compares the mean (the average of the high and low) outdoor temperatures recorded for a location to a standard temperature. The more extreme the outside temperature, the higher the number of degree days. A high number of degree days generally results in higher levels of energy use for space heating or cooling. A heating degree day refers to a temperature below the mean, and as such, a higher number of heating degree days is expected to result in a higher building heating energy demand.

saw a decrease in the City, which was primarily due to increased fuel efficiency and minimal growth in vehicle miles traveled (VMT). However, commercial on-road VMT increased by 6.5 percent in the City, offsetting any potential GHG reduction from improved efficiency. This increase in commercial VMT is likely attributable to economic growth in the City and region.

Waste sector GHG emissions increased by 14 percent, which is directly related to an increase in the amount of waste generated in Beverly Hills that is sent to landfills. The 14 percent increase in emissions between 2015 and 2019 is a direct result of a 14 percent increase in waste sent to landfill, which is likely attributable to economic growth and housing development in the City.

Water sector GHG emissions sources also saw significant reduction in total emissions between 2015 and 2019. GHG emissions from water supply are generated by the energy used to convey, treat, and distribute water, with imported water sources requiring a high energy intensity. Between 2015 and 2019, Beverly Hills reduced its reliance on imported water by 9 percent through its water conservation efforts. However, the primary driver for emissions reduction in this sector result from the decreased carbon intensity of electricity used to supply water to Beverly Hills. This sector may see decreased emissions when the City’s water treatment plant is back online in 2022, which would result from the reduced amount of imported water from Metropolitan Water District of Southern California.
GHG Emissions Forecast

A GHG emissions inventory sets a reference point for a single year; however, annual GHG emissions change over time due to factors such as population and job growth as well as new technologies and policies. A GHG emissions forecast estimates future GHG emission changes by accounting for projected community growth. Calculating the difference between the GHG emissions forecast and GHG emissions reduction targets set by a jurisdiction determines the gap in GHG emissions that needs to be closed through the implementation of local GHG reduction policies. This section includes an estimate of the future emissions for the City of Beverly Hills in the years 2025, 2030, 2040, and 2045 in a business-as-usual scenario (BAU) forecast and a legislative adjusted scenario (adjusted) forecast, which are defined as follows:

▪ Business-as-usual scenario- Provides a forecast of how future GHG emissions would change if consumption trends continue as they did in 2019 and growth were to occur as projected in the City’s General Plan, absent any regulations that would reduce local emissions.

▪ Legislative adjusted scenario- Provides a forecast of how currently adopted legislation would reduce GHG emissions from the business-as-usual scenario. The legislative adjusted scenario represents the state’s contribution to reducing local GHG emissions to meet state goals.

The adjusted forecast incorporates the impact of state regulations that provide GHG emission reduction potential to offer a more accurate picture of future GHG emissions growth and the responsibility of the City for GHG emissions reduction.

Business-as-usual Scenario GHG Emissions Forecast

The BAU forecast provides an estimate of how GHG emissions would change in the forecast years if consumption trends continue as in 2019, absent any new regulations or actions which would reduce local GHG emissions. Future GHG emissions were calculated by multiplying projected activity data under the BAU forecast with baseline emission factors, established by the 2019 community GHG emissions inventory. Several indicator growth rates were developed from 2019 activity data and GHG emission levels for GHG emission sectors and applied to demographic projections to estimate future year emissions. On-road transportation and off-road equipment GHG emissions were alternatively projected using modeled activity data. On-road VMT data was obtained from the Southern California Association of Governments’ (SCAG) Trip-Based Travel Demand Model v6.3 from the agency’s 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), while the off-road equipment fuel consumption was obtained from CARB’s OFFROAD2007 and OFFROAD2017 mobile source emissions models. Emission factors for the BAU forecast remain constant for all forecast years, derived from the 2019 community GHG emissions inventory. A summary of the BAU forecast results by GHG emission sector are provided in Table 9 and Figure 5.

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14 Carbon sequestration potential is not addressed in the GHG emissions forecast. The effects of City policies for maintaining and increasing carbon sequestration potential will be addressed as part of the GHG reduction measures in the CAAP.
Table 9  BAU Forecast Results Summary by Emissions Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>2019</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>192,700</td>
<td>204,128</td>
<td>214,962</td>
<td>217,346</td>
<td>219,995</td>
<td>222,636</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>5.9%</td>
<td>5.3%</td>
<td>1.1%</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Transportation</td>
<td>205,690</td>
<td>210,969</td>
<td>214,785</td>
<td>218,674</td>
<td>222,633</td>
<td>226,567</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>2.6%</td>
<td>1.8%</td>
<td>1.8%</td>
<td>1.8%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>15,352</td>
<td>16,031</td>
<td>16,665</td>
<td>16,858</td>
<td>17,091</td>
<td>17,324</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>4.4%</td>
<td>4.0%</td>
<td>1.2%</td>
<td>1.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Water</td>
<td>4,490</td>
<td>4,705</td>
<td>4,878</td>
<td>4,936</td>
<td>5,004</td>
<td>5,065</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>4.8%</td>
<td>3.7%</td>
<td>1.2%</td>
<td>1.4%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Total</td>
<td>418,232</td>
<td>435,833</td>
<td>451,291</td>
<td>457,814</td>
<td>464,722</td>
<td>471,593</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>4.2%</td>
<td>3.5%</td>
<td>1.4%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Notes: All values are presented in metric tons of carbon dioxide equivalent (MT CO₂e)
Totals may not add up due to rounding

Figure 5  BAU Forecast Results Summary by Emissions Sector
Legislative Adjusted Scenario GHG Emissions Forecast

Several federal and state regulations have been enacted that would reduce Beverly Hills’s GHG emissions below the BAU forecasted levels in 2025, 2030, 2040 and 2045. The impact of these regulations was quantified and incorporated into the adjusted forecast to provide a more accurate depiction of future emissions growth and the GHG emission reduction responsibility of Beverly Hills, once established state regulations have been implemented. The state legislation included in the adjusted forecast result in GHG emissions reduction related to transportation, building efficiency and renewable electricity. A brief description of each regulation and the methodology used to calculate associated reduction is provided in the following, as well as a description of why specific legislation was excluded from the analysis. This adjusted forecast does not take into account waste or water reductions from legislation such as AB 341, SB 1383, or SB X7-7. The GHG emission reduction that would be achieved by these will be accounted for the GHG reduction measures, as they require discreet actions the City must take, and therefore, the City should be able to take credit GHG reduction credit for the implementation.

Transportation Legislation

Major regulations incorporated into the CARB’s 2021 transportation modeling include the Advanced Clean Truck Rule, SAFE Vehicle Rules and Actions, and Innovative Clean Transit Rule; which are also included in this GHG emissions forecast to account for state and federal transportation legislation.\(^\text{15}\)

Adopted in 2020, the Advanced Clean Truck Rule requires manufacturers of heavy-duty on-road trucks to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 vocational truck sales, and 40 percent of Class 7-8 truck tractor sales.

Adopted in 2018, Innovative Clean Transit regulation is a program that aims to transform California transit bus fleets to zero-emissions technologies. This regulation applies to all transit agencies that own, operate, or lease buses with GVWR above 14,000 lbs. It requires all public transit agencies to gradually transition to a 100 percent zero-emission bus fleet and encourages them to provide innovative first and last-mile connectivity and improved mobility for transit riders.

In September 2019, the U.S. Environmental Protection Agency (US EPA) and the National Highway Traffic Safety Administration (NHTSA) issued the Safer Affordable Fuel-Efficient or SAFE Vehicles Rule. This rule set a vehicle fleet efficiency standard increase of 1.5 percent per year above 2020 standards through 2026.

Reduction in GHG emissions from the above referenced standards were calculated using CARB’s EMFAC2021 model for Los Angeles County. The newly updated EMFAC2021 model integrates the estimated reduction from state and federal transportation legislation into the mobile source emissions portion of the model.\(^\text{16}\)


can be quantified as the difference between transportation emissions calculated using the 2019 provided emission factors and calculated using the reduced emission factors for the target years.

**Title 24**

The California Code of Regulations Title 24, Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption, which in turn reduces fossil fuel consumption and associated GHG emissions. The standards are updated triennially to allow consideration and possible incorporation of new energy-efficient technologies and methods. Since the 2019 GHG inventory year, the 2019 Title 24 Energy Efficiency Standards have come into effect, creating significantly more efficient new building stock. For example, new residential developments must include on-site solar generation and near-zero net energy use. For projects implemented after January 1, 2020, the California Energy Commission (CEC) estimates that the 2019 standards will improve energy efficiency for residential buildings by 53% for electricity end uses and 7% for natural gas end uses, relative to the 2016 standards. These percentage savings relate to space heating and cooling, lighting, and water heating only and do not include other appliances, outdoor lighting that is not attached to buildings, plug loads, or other energy uses.

The SB 32 Scoping Plan calls for the continuation of ongoing triennial updates to Title 24 that will yield regular increases in the mandatory energy and water savings for new construction. Future updates to Title 24 standards for residential and non-residential alterations past 2025 are not taken into consideration due to lack of data and certainty about the magnitude of energy savings that will be realized with each subsequent update.

**Renewables Portfolio Standard & Senate Bill 100**

Established in 2002 under Senate Bill 1078, enhanced in 2015 by Senate Bill 350, and accelerated in 2018 under Senate Bill 100, California’s Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, publicly owned utilities, electricity service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 50% of total procurement by 2026 and 60% of total procurement by 2030. The RPS program further requires these entities to increase procurement from GHG-free sources to 100% of total procurement by 2045.

The GHG emission reduction from SB 100 are accounted for by reducing the GHG emissions associated with each unit of energy in line with the increasing stringent RPS requirements. In 2045, all retail electricity is assumed to be completely carbon neutral.

**Legislative GHG Emission Reduction Contribution**

Based on the legislation described above and emission reduction potential for each, the City of Beverly Hills can expect significant help from these state regulations in meeting state GHG emission reduction regulation is excluded from EMFAC2017 because most of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS is assumed to not have a significant impact on CO₂ emissions from EMFAC’s tailpipe emission estimates.
goals. These GHG emissions reduction primarily contribute to the energy sector and transportation sectors, with some impact from SB 100 on GHG emissions from imported water. A summary of the reduction from the BAU forecast that can be expected under the adjusted forecast are provided in Table 10.

Table 10  Summary of Legislative GHG Emissions Reduction

<table>
<thead>
<tr>
<th>Legislation</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senate Bill 100 and Renewable Portfolio Standards</td>
<td>19,855</td>
<td>37,151</td>
<td>64,315</td>
<td>92,455</td>
<td>121,300</td>
</tr>
<tr>
<td>Title 24</td>
<td>2,309</td>
<td>4,567</td>
<td>4,827</td>
<td>5,025</td>
<td>5,222</td>
</tr>
<tr>
<td>Transportation (Advanced Clean Trucks, Innovative Clean Transit, etc.)</td>
<td>22,607</td>
<td>38,327</td>
<td>48,997</td>
<td>55,230</td>
<td>58,830</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44,771</strong></td>
<td><strong>80,046</strong></td>
<td><strong>118,139</strong></td>
<td><strong>152,709</strong></td>
<td><strong>185,352</strong></td>
</tr>
</tbody>
</table>

Notes: All values are presented in metric tons of carbon dioxide equivalent (MT CO₂e)

Legislative Adjusted Scenario Forecast Results

In the adjusted emissions forecast, the electricity and water sectors all experience a strong downward trend, approaching near-zero in 2045 due to stringent RPS requirements from SB 100. Natural gas emissions are expected to continue an upward trajectory until 2045 due to population and employment growth projections. This trend is partially offset due to the increasingly stringent efficiency requirements for new construction in the upcoming Title 24 code cycles. Transportation emissions are expected to decrease sharply in the next 10 to 15 years due to existing fuel efficiency requirements and fleet turnover rates. As most current regulations expire in 2025 or 2030, emissions standards will experience diminishing returns while VMT continues to increase, leading to lower rates of emissions reduction in the transportation sector. A summary of Beverly Hills’s projected GHG emissions under the adjusted forecast by sector and year through 2045 can be found in Table 11 and Figure 6.
Table 11  Legislative Adjusted Scenario GHG Emissions Forecast Results

<table>
<thead>
<tr>
<th>Sector</th>
<th>2019</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>192,700</td>
<td>183,232</td>
<td>175,839</td>
<td>152,568</td>
<td>128,878</td>
<td>104,544</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>-4.9%</td>
<td>-4.0%</td>
<td>-13.2%</td>
<td>-15.5%</td>
<td>-18.9%</td>
</tr>
<tr>
<td>Transportation</td>
<td>205,690</td>
<td>188,125</td>
<td>175,777</td>
<td>168,045</td>
<td>164,597</td>
<td>163,688</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>-8.5%</td>
<td>-6.6%</td>
<td>-4.4%</td>
<td>-2.1%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>15,352</td>
<td>16,031</td>
<td>16,665</td>
<td>16,858</td>
<td>17,091</td>
<td>17,324</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>4.4%</td>
<td>4.0%</td>
<td>1.2%</td>
<td>1.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Water</td>
<td>4,490</td>
<td>3,675</td>
<td>2,963</td>
<td>2,205</td>
<td>1,446</td>
<td>685</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>-18.2%</td>
<td>-19.4%</td>
<td>-25.6%</td>
<td>-34.4%</td>
<td>-52.7%</td>
</tr>
<tr>
<td>Total</td>
<td>418,232</td>
<td>391,062</td>
<td>371,245</td>
<td>339,675</td>
<td>312,012</td>
<td>286,240</td>
</tr>
<tr>
<td>Percent Change</td>
<td>-</td>
<td>-6.5%</td>
<td>-5.1%</td>
<td>-8.5%</td>
<td>-8.1%</td>
<td>-8.3%</td>
</tr>
</tbody>
</table>

Notes: All values are presented in metric tons of carbon dioxide equivalent (MT CO₂e)
Totals may not add up due to rounding

Figure 6  Legislative Adjusted Forecast Results Summary by Emissions Sector
The results of the adjusted GHG emissions forecast show that state legislation can be expected to influence significant GHG emissions reduction for the Beverly Hills community. A comparison of the forecasted GHG emissions under the BAU and adjusted forecast scenarios are provided in Table 12 and Figure 7.

### Table 12 Summary of Legislative GHG Emissions Reduction

<table>
<thead>
<tr>
<th>Forecast Scenario</th>
<th>2019</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislative Adjusted Scenario Forecast</td>
<td>418,232</td>
<td>391,062</td>
<td>371,245</td>
<td>339,675</td>
<td>312,012</td>
<td>286,240</td>
</tr>
<tr>
<td>Percent GHG Emissions Reduction</td>
<td>-</td>
<td>10%</td>
<td>18%</td>
<td>26%</td>
<td>33%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Notes: All values are presented in metric tons of carbon dioxide equivalent (MT CO₂e)

### Figure 7 BAU Forecast and Legislative Reductions Summary by Emissions Sector
Minimum GHG Emissions Reduction Target Pathway

GHG reduction targets can be set as either an efficiency target (MT CO$_2$e per capita) or as a community-wide mass emissions target (total MT CO$_2$e). With CARB’s 2017 Scoping Plan Update, the state recommended using efficiency metrics for local targets to incentivize growth in a coordinated manner and not penalize cities which are growing at significant rates. As Beverly is not expected to have significant population growth and is pursuing a carbon neutrality target, a mass emissions target may be more appropriate and transparent. However, a per capita emissions target could highlight the distinct characteristics of the City, where a portion of the housing stock may have an outsized impact on the City’s total GHG emissions due to home size and scale of end uses. This could help demonstrate areas where GHG emissions reduction will be needed in order to meet the GHG reduction targets. Throughout this section, targets are discussed in terms of per capita metrics; however, they must occasionally be translated into absolute emissions reduction to quantify reduction measures and identify the magnitude of reduction required.

State Minimum GHG Reduction Target Pathway

Target setting is an iterative process which must be informed by the GHG emissions reduction that can realistically be achieved through the development of feasible GHG reduction measures. With the intent of developing a tiered GHG emission reduction pathway, the GHG reduction targets presented here are the minimum targets that would align the CAAP with currently adopted state legislations. As such, the targets identified herein demonstrate the baseline minimum, until the quantification and analysis of potential GHG reduction measures has been completed and a tiered reduction pathway can be developed based on measure implementation scenarios. The minimum targets presented here provide a trajectory toward achieving the state’s 2030 goal and prepare for the deep decarbonization needed by 2045 to achieving the EO B-55-18 goal.

With the GHG reduction legislation enacted by the state, Rincon recommends the following minimum GHG reduction targets be the basis for a establishing a tiered GHG reduction pathway:

- Reduce GHG emissions to 40% below 1990 levels by 2030 (SB 32 target year),
- Reduce GHG emissions to 80% below 1990 levels by 2040 (interim target year),
- Achieve carbon neutrality by 2045 (EO B-55-18 target year).

This pathway establishes the minimum GHG emissions reduction that the City will need to achieve state goals, with a straight-line trajectory of GHG emissions from 2019 to 2030 and then from 2030 to 2045. The recommended interim target GHG reduction of 80% below 1990 levels by 2040 sets a point for monitoring progress on the pathway to carbon neutrality. While these are the minimum required by the state that many jurisdictions have adopted as part of their GHG reduction efforts, some cities have adopted more aggressive GHG reduction timelines. Based on recent report published by the IPCC, *AR6 Climate Change 2021: The Physical Science Basis*, it is evident that we are on an irreversible pathway towards climatic changes, and GHG reduction efforts must be accelerated in order to avoid some of the

---

worst-case climate change scenarios. Rincon will work with the City to understand accelerated GHG reduction pathways that can build upon these minimum state-aligned targets and can be achieved through feasible GHG reductions measures.

The equivalent 1990 GHG emission levels are derived by comparing the State’s GHG emissions from relevant sources from given year to the statewide GHG emission in 1990, using relevant GHG emission sectors. This assumes that GHG emissions in the City of Beverly Hills have generally scaled with the State’s GHG emissions, as vehicle fuel economy standards, waste reduction policies, and increased renewable energy procurement would have similar effects in the City as they did statewide. For the state minimum targets presented here, the State’s GHG emissions in 2015 were compared to 1990, with the agricultural and industrial GHG emission sectors excluded. This showed that 2015 State GHG emissions levels were approximately equivalent (within less than 0.2%), and as such the City’s 2015 GHG emission levels are also assumed to be equivalent to 1990 levels.

The initial intent of the CAAP will be to demonstrate substantial progress toward the long-term State reduction targets; however, new opportunities are anticipated to emerge that could further accelerate GHG reductions beyond those identified in this CAAP. It is recommended that the CAAP be updated every 5 years to incorporate legislative changes at the state level and new technologies that can further accelerate the City’s GHG reduction targets.

With the minimum provisional GHG emissions reduction targets provided, the minimum reduction gap that the City will be responsible for through local action can be calculated. The CAAP will assess the GHG reduction gap based on the difference between the legislative adjusted scenario GHG emissions forecast, discussed previously, and the minimum provisional GHG reduction targets. Table 13 provides a summary of the GHG emissions reduction targets and gap in both mass emissions and per capita emissions metrics. The per capita targets are calculated by dividing forecasted GHG emissions by the expected City population in each target year.

---

Table 13  Summary of State Minimum GHG Emission Reduction Targets Pathway and Gap Analysis

<table>
<thead>
<tr>
<th>Metric</th>
<th>2019</th>
<th>2025</th>
<th>2030$^3$</th>
<th>2040</th>
<th>2045$^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Emissions Target and Gap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass Emissions Adjusted Forecast (MT CO$_2$e)</td>
<td>418,232</td>
<td>391,062</td>
<td>371,245</td>
<td>312,012</td>
<td>286,241</td>
</tr>
<tr>
<td>Mass Emissions Minimum Targets (MT CO$_2$e)$^2$</td>
<td>418,232</td>
<td>338,545</td>
<td>272,139</td>
<td>90,713</td>
<td>0</td>
</tr>
<tr>
<td>Remaining Emissions Gap (MT CO$_2$e)</td>
<td>0</td>
<td>52,518</td>
<td>99,106</td>
<td>221,299</td>
<td>286,241</td>
</tr>
<tr>
<td>Percent Reduction Below Adjusted Forecast Needed to Meet Minimum Targets</td>
<td>0%</td>
<td>13%</td>
<td>27%</td>
<td>71%</td>
<td>100%</td>
</tr>
<tr>
<td>Per Capita Emissions Target and Gap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population$^1$</td>
<td>34,767</td>
<td>38,399</td>
<td>41,995</td>
<td>42,724</td>
<td>43,038</td>
</tr>
<tr>
<td>Per Capita Adjusted Forecast (MT CO$_2$e per capita)</td>
<td>12.0</td>
<td>10.2</td>
<td>8.8</td>
<td>7.3</td>
<td>6.7</td>
</tr>
<tr>
<td>Per Capita Minimum Targets (MT CO$_2$e per capita)</td>
<td>12.0</td>
<td>8.8</td>
<td>6.5</td>
<td>2.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Remaining Per Capita Emissions Gap (MT CO$_2$e per capita)</td>
<td>0.0</td>
<td>1.4</td>
<td>2.4</td>
<td>5.2</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Notes: MT CO$_2$e = Metric tons of carbon dioxide equivalent
Emissions have been rounded to the nearest whole number and therefore sums may not match.
2. These provisional targets are consistent with both SB 32 and a trajectory set forth to achieve EO B-55-18 targets set by the state.
3. SB 32 requires the CARB to ensure that statewide GHG emissions are reduced to 40% below the 1990 level by 2030.
4. EO-B-55-18 sets a 2045 target of Carbon Neutrality.

Figure 8 provides a visual representation of past and future GHG emissions, with the impacts of state legislation and the remaining gap the City of Beverly Hills will be responsible for the meet the GHG emission reduction targets.
Meeting the Targets

The 2030, 2040, and 2045 minimum provisional targets identified above will be achieved through a combination of existing state measures and the implementation of local measures that are identified in the Beverly Hills CAAP. Local measures will be identified through a comprehensive assessment of existing local and regional policies, programs, and actions and by assessing any gaps and identifying additional opportunities. Additional measures will be developed from best practices of other similar and neighboring jurisdictions, as well as those recommended by organizations and agencies, such as the California Air Pollution Control Officers Association (CAPCOA), the Office of Planning and Research, CARB’s 2017 Scoping Plan, and Association of Environmental Professionals (AEP).

Sincerely,
Rincon Consultants, Inc.

Andrew Beecher
Sustainability Planner

Erik Feldman, MS, LEED-AP
Principal
Attachment A

Data Evaluation and GHG Inventory Methodology Memorandum
May 27th, 2021
Rincon Project No: 20-09714

Josette Descalzo, Programs Manager
Environmental Compliance and Sustainability
City of Beverly Hills
345 Foothill Road
Beverly Hills, California 90210
Via email: jdescalzo@beverlyhills.org

Subject: City of Beverly Hills Climate Action and Adaptation Plan, Greenhouse Gas Inventory Methodology and Data Evaluation Memorandum

Dear Mr. Descalzo,

Rincon Consultants, Inc. (Rincon) has completed the data gathering phase of the draft greenhouse gas (GHG) emission inventories for the City of Beverly Hills (City) for the years 2015 and 2019. Data was provided by various sources, including City departments, utility providers, traffic modelers and the Los Angeles County Chief Sustainability Office. The intent is to develop the GHG inventory based on the Local Governments for Sustainability (ICLEI) principles adapted from the World Business Council for Sustainable Development and the World Resources Institute (WBCSD/WRI) GHG Protocol Initiative (March 2004), which includes the United States Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (Community Protocol)\(^1\) and the Local Government Operations Protocol (LGOP) developed by ICLEI. These protocols identify specific principles that serve to guide the measurement and reporting of GHG emissions and include relevance, completeness, consistency, transparency, and accuracy. As part of the data completeness, accuracy, and transparency review, Rincon completed an evaluation to establish a transparent and replicable pathway of GHG emissions reporting and reviewed the data through an internally vetted quality assurance/quality control (QA/QC) process. In addition to the evaluation of data, this memorandum provides an overview of the calculation methodologies that will be used to calculate both the municipal and community GHG inventories, clearly demonstrating all City- and region-specific inputs. The following discussion includes a description of Rincon’s data validation process, data review, and conclusions.

Introduction

California’s 2017 Climate Change Scoping Plan (2017 Scoping Plan), released by the California Air Resources Board (CARB) in November 2017, outlines California’s strategy for achieving the state’s 2030 GHG emission reduction goal.\(^2\) Based on the 2017 Scoping Plan, there are nine economic GHG emission generating sectors, which include: agriculture, residential and commercial buildings, electric power, high

---


\(^2\) Per Senate Bill (SB) 32, the state is required to reduce GHG emissions by 40 percent below the 1990 levels by 2030.
May 27th, 2021
Rincon Project No: 20-09714
Josette Descalzo, Programs Manager
Environmental Compliance and Sustainability
City of Beverly Hills
345 Foothill Road
Beverly Hills, California 90210
Via email: jdescalzo@beverlyhills.org

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Introduction

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---


\(^2\) Per Senate Bill (SB) 32, the state is required to reduce GHG emissions by 40 percent below the 1990 levels by 2030.
global warming potential (GWP),\(^3\) industrial, recycling and waste, transportation, natural working lands net sink,\(^4\) and the Cap-and-Trade Program. The City of Beverly Hills does not have a significant agricultural sector which generates GHG emissions; therefore, this sector is excluded from the inventory and is not discussed further. Typically, CARB regulates the GHG emissions associated with industrial stationary combustion through the California Cap-and-Trade Program; however, according to CARB’s annual summaries of reported GHG emissions for entities covered under Cap-and-Trade, there were no industrial facilities in the City regulated by CARB.\(^5\),\(^6\) Lastly, a full carbon inventory of net sources and sinks of GHG emissions in Natural and Working Lands is not included in this inventory due to a lack of granular data at the City scale; however, the carbon sequestration value of trees in the City right-of-way will be calculated using the City’s tree inventory.

The City of Beverly Hills 2015 and 2019 GHG inventory will provide separate assessments of GHG emissions generated by the community and by municipal operations for the City to exert stronger influence over GHG emission sources that are under their direct control. In this analysis, a municipal GHG emissions inventory is only performed for the year 2019. There is significant overlap between GHG emission sources presented in the 2019 inventory; therefore, the municipal operations are considered as a subset of the community inventory and the two inventories are not intended to be additive. The community inventory is intended to represent the total GHG emission emitted directly by and as a result of activities occurring within the City’s physical boundaries, from which a GHG emissions forecast and GHG reduction targets will be calculated. The municipal inventory provides deeper insight to a subset of the community GHG emissions, which are under direct control of the City and a result of municipal operations.

Based on the requirements of the Community Protocol developed by ICLEI, a minimum set of five “Basic Emissions Generating Activities” or sectors must be included in all Community Protocol-compliant GHG emissions inventories. Specifically, local governments must include emissions associated with the following sectors: use of electricity by the community, use of fuel in residential and commercial stationary combustion equipment, on-road passenger and freight motor vehicle travel, use of energy in potable water and wastewater treatment and distribution, and generation of solid waste by the community. The purpose of this requirement is to facilitate the process of assessing GHG emission sources and activities over which local governments commonly have influence, and to support shared learning and comparison on a common set of GHG emissions across communities. Therefore, this evaluation includes a review of data from all applicable sectors, as well as the additional Community Protocol forest land and trees sector, to evaluate urban forest carbon sequestration value. As demonstrated in Table 1, all other economic sectors outlined above for the CARB 2017 Scoping Plan align with the Community Protocol GHG emission sectors.

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\(^3\) High GWPs are not included in this analysis because the City does not have operational control over high-GWP generating sources; high GWP generating emission sources include refrigeration systems in large food processing plants and chemical and petrochemical facilities, among others.

\(^4\) Per the 2017 Scoping Plan, work is currently underway to estimate the range of potential sequestration benefits from natural and working land sectors.

\(^5\) Please see https://www.arb.ca.gov/cc/capandtrade/capandtrade.htm for more information on the Cap-and-Trade Program.

Table 1  CARB and ICLEI Community Protocol Sector Connectivity Summary

<table>
<thead>
<tr>
<th>CARB 2017 Scoping Plan Economic Sector</th>
<th>ICLEI Community Protocol Sector</th>
<th>Sector in 2019 GGRP Update Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential and commercial</td>
<td>Use of electricity by the community, use of fuel in residential and commercial stationary combustion equipment</td>
<td>Energy</td>
</tr>
<tr>
<td>Electric power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling and waste</td>
<td>Generation of solid waste by the community</td>
<td>Solid Waste</td>
</tr>
<tr>
<td>Transportation</td>
<td>On-road passenger and freight motor vehicle travel</td>
<td>Transportation</td>
</tr>
<tr>
<td>NA</td>
<td>Use of energy in potable water and wastewater treatment and distribution</td>
<td>Water and Wastewater</td>
</tr>
<tr>
<td>Natural and Working Lands</td>
<td>Forest Land and Trees</td>
<td>Carbon Sequestration</td>
</tr>
</tbody>
</table>

Notes: NA = Not applicable

Likewise, the ICLEI Local Government Operations Protocol (LGOP) is designed to provide a standardized set of guidelines to assist local governments in quantifying and reporting GHG emissions associated with their government operations. According to the LGOP, to separately account for direct and indirect emissions, to improve transparency, and to provide utility for different types of climate policies and goals, municipal emissions should be categorized by scope.7 GHG emissions can be categorized by scope based on the degree of operational control the City has over the emission sources, and whether they occur within or outside of the jurisdictional boundaries.8 In addition to scope, municipal emissions should also be categorized into the following local government sectors: buildings and other facilities, streetlights and traffic signals, water delivery facilities, port facilities, airport facilities, vehicle fleet, transit fleet, power generation facilities, solid waste facilities, and wastewater facilities.9 Municipal GHG emission sectors included in this inventory, and associated scope of emission sources, are provided in Table 2.

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7 It’s important to note that municipal emissions are a subset of the community emissions and are calculated separately to provide a source of information to develop GHG reduction measures targeted for City operations.

8 Scope 1: Direct GHG emissions from sources within a local government’s operations that it owns and/or controls.

Scope 2: Indirect GHG emissions associated with the consumption of electricity, steam, heating, or cooling that are purchased from a utility provider that also provides energy to other jurisdictions and/or is located outside City boundaries.

Scope 3: All other indirect GHG emissions not covered in scope 2.

9 The following local government sectors are not relevant to the City of Beverly Hills Municipal Operations GHG emissions inventory and are therefore excluded from the GHG inventories and not further discussed in this analysis.

- Port facilities: The City is not surrounded by any body of water that could support a port.

- Airport facilities: The City does not have an airport within the City borders, nor does it have operational control over an airport.

- Power generation facilities: The City purchases electricity from Southern California Edison and the Clean Power Alliance and does not have operational control over power generation facilities.

- Solid waste facilities: The City does not have a landfill within its borders, nor does it have operational control over a landfill.

- Wastewater facilities: The City’s wastewater collection and processing is provided by the Los Angeles County Sanitation District. A small portion of the City’s overall electricity consumption may be attributed to the collection of wastewater, which is included in the “buildings and other facilities” sector.
Table 2  Reported Municipal GHG Emission Sources and Scope

<table>
<thead>
<tr>
<th>Sector in 2019 GHG Inventory</th>
<th>GHG Emission Source</th>
<th>GHG Emissions Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Natural Gas (Buildings and other facilities)</td>
<td>Scope 1</td>
</tr>
<tr>
<td></td>
<td>Electricity (Buildings and other facilities, streetlights and traffic signals, water delivery facilities and vehicle fleet)</td>
<td>Scope 2</td>
</tr>
<tr>
<td>Transportation</td>
<td>Municipal Vehicles Fleet</td>
<td>Scope 1</td>
</tr>
<tr>
<td></td>
<td>Public Transit Fleet</td>
<td>Scope 1</td>
</tr>
<tr>
<td></td>
<td>Employee Commute</td>
<td>Scope 3</td>
</tr>
<tr>
<td>Water and Wastewater</td>
<td>Water Consumption</td>
<td>Scope 3</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>Municipal Waste Generation</td>
<td>Scope 3</td>
</tr>
</tbody>
</table>

City Characteristics

As part of the data evaluation, Rincon used the City’s General Plan as well as communication with the City to understand characteristics of the City of Beverly Hills that would influence the City’s GHG emissions inventory. Based on our understanding of data provided for the 2015 and 2019 inventory, the City of Beverly Hills primary GHG emissions originate from building energy use and fossil fuels burned in vehicles, with water and waste emissions making a smaller contribution.

As shown in Table LU1 of the City’s 2010 General Plan, the City is primarily made up of Single Family Residential (74% of land use acreage) and Multi-Family Residential (8% of land use acreage) land uses, with approximately 10% of land use acreage considered Commercial, and the remainder a mix of Park, Public Building, and Public School land uses. While Table LU1 of the General Plan indicates that Industrial land uses occur within the City, the 2010 Land Use Element, indicates that these Industrial land uses have since been redesignated as Commercial.10

The Parks areas are considered “urban green-space” within California’s Natural and Working Lands Sector.11 Emissions associated with the water use and on-road transportation for maintenance of these areas are included within the activity data used for calculation of GHG emissions in these respective sectors. GHG emissions from all carbon sinks and sources in natural and working lands are not included in this inventory due to the lack of granular data and standardized methodology. The Nature Conservancy and California Department of Conservation are exploring options for a tool which may be able to perform these inventories at a more specific geographic level, and it is recommended that Natural and Working Lands are included in subsequent GHG inventories to better assess carbon

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sequestration potential within the City. However, the City has completed a detailed tree inventory for trees in the City right-of-way as part of the in progress Urban Forest Management Plan. As such, it is possible to include the carbon sequestration value of these trees in the 2019 GHG inventory, incorporating the value of Natural and Working Lands to the extent currently feasible.

Data Review

The following section provides an overview of the data to be used in the 2015 and 2019 GHG inventory that was provided by the City and reviewed by Rincon, as well as data that was obtained by Rincon from external data sources outside the City, including an explanation of the sources where the data was acquired. As part of the analysis the data has been reviewed for completeness and accuracy, which is summarized here to provide transparency and a replicable pathway for future emissions reporting. This analysis includes emissions from both community and municipal operations and is summarized by the inventory sector (i.e. Energy, Transportation, Solid Waste, Water, Wastewater, and Carbon Sequestration) below.

Energy

GHG emissions included in the energy sector are generated through electricity and natural gas consumption. The City of Beverly Hills has two primary electricity providers, Southern California Edison (SCE) and Clean Power Alliance (CPA), with some electricity customers obtaining direct access electricity from third-party private providers. While electricity in the City is purchased from multiple sources, SCE continues to provide electricity transmission and customer billing for all electricity consumed in the City. The City joined CPA in 2017 and began receiving electricity from CPA in February 2019. As of 2019, electricity customers were provided four options for their electricity service:

1. Continue to purchase electricity from SCE.
2. Purchase electricity from CPA and receive 36% renewable energy (Lean Power Rate Product).
3. Purchase electricity from CPA and receive 50% renewable energy (Clean Power Rate Product).
4. Purchase electricity from CPA and receive 100% renewable energy (100% Green Power Rate Product).

Natural gas is provided to the City by Southern California Gas (SCG). The discussion below details the methods for data collection of energy data for the Community and Municipal GHG Emission Inventories, as well as an evaluation of the completeness and accuracy of data collected.

Community

Electricity

Community electricity consumption data was obtained from multiple sources, and some data processing was required to accurately attribute electricity consumption to the appropriate electricity provider. Data

for the 2019 Community GHG Inventory was obtained from SCE and CPA in the form of kilowatt-hour (kWh) consumption. Total electricity consumption in the City for 2019 was obtained from SCE through the official energy data request program (EDRP), which includes electricity consumption SCE, CPA and direct access customers. The SCE data provided annual electricity consumption disaggregated by the residential, commercial, and industrial customer classes. California Public Utilities Commissions (CPUC) aggregation rules are intended to protect customer confidentiality by reducing the possibility of identifying customers through the release of consumption information. Data provided by SCE passed both the 15/20 and 5/25 aggregation rules and is aggregated annually and assumed to be complete. CPA provided electricity consumption by month for all CPA customers in each “Rate Product” for 2019. The CPA data did not disaggregate consumption by customer class.

In obtaining data from SCE through the EDRP, a non-disclosure agreement was signed by Rincon and the City of Beverly Hills to limit the publication of energy consumption data to protect customer privacy. Pursuant to the non-disclosure agreement, community electricity consumption activity data provided by the SCE for the 2019 Community GHG Inventory cannot be disclosed to the public, and as such will not be included in the GHG inventory, or the public version of this document. Due to data retention policies by SCE, data was not available for the 2015 Community Inventory through the EDRP process. Electricity consumption data for the 2015 Community Inventory was obtained from the Los Angeles County Chief Sustainability Office, consisting of data that was included as part of the 2019 OurCounty Sustainability Plan for Los Angeles County.

This data consist of electricity consumption by customer class in megawatt-hours, which was converted to kWh for consistency with the 2019 Community Inventory data.

GHG emissions associated with electricity consumption are generated at varying rates depending on the electricity provider and CPA Rate Product, and as such, electricity consumption must be attributed appropriately by the varied rates of GHG emission generation. Specifically, electricity purchased from SCE generates GHG emissions at a specific rate, while each Rate Product for electricity purchased from CPA also generate GHG emission at varying rates depending on the amount of renewable and GHG-free electricity included in the electricity source mix. Since the SCE data obtained in 2019 encompasses all electricity consumption in the City, the total electricity purchased by customers from SCE and other direct access third-party providers was assumed to be the difference between the total electricity consumption provided by SCE and CPA. The total electricity provided to customers by direct access third-party providers was not available, and as such, this electricity consumption is assumed to be include in the SCE electricity consumption and is also assumed to generate GHG emissions at a rate similar to SCE electricity.

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13 Data provided to the City by email from SCE on April 23, 2021.
14 Residential, Commercial Consumption Data 15/20 Rule: Aggregated over a group consisting of 15 customers in a single customer class. No single customer accounts for more than 20 percent of the total energy consumption in an individual month. Industrial Consumption Data 5/25 Rule: Aggregated over a group consisting of five customers in a single customer class. No single customer accounts for more than 25 percent of the total energy consumption in an individual month.
15 Residential, Commercial Consumption Data 15/20 Rule: Aggregated over a group consisting of 15 customers in a single customer class. No single customer accounts for more than 20 percent of the total energy consumption in an individual month. Industrial Consumption Data 5/25 Rule: Aggregated over a group consisting of five customers in a single customer class. No single customer accounts for more than 25 percent of the total energy consumption in an individual month.
16 Data provided to the City by email from CPA on April 5, 2021.
Due to a lack of reporting of electricity consumption by customer class for CPA data, electricity consumption by customer class in 2019 was estimated based on the percentage of total electricity consumption by residential, commercial, and industrial customers in 2015.

GHG emissions associated with community electricity consumption will be estimated using Community Protocol Method BE.2 *Emissions from Electricity Use*. Annual average electricity GHG emissions factors used to calculate GHG emissions vary by year, electricity provider, and CPA Rate Product. The SCE electricity GHG emission factors were obtained from the 2017 and 2019 Edison International Sustainability Reports.\(^\text{18,19}\) The CPA GHG emission factors for each Rate Product were obtained from the Climate Registry’s public Utility-Specific Emission Factors for CPA, which is a third-party verified source.\(^\text{20}\) CPA emission factors were provided in form of pounds of CO\(_2\)e and converted to MT CO\(_2\)e to provide an equivalent reporting metric.\(^\text{21}\)

The community electricity consumption activity data and GHG emissions factors used to calculate GHG emissions are provided for the year 2015 in Table 3, and for the year 2019 in Table 4.


\(^{21}\) \(2,204.62 \text{ lbs} = 1 \text{ MT}\)
### Table 3  2015 Community Electricity Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>% of Total (Consumption)</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Consumption Activity Data – SCE and Direct Access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>367,176,420 kWh</td>
<td>64.58%</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>673,731 kWh</td>
<td>0.12%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>568,564,651 kWh</td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

**Electricity GHG Emissions Factor**

<table>
<thead>
<tr>
<th>SCE Electricity GHG Emission Factor</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
</table>

Notes: MT CO₂e = metric tons of carbon dioxide equivalent; kWh = kilowatt-hour; SCE = Southern California Edison
### Table 4 2019 Community Electricity Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>SCE</th>
<th>CPA – 100% Green Power</th>
<th>CPA – Clean Power</th>
<th>CPA - Lean Power</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Consumption Activity Data¹</td>
<td>Redacted²</td>
<td>35,512 kWh</td>
<td>103,036,131 kWh</td>
<td>812,204 kWh</td>
<td>Data provided to the City by email from SCE on April 23, 2021.</td>
</tr>
<tr>
<td>Residential</td>
<td>Redacted²</td>
<td>51,797 kWh</td>
<td>150,286,941 kWh</td>
<td>1,184,669 kWh</td>
<td>Data provided to the City by email from CPA on April 5, 2021.</td>
</tr>
<tr>
<td>Commercial</td>
<td>Redacted²</td>
<td>21,909 kWh</td>
<td>63,567,841 kWh</td>
<td>501,087 kWh</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>Redacted²</td>
<td>109,217 kWh</td>
<td>316,890,912 kWh</td>
<td>2,497,960 kWh</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Redacted²</td>
<td>109,217 kWh</td>
<td>316,890,912 kWh</td>
<td>2,497,960 kWh</td>
<td></td>
</tr>
</tbody>
</table>

### Electricity GHG Emissions Factor

<table>
<thead>
<tr>
<th>Emission Factor</th>
<th>SCE</th>
<th>CPA – 100% Green Power</th>
<th>CPA – Clean Power</th>
<th>CPA - Lean Power</th>
<th>Data Source</th>
</tr>
</thead>
</table>

Notes: MT CO₂e = metric tons of carbon dioxide equivalent; kWh = kilowatt-hour; MWh = megawatt-hour; SCE = Southern California Edison; CPA = Clean Power Alliance.

1. Electricity consumption by customer class was determined by multiplying the total electricity consumption for each Rate Product by the percentage of total electricity consumption in Table 3. Only the total consumption for each Rate Product was provided by CPA, and customer class totals are estimated.

2. Due to California Public Utilities Commissions customer data privacy regulations and the terms of the associated non-disclosure agreement, electricity consumption data obtained through the Energy Data Request Program cannot be publicly disclosed.

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### Electricity Transmission and Distribution Losses

When electricity is transported through transmission wires over long distances some of the energy is lost as heat, resulting in transmission losses. Additional energy is lost when electricity is delivered to lower voltage wires for distribution to end users, resulting in distribution losses. The Community Protocols recommend reporting of transmission and distribution (T&D) losses, as this emission source can be reduced through increased distributed energy generation (i.e. solar photovoltaic) by reducing the need for electricity that is transported over long distances.

T&D losses are calculated by applying a grid loss factor to the total electricity consumed in the City, as provided in Table 3 and Table 4, using Community Protocol Method BE.4.1. The grid loss factor used to...
estimate T&D losses was obtained from eGRID 2019, for the WECC California regional grid. GHG emissions from the T&D losses are calculated by multiplying the estimated losses by the appropriate GHG emission factor for SCE and CPA Rate Products.

The community electricity T&D losses activity data and GHG emissions factors used to calculate GHG emissions are provided for the year 2015 in Table 5, and for the year 2019 in Table 6.

### Table 5  2015 Community Electricity T&D Losses Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity T&amp;D Losses Activity Data</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid Loss Factor</td>
<td>5.1%</td>
<td></td>
</tr>
<tr>
<td>Estimated T&amp;D Losses</td>
<td>26,996,797 kWh</td>
<td></td>
</tr>
<tr>
<td><strong>Electricity GHG Emissions Factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCE Electricity GHG Emission Factor</td>
<td>0.0002345 MT CO$_2$e/kWh</td>
<td>See Table 3.</td>
</tr>
</tbody>
</table>

Notes: MT CO$_2$e = metric tons of carbon dioxide equivalent; kWh = kilowatt-hour; SCE = Southern California Edison

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### Table 6  2019 Community Electricity T&D Losses Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>SCE</th>
<th>CPA – 100% Green Power</th>
<th>CPA – Clean Power</th>
<th>CPA - Lean Power</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid Loss Factor</td>
<td>5.1%</td>
<td>5.1%</td>
<td>5.1%</td>
<td>5.1%</td>
<td></td>
</tr>
<tr>
<td>Estimated T&amp;D Losses</td>
<td>7,604,618 kWh</td>
<td>5,570 kWh</td>
<td>16,161,437 kWh</td>
<td>127,396 kWh</td>
<td></td>
</tr>
</tbody>
</table>

### Electricity GHG Emissions Factor

<table>
<thead>
<tr>
<th>Emission Factor</th>
<th>SCE</th>
<th>CPA – 100% Green Power</th>
<th>CPA – Clean Power</th>
<th>CPA - Lean Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td>MT CO₂e/kWh</td>
<td>MT CO₂e/kWh</td>
<td>MT CO₂e/kWh</td>
<td>MT CO₂e/kWh</td>
</tr>
<tr>
<td></td>
<td>0.0002400</td>
<td>0.0000000</td>
<td>0.0001630</td>
<td>0.0002699</td>
</tr>
</tbody>
</table>

See Table 4.

Notes: MT CO₂e = metric tons of carbon dioxide equivalent; kWh = kilowatt-hour; MWh = megawatt-hour; SCE = Southern California Edison; CPA = Clean Power Alliance.

1. Due to California Public Utilities Commissions customer data privacy regulations and the terms of the associated non-disclosure agreement, electricity consumption data obtained through the Energy Data Request Program cannot be publicly disclosed.

### Natural Gas

Community natural gas use is based on residential, commercial, and industrial building energy use. Community natural gas consumption data for 2015 and 2019 was obtained from SCG through the EDRP, which was in the form of total annual therms.²³ Similar to electricity, the data was provided by customer category (i.e. commercial, industrial, and residential). California Public Utilities Commissions (CPUC) aggregation rules are intended to protect customer confidentiality by reducing the possibility of identifying customers through the release of consumption information.²⁴ Data provided by SCG passed both the 15/20 and 5/25 aggregation rules and is aggregated annually and assumed to be complete.

Similar to the data provided by SCE through the EDRP, the data provided by SCG also included a non-disclosure agreement was signed by Rincon and the City of Beverly Hills to limit the publication of energy consumption data to protect customer privacy. Pursuant to the non-disclosure agreement, community natural gas consumption activity data provided by the SCG for the 2015 and 2019 Community GHG Inventories cannot be disclosed to the public, and as such will not be included in the GHG inventory, or the public version of this document.

GHG emissions associated with community natural gas consumption will be estimated using Community Protocol Method BE.1.1 *Stationary Fuel Combustion* based on default emission factors obtained from

²³ Data provided to the City by email from SCG on March 16, 2021.

²⁴ Residential, Commercial Consumption Data 15/20 Rule: Aggregated over a group consisting of 15 customers in a single customer class. No single customer accounts for more than 20 percent of the total energy consumption in an individual month.

Industrial Consumption Data 5/25 Rule: Aggregated over a group consisting of five customers in a single customer class. No single customer accounts for more than 25 percent of the total energy consumption in an individual month.
the United States Environmental Protection Agency (USEPA) Table 1 Emission Factors for Greenhouse Gas Inventories (0.005313 MT CO₂e/therm).\textsuperscript{25}

The community natural gas activity data and GHG emissions factors used to calculate GHG emissions are provided for the year 2015 and 2019 in Table 7.

**Table 7 2015 and 2019 Community Natural Gas Data**

<table>
<thead>
<tr>
<th>Data Type</th>
<th>2015</th>
<th>2019</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>Redacted\textsuperscript{1}</td>
<td>Redacted\textsuperscript{1}</td>
<td>Data provided to the City by email from SCG on March 16, 2021.</td>
</tr>
<tr>
<td>Commercial</td>
<td>Redacted\textsuperscript{1}</td>
<td>Redacted\textsuperscript{1}</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>Redacted\textsuperscript{1}</td>
<td>Redacted\textsuperscript{1}</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Redacted\textsuperscript{1}</td>
<td>Redacted\textsuperscript{1}</td>
<td></td>
</tr>
</tbody>
</table>

**GHG Emission Factor**


Notes: MT CO₂e = metric tons of carbon dioxide equivalent

\textsuperscript{1} Due to California Public Utilities Commissions customer data privacy regulations and the terms of the associated non-disclosure agreement, natural gas consumption data obtained through the Energy Data Request Program cannot be publicly disclosed.

**Municipal**

**Electricity**

The LGOP recommends reporting scope 2 electricity use emissions from the municipality in the following sub-sectors: 1) streetlights and traffic signals, 2) water delivery facilities, 3) port facilities, 4) airport facilities, 5) vehicle fleet, 6) transit fleet, 7) power generation facilities, 8) solid waste facilities, 9) wastewater facilities, and 10) all other municipality buildings/facilities. Reporting for the 2019 Beverly Hills municipal GHG inventory includes streetlights and traffic signals, water delivery facilities, wastewater facilities, and municipal buildings and facilities. The City operates four groundwater pumping wells, water treatment facilities, water delivery and conveyance pumps, and wastewater conveyance pumps. Due to the format of the electricity data provided, it was not possible to disaggregate these end uses completely. As such, the sub-sectors reported for municipal electricity consumption include:

- Streetlights and traffic signals,
- Groundwater pumping facilities,
- Water and wastewater delivery and conveyance, and

Buildings and facilities.

Beverly Hills does not have port facilities, power generation facilities, solid waste facilities, or operational control over airport facilities, as discussed previously. Additionally, electricity consumption transit fleet is not reported separately and is included under the buildings and other facilities sector.

In February of 2019, the City began purchasing electricity from CPA at the Clean Energy Rate Product level. With this, the City’s municipal electricity accounts were served with electricity that was generated from 50% renewable sources from February to December. Electricity was still being purchased from SCE for the month of January 2019.

Municipal electricity consumption was obtained from SCE in the form of monthly consumption in kWh by service account for the year 2019.26 Electricity consumption data was provided for each service account, for which consumption was categorized into the appropriate sub-sector by the SCE provided billing rate for the respective account.

GHG emissions associated with municipal electricity consumption will be calculated using the recommended method outlined in LGOP Section 6.2 Electricity Use. The GHG emission factor for SCE will be used to calculate GHG emissions for electricity consumption for the month of January, and the GHG emission factor for the CPA Clean Power Rate Product will be used to calculate GHG emissions for energy consumption for the remainder for the year. The electricity consumption totals for municipal operations, as well as the GHG emission factor used to calculate GHG emissions, are provided in Table 8.

26 Data provided to the City by email from SCE on March 2, 2021.
Table 8  2019 Municipal Electricity Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>January - SCE</th>
<th>February to December - CPA</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Consumption Activity Data¹</td>
<td>399,959 kWh</td>
<td>2,560,493 kWh</td>
<td>City of Beverly Hills Billing Summary. Data provided to the City by email from SCE on March 2, 2021.</td>
</tr>
<tr>
<td>Streetlights and Traffic Signals</td>
<td>32,444 kWh</td>
<td>427,815 kWh</td>
<td></td>
</tr>
<tr>
<td>Water Pumping Facilities</td>
<td>66,042 kWh</td>
<td>804,930 kWh</td>
<td></td>
</tr>
<tr>
<td>Water and Wastewater Conveyance and Distribution</td>
<td>988,252 kWh</td>
<td>12,775,292 kWh</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,486,697 kWh</td>
<td>16,568,530 kWh</td>
<td></td>
</tr>
</tbody>
</table>

| Electricity GHG Emission Factor              |                      |                            |                                                                           |
| GHG Emission Factor                          | 0.0002400 MT CO₂e/kWh| 0.0001630 MT CO₂e/kWh     | See Table 4.                                                             |

Notes: MT CO₂e = metric tons of carbon dioxide equivalent; kWh = kilowatt-hour

Natural Gas

The City of Beverly Hills is provided natural gas by SCG through the City’s municipal natural gas accounts. Municipal natural gas consumption data was provided by SCG in the form of monthly consumption totals by service account in therms.²⁷ End-use applications of natural gas in buildings and facilities, such as furnaces, are considered a scope 1 emission source. The LGOP recommends reporting stationary combustion emissions from the municipality in the following sectors: 1) water delivery facilities, 2) power generation facilities, 3) solid waste facilities, 4) wastewater facilities, 5) port facilities, 6) airport facilities, and 7) all other municipality buildings/facilities. However, as mentioned above, there are no ports or airports in the City, and the City does not manage solid waste, power generation, or wastewater facilities; and these sources are not included in the natural gas GHG emissions reporting. While the City does have water delivery facilities, natural gas consumption in the data provided is aggregated by municipal account address, and the City’s water treatment facility is co-located with the City’s Public Works facility. Therefore, all GHG emissions from natural gas consumption are reported under municipal buildings and facilities.

GHG emissions associated with municipal natural gas consumption will be calculated using provided total annual consumption and the recommended method outlined in LGOP Section 6.1 Stationary Combustion. A default emission factor based on fuel type will be used and obtained from USEPA Emission Factors for Greenhouse Gas Inventories (0.005313 CO₂e/therm).²⁸ The energy consumption and emissions factor used to calculate municipal GHG emissions from natural gas consumption are provided in Table 9.

²⁷ Data provided to the City by email from SCG on March 1, 2021.
### Table 9  2019 Municipal Natural Gas Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption Buildings and Facilities</td>
<td>54,960 therms</td>
<td>Data provided to the City by email from SCG on March 1, 2021.</td>
</tr>
</tbody>
</table>

**Notes:** MT CO₂e = metric tons of carbon dioxide equivalent

### Transportation

Transportation GHG emissions are generated by the community and the City of Beverly Hills through on-road transportation, use of off-road equipment, and municipal employee commute. Community on-road transportation emissions result from passenger and commercial vehicle trips originating and/or ending in the City of Beverly Hills. Community off-road transportation GHG emissions result from use of various types of off-road equipment, including lawn and garden, commercial and light industrial, construction, and golf carts. GHG emissions from fuel consumed by the municipal fleet, including heavy-trucks, light-trucks, passenger vehicles, and off-road equipment are attributed to municipal operations. Lastly, GHG emissions from employee commute and employee business travel are assessed and attributed to municipal operations.

### Community

On-road transportation-related data for 2015 and 2019 included estimated vehicle miles traveled (VMT) based on Southern California Association of Governments (SCAG) model Trip-Based Travel Demand Model v6.3 from the agency’s 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). SCAG’s Trip-Based Travel Demand Model analyzes transportation and socioeconomic data such as population, household, and employment, to forecast daily vehicle trips for each traffic analysis zone (TAZ). The model output was post-processed to obtain VMT data consistent with the Senate Bill 375 Regional targets Advisory Committee, which attributes vehicles trips to the City based on trip origin and destination, as follow:

- VMT for trips that originate and end within the City (Internal-Internal, or I-I) is attributed 100% to the City.
- VMT for trips that originate within the City and end outside of the City, or vice versa, (Internal-External, or I-X; and, External-Internal, or X-I) is attributed 50% to the City.
- VMT for pass-through trips that do not being or end in the City (External-External, or X-X) are excluded from City VMT calculations.

Calculations for VMT were completed by Fehr and Peers and provided in the form of a *VMT Analysis in Support of the Beverly Hills CAAP Memorandum*, provided as Attachment A of this analysis. VMT data was provided in the form of daily VMT, which can be converted to annual VMT using the SCAG average weekday to annual factor of 347 days per year.
Emissions due to passenger vehicle operation will be calculated using the recommended Community Protocol Method TR.1.A. Because emissions data were not provided, Methods TR.1.B.2 and TR.1.B.3 will be used to convert provided VMT data into emissions data and regional emission factors from CARB’s EMFAC2017 model. EMFAC2017 VMT-based emission rates are based on the vehicle class, model years, speed, and fuel type. A fleet-wide emission factor will be calculated using the mix of vehicle class specific to the City of Beverly Hills determined via the Trip Based SCAG model. Emissions from freight and service trucks (i.e. medium and heavy-duty trucks) will be calculated using Community Protocol Method TR.2.C, which is similar to assigning passenger emissions.

Community off-road transportation GHG emissions for 2015 and 2019 will be assessed using CARB’s mobile source emissions models for off-road equipment, including the OFFROAD2017, SORE2020, and RV2018 models. The models provide annual fuel consumption from various types of off-road equipment operating in Los Angeles County. GHG emissions will be calculated using the fuel and equipment specific GHG emission factors obtained from USEPA Emission Factors for Greenhouse Gas Inventories.29 GHG emissions are attributed to Beverly Hills from the models using Community Protocol Method TR.8. The indicators used to attribute emissions are based on the City’s population (recreational vehicles), employment (construction and mining equipment, industrial equipment, light commercial equipment, transportation refrigeration units and other portable equipment) and service population (lawn and garden) as compared to Los Angeles County totals.

The activity data that will be used to calculate GHG emissions from community on-road transportation, as well as the associated attribution metrics for off-road equipment, are provided for 2015 in Table 10 and for 2019 in Table 11.


30 Beverly Hills is not considered to be a potential future source for mineral resources and is therefore not expected to include significant mining equipment operating within the City boundaries. The OFFROAD2017 model Construction and Mining equipment categorization includes equipment that can be used in both mining and construction capacities that would be expected to occur within Los Angeles County. Mining specific equipment cannot be easily removed from the model; therefore, all equipment under this categorization is conservatively included in the community GHG inventory.
Table 10  2015 Community Transportation Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-road Transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy-duty Trucks</td>
<td>39,567</td>
<td></td>
</tr>
<tr>
<td>Total VMT</td>
<td>1,404,764</td>
<td></td>
</tr>
<tr>
<td>Off-road Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Population</td>
<td>108,893</td>
<td></td>
</tr>
</tbody>
</table>

Notes: VMT = vehicles miles traveled

Table 11  2019 Community Transportation Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-road Transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy-duty Trucks</td>
<td>42,141</td>
<td></td>
</tr>
<tr>
<td>Total VMT</td>
<td>1,420,695</td>
<td></td>
</tr>
<tr>
<td>Off-road Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Population</td>
<td>110,169</td>
<td></td>
</tr>
</tbody>
</table>

Notes: VMT = vehicles miles traveled
1. The number of total jobs in the City was not available for 2019. Therefore, the most recent year available (2017) will be used.

Municipal

LGOP recommends reporting local government’s vehicle fleet emission as two sectors: 1) transit fleet and 2) all other fleet vehicles (on-road and off-road equipment). The City of Beverly Hills operates and owns numerous pieces of on-road fleet vehicles and off-road equipment. LGOP also recommends reporting emissions from employee commute and employee business travel as a scope 3 emission sources.
The City of Beverly Hills provided fuel consumption totals for the year 2019 for renewable diesel and gasoline for the City's vehicle and equipment fleet. \(^{31}\) The vehicle fleet also utilizes renewable natural gas, which is metered by SCG. \(^{32}\) GHG Emissions will be calculated using LGOP Method 7.1.1.1, with fuel specific emission factors obtained from USEPA Emission Factors for Greenhouse Gas Inventories. \(^{33}\)

The municipal inventory will also include an estimate of GHG emissions from employee commute patterns, based on the results of the 2019 South Coast Air Quality Management District (SCAQMD) Rule 2022 Employee Commute Survey. \(^{34}\) The City of Beverly Hills’s employee commute survey was distributed to City employees in 2019, with approximately 550 responses, demonstrating the commute mode of approximately 95% of the City’s employees. The results of the survey provided the number of weekly vehicle commute trips by City employees in a single-occupancy vehicle trip equivalent, which was 1,762.67 trips per week. \(^{35}\) The commute distance for employees was obtained by employee commute survey results that included the home zip code of commuting employees, which was used to calculate the approximate distance that each employee travels to and from work each day. An average trip length of 13.75 miles was calculate for the zip code data, which when multiplied by the number of trips results in approximately 24,241 VMT per week. \(^{36}\) This value can then be converted to annual VMT, assuming 48 work weeks per year, resulting in approximately 1,163,577 VMT per year associated with employee commute. GHG emissions will be calculated from employee commute VMT using the appropriate passenger vehicle emission factors from EMFAC2017 VMT-based emission rates. Employee commute is a scope 3 emission source, which the City has little control over due to personal preference of employees.

The activity data that will be used to calculate municipal fleet vehicle and employee commute GHG emissions are provided in Table 12.

\(^{31}\) Data provided to the City by email on July 6, 2021.
\(^{32}\) Data provided to the City by email from SCG on March 1, 2021.
\(^{34}\) 2019 SCAQMD Rule 2022 Employee Commute Survey Results. Provided on January 26, 2021.
\(^{35}\) The single-occupancy vehicle trip equivalent excludes public transit trips, active transportation trips, and zero-emission vehicle trips; and discounts carpool trips.
\(^{36}\) An average trip length was calculated from the VMT analysis included in Attachment A. The 2019 value for VMT in Table 1 was divided by the 2019 value for total trips in Table 2.
### Table 12 2019 Municipal Transportation Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Municipal Fleet</strong>¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Diesel</td>
<td>38,493 Gallons</td>
<td>Data provided to the City by email from SCG on March 1, 2021.</td>
</tr>
<tr>
<td>Renewable Natural Gas</td>
<td>143,825 Therms</td>
<td></td>
</tr>
<tr>
<td><strong>Employee Commute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Weekly SOV Trips</td>
<td>1,762.67 Trips</td>
<td>2019 SCAQMD Rule 2022 Employee Commute Survey Results. Provided on January 26, 2021.</td>
</tr>
<tr>
<td>Average Trip Length</td>
<td>13.75 Miles</td>
<td></td>
</tr>
<tr>
<td>Average Weekly VMT</td>
<td>24,241 VMT</td>
<td></td>
</tr>
<tr>
<td>Work Weeks per Year²</td>
<td>48 Weeks</td>
<td></td>
</tr>
<tr>
<td>Annual VMT</td>
<td>1,163,577 VMT</td>
<td></td>
</tr>
</tbody>
</table>

Notes: VMT = vehicles miles traveled; SOV = single-occupancy vehicle

1. The specific fuel type of vehicles was not available in the data provided. Therefore, the fuel type of vehicle was estimated based on their use.

2. An estimate of 48 work weeks per year accounts for 2 weeks of holiday time and an additional 2 weeks of vacation time per year.
Water and Wastewater

GHG emissions associated with water consumption are related to the energy used for water conveyance, treatment, and distribution. Similarly, emission associated with wastewater generation are related to the energy associated with the treatment and collection of wastewater, as well as fugitive emissions related to the treatment process. A discussion of the data sources and calculation methodology that will be used to calculate GHG emissions from water and wastewater in the community and municipal GHG inventory is provided in this section.

Community

Water Consumption

The City of Beverly Hills' water supply comes from the locally pumped groundwater and Metropolitan Water District (MWD). In 2015 and 2019, all water consumed in the City was obtained from MWD, as the Beverly Hills Water Treatment Plant was not in operation. Water consumption data to be used for calculating 2019 community GHG emissions was provided in the form of monthly water delivered to customers for 2019.37 Data used to calculate GHG emissions for 2015 was obtained from the City’s 2015 Urban Water Management Plan (UWMP).38

The amount of energy required for community water consumption will be determined following Community Protocol Method WW.14 and using specific energy intensity factors for MWD. The energy intensity of treated water delivered by MWD was obtained from the MWD 2020 UWMP.39

GHG emission will be calculated by applying the appropriate GHG emission factors for electricity to the energy used in each aspect of the water supply cycle. The energy consumption included in the MWD water supply occurs outside of the City boundaries; therefore, the GHG emissions associated with energy consumed in the MWD treated water supply will be calculated using the appropriate eGRID GHG emission factors. Specifically, the WECC California grid emission factors obtained from eGRID 2016 and eGRID 2019 will be used for the 2015 and 2019 inventory years, respectively.

The water consumption totals and energy intensities of the water supply used for community GHG emissions calculations are provided in Table 13.

37 Master Water Delivered Data. Provided by email on February 17, 2021.
Table 13 Community Water Consumption and Energy Intensity Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>2015</th>
<th>2019</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Intensity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GHG Emission Factor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: MG = million gallons; kWh = kilowatt-hour; MT CO₂e = metric tons of carbon dioxide equivalent

Wastewater Generation

The City collects sanitary wastewater flows within the City via a City sewer system that conveys the flows to trunk sewers operated and maintained by the Los Angeles Bureau of Sanitation. The trunk sewers convey the wastewater to the Hyperion Wastewater Reclamation Plant (HWRP) that is owned by the City of Los Angeles and operated by the Los Angeles Bureau of Sanitation. Methodologies used to

calculate GHG emissions are dependent on the processes occurring at the treatment facility. Accordingly, the following assumption will be made based on information about the HWRP:

- Stationary combustion of digestor gas occurs at the HWRP.
- Anaerobic digestion of solids occur at HWRP.
- HWRP does not have a nitrification or denitrification phase.
- Fossil-fuel-derived methanol is not used for biological nitrogen removal.
- Effluent is discharged into an ocean environment with minimal industrial inputs from Beverly Hills.
- The entire population of Beverly Hills is served by HWRP.
- Centralized treatment at HWRP is the primary form of wastewater treatment in Beverly Hills, and on-site septic treatment is used minimally or not at all.

Based on the above assumptions, GHG emissions for process and fugitive emissions from wastewater treatment will be calculated using Community Protocols Methods WW.1.(alt) WW.2.(alt), WW.8.(alt), and WW.12.(alt); with the primary data input being population served. Community Protocol Method WW.15 will be used to determine the amount of energy used for wastewater conveyance and treatment, using the energy intensity factor reported for Los Angeles County Sanitation District of 1,577 kilowatt-hours per million gallons (kWh/MG). The conveyance and treatment of wastewater occurs primarily outside of the City of Beverly Hills boundaries; therefore, GHG emissions from electricity used in wastewater conveyance and treatment will use the appropriate eGRID emission factors for 2015 and 2018.

The wastewater generation totals, energy intensities, and City specific factors used for community wastewater GHG emissions calculations are provided in Table 14.

---

41 Wastewater treatment technology specifications can vary widely between jurisdictions, as a result of process specifics, influent characteristics, and the age of infrastructure. As noted in the Community Protocols, the wastewater emissions calculation methodologies used here were designed as a generalized top-down approach for countries where detailed information was not available; they are a simplified approach that sacrifice accuracy. These methods have a range of accuracy for CH₄ emissions of +37% to -47% and +76% to -93% for N₂O, compared to direct source measurements. While there is significant uncertainty in the fugitive and process emissions associated with wastewater treatment, providing estimates of their emissions provides a general understanding of the magnitude of this emission source in comparison to others.


Table 14 Community Wastewater Generation and Energy Intensity Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>2015</th>
<th>2019</th>
<th>Data Source</th>
</tr>
</thead>
</table>
| Wastewater Generation         |       |       | California Department of Finance. E-5 Population and Housing Estimates.  

Calculation Factors

<table>
<thead>
<tr>
<th>Calculation Factors</th>
<th>2015</th>
<th>2019</th>
<th>Data Source</th>
</tr>
</thead>
</table>

GHG Emissions Factor

<table>
<thead>
<tr>
<th>GHG Emissions Factor</th>
<th>2015</th>
<th>2019</th>
<th>Data Source</th>
</tr>
</thead>
</table>

Notes: MG = million gallons; kWh = kilowatt-hour; MT CO₂e = metric tons of carbon dioxide equivalent

Municipal Water Consumption

As discussed previously, the City of Beverly Hills’ water supply came MWD in 2015 and 2019. Water consumption data was provided by BWP for all municipal customers, which includes water used for fire operations. Total indirect emissions from electricity use from water consumption at City facilities will be calculated using the same methodology outlined above for community water consumption. GHG emissions will be calculated from the electricity consumed in the water supply using the appropriate emission factors for the water sources. The GHG emissions from electricity used to provide local groundwater will be excluded from the GHG emissions totals to avoid double counting of emissions captured in municipal energy consumption.

Table 15 provides the total water consumption by municipal facilities and the average energy intensity that will be used to calculate GHG emissions.

---

44 Master Water Delivered Data. Provided by email on February 17, 2021.
Table 15 2019 Municipal Water Consumption and Energy Intensity

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Value</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Water Consumption</td>
<td></td>
<td>Master Water Delivered based on data reporting from the water utility service provider by email from City of Beverly Hills on February 17, 2021.</td>
</tr>
<tr>
<td>Total Municipal Consumption</td>
<td>103.42 MG</td>
<td>Master Water Delivered based on data reporting from the water utility service provider by email from City of Beverly Hills on February 17, 2021.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Intensity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MWD Imported Water</td>
<td>5,948 kWh/MG</td>
<td>See Table 13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GHG Emissions Factor</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MWD Imported Water</td>
<td>0.0002065 MT CO2e/kWh</td>
<td>See Table 13.</td>
</tr>
</tbody>
</table>

Notes: MG = million gallons; kWh = kilowatt-hour; MT CO2e = metric tons of carbon dioxide equivalent
1. Water consumption attributed to local groundwater will not be added to emissions totals due to risk of double counting with GHG emissions captured in municipal energy consumption.

Waste

GHG emissions from solid waste include methane generated by the decay of organic material, collection and transport of waste, fuel consumption in landfilling equipment, and combustion of waste in waste-to-energy facilities. Solid waste generated by the community is sent to multiple landfilling and processing facilities by Athens Services. Methane emissions from waste decay represent the “methane commitment” of disposed waste generated in the inventory year, even though these emissions will occur throughout the time-period over which the waste decays.

Community

Community waste disposal data was obtained through a Los Angeles County historical waste disposal tonnage report, which provides the total waste sent to landfill by the City of Beverly Hills in 2015 and 2019. The Beverly Hills community generated 41,171 and 46,912 tons of waste sent to landfill in 2015 and 2019, respectively. The recommended GHG emissions calculation methodologies are Community Protocol Methods SW.4, SW.5, and SW.7 for emissions associated with methane emissions from waste sent to landfills, landfilling process emissions and waste sent to combustion facilities, respectively. The landfill gas (LFG) capture rate of a destination landfill contributes significantly to the methane emissions generated by waste disposal. While many of the destination landfills report having LFG capture, the availability of accurate data representing current LFG capture rates is limited; therefore, the Community Protocol recommended default LFG capture rate of 75% was used for emission calculations. GHG emissions generated by waste collection and transport are not included in this sector, as they are accounted from in community VMT in the on-road transportation sector.

The waste generation totals used for community wastewater GHG emissions calculations are provided in Table 16.

45 Los Angeles County Public Works. Historical Disposal Tonnage for All In-County Jurisdictions. Provided by email on May 20, 2021.
### Table 16  Community Solid Waste Data

<table>
<thead>
<tr>
<th>Data Type</th>
<th>2015</th>
<th>2019</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Waste Generation</td>
<td></td>
<td></td>
<td>Los Angeles County Public Works. Historical Disposal Tonnage for All In-County Jurisdictions. Provided by email on May 20, 2021.</td>
</tr>
</tbody>
</table>

### Municipal

GHG emissions associated with generation of solid waste in City-operated facilities are a scope 3 emission source. Waste generation data specific to municipal facilities and operations was provided by the City in the form of total tonnage hauled from municipal facilities by the waste service provider, Athens, which showed a total municipal waste generation of 353.49 tons in 2019.\(^{46}\) The LGOP does not provide a recommended calculation methodology for this emission source; therefore, Community Protocol Method SW.4 will be used to calculate emissions associated with municipal waste generation. A characterization of the municipal waste stream was not available; therefore, it is conservatively assumed that the waste is similar to the average waste stream used for Community Protocol Method SW.4.

### Carbon Sequestration

The City of Beverly Hills is a Tree City USA, and as such celebrates the importance of an urban tree canopy. Trees provide numerous ecosystem services, including combating the urban heat island effect and providing carbon sequestration value. As part of the 2019 Community GHG Inventory the carbon sequestration value of the trees in the City right-of-way will be calculated based on the tree inventory conducted to inform the in progress Urban Forest Management Plan. The tree inventory includes a detailed assessment of each tree in the City right-of-way, including the specie, height and diameter at breast height (DBH), which was last updated in January 2020.\(^{47}\) To calculate the associated carbon sequestration value, the average DBH of tree species in the City will be entered into the i-Tree Planting Calculator version 2.1.2 to obtain an annual carbon sequestration value.\(^{48}\) The i-Tree Planting Calculator estimates the long-term environmental benefits from a tree planting project, with carbon dioxide sequestration values derived from species-based biomass equations based on tree characteristics.\(^{49}\) This annual carbon sequestration value will reduce the City’s overall community GHG emissions and highlight the value of preserving the urban forest.

### Conclusion

The data provided by the City and summarized in this Data Evaluation Memorandum provides the basis for the City’s updated 2015 Community GHG Inventory and 2019 Municipal and Community GHG Inventories. Based on Rincon’s review of the provided data, it appears that the data is generally complete and appropriate for use in the City’s GHG Inventory as detailed above. Upon review of the

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\(^{46}\) Data provided by the City of Beverly Hills by email on May 11, 2021.

\(^{47}\) Tree inventory provided by the City of Beverly Hills on March 18, 2021.


Data Evaluation Memorandum and approval from the City, Rincon will finalize the GHG Inventory which will be provided to the City for review. Please let us know if you have any questions, comments, or concerns with the data proposed for use in the City’s GHG inventory.

Sincerely,
Rincon Consultants, Inc.

Andrew Beecher
Sustainability Planner

Erik Feldman, MS, LEED-AP
Principal
Attachment A

VMT Analysis in Support of the Beverly Hills CAAP Memorandum
Memorandum

Date: May 17, 2021
To: Andrew Beecher and Reema Shakra, Rincon Consultants
From: Chelsea Richer and Griffin Kantz, Fehr & Peers
Subject: VMT Analysis in Support of the Beverly Hills CAAP

Introduction

Fehr & Peers is assisting Rincon Consultants, Inc. with transportation modeling efforts in support of the development of the City of Beverly Hills Climate Action & Adaptation Plan (CAAP) in Beverly Hills, California. The purpose of this memorandum is to document the methodologies used to estimate the baseline and future-scenario vehicle-miles traveled (VMT) associated with the City in support of quantifying GHG emissions.

VMT Analysis Overview

Origin-destination-based VMT was estimated using the Southern California Association of Governments’ (SCAG) Trip-Based Travel Demand Model v6.3 from the agency’s 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Such models are developed and periodically updated, calibrated, and validated for use in long range infrastructure planning, environmental impact assessments, and air quality conformity analyses by local and regional agencies. Trip-based travel forecasting models generate daily vehicle trips for each traffic analysis zone (TAZ) across various trip purposes based on inputs such as the transportation network and socioeconomic data (population, household, and employment). SCAG’s 2016 model is validated to the base year 2012, and it forecasts conditions out to 2040 for different scenarios of future regional travel patterns.

Post-processing the model’s outputs yields City-level VMT totals disaggregated by:

- Trip configuration: internal-internal (I/I), internal-external (I/X), external-internal (X/I)
- Trip purpose: home-based work, home-based other, non-home-based
- Heavy-duty truck weight
VMT forecasts have been provided for the years 2015, 2019, 2025, 2030, 2035, 2040, and 2045. These forecasts are based on a linear interpolation and extrapolation between the model’s validated 2012 base year scenario and 2040 scenario. This process is described in the following section.

**Forecast Year Interpolation**

A linear interpolation between the SCAG 2016 RTP model’s 2012 base year scenario and 2040 fiscally-constrained scenario was used to estimate past and future VMT for the City of Beverly Hills in the forecast years. The fiscally-constrained 2040 scenario assumes a more limited program of capital improvements and less reduction of VMT-per-capita in future decades than the “full-build” 2040 scenario. Using the fiscally-constrained future scenario enables the creation of future baseline VMT forecasts, against which the impacts of potential VMT reduction strategies can be measured.

**Regional Fair-Share VMT**

The forecasts shown here calculate the City’s “fair share” of regional VMT by adding 50% of I/X and 50% of X/I trip VMT between the City and the surrounding region to the total I/I VMT entirely within the City. We omit external-external (i.e., pass-through) trip VMT. This method is standard for Climate Action Plans and other related analysis; it may differ from VMT calculation methods used in other contexts (for example, CEQA transportation impact analysis of a specific project).

*Figure 1* shows the linear trendline interpolating between the 2012 base year and 2040 fiscally-constrained scenario forecasts from the SCAG model.

**Figure 1: Vehicle-Miles Traveled Interpolation**
Table 1 presents the VMT for the City of Beverly Hills in the forecast years. The City’s total share of regional VMT grows by 8% between the baseline year 2015 and the horizon year 2045, or by roughly 40,000 vehicle-miles every decade. The substantial majority of VMT will continue to be between the City and the surrounding region for these forecast years, with I/X and X/I VMT comprising more than 98% of the City’s total VMT share in every forecast year. X/I trip VMT alone accounts for nearly 78% of the total share.

**Table 1: Vehicle-Miles Traveled Forecast Summary**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>2015</th>
<th>2019</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal-Internal (I/I)</td>
<td>19,632</td>
<td>20,086</td>
<td>20,767</td>
<td>21,334</td>
<td>21,902</td>
<td>22,469</td>
<td>23,036</td>
</tr>
<tr>
<td>External-Internal (X/I)</td>
<td>1,092,940</td>
<td>1,105,459</td>
<td>1,124,238</td>
<td>1,139,887</td>
<td>1,155,535</td>
<td>1,171,184</td>
<td>1,186,833</td>
</tr>
<tr>
<td><strong>Total VMT</strong></td>
<td>1,404,764</td>
<td>1,420,695</td>
<td>1,444,591</td>
<td>1,464,506</td>
<td>1,484,419</td>
<td>1,504,334</td>
<td>1,524,247</td>
</tr>
</tbody>
</table>

Table 2 presents the forecasted vehicle-trips (VT) for the City of Beverly Hills in the same years. In contrast to VMT, I/X and X/I trips comprise approximately 81% of the City’s total VT share in each year, which is less than the I/X and X/I proportion of VMT since external trips are longer than internal trips, on average. X/I trips alone account for 57% of total trips.

**Table 2: Vehicle Trips Forecast Summary**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>2015</th>
<th>2019</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal-Internal (I/I)</td>
<td>27,239</td>
<td>27,666</td>
<td>28,306</td>
<td>28,839</td>
<td>29,372</td>
<td>29,905</td>
<td>30,439</td>
</tr>
<tr>
<td>Internal-External (I/X)</td>
<td>36,140</td>
<td>36,416</td>
<td>36,828</td>
<td>37,173</td>
<td>37,517</td>
<td>37,861</td>
<td>38,205</td>
</tr>
<tr>
<td>External-Internal (X/I)</td>
<td>82,487</td>
<td>83,736</td>
<td>85,609</td>
<td>87,170</td>
<td>88,731</td>
<td>90,291</td>
<td>91,852</td>
</tr>
<tr>
<td><strong>Total VMT</strong></td>
<td>145,866</td>
<td>147,816</td>
<td>150,743</td>
<td>153,181</td>
<td>155,620</td>
<td>158,057</td>
<td>160,496</td>
</tr>
</tbody>
</table>
**VMT by Vehicle Type**

*Table 3* on the following page disaggregates VMT for the City by vehicle type and trip purpose, according to this framework:

- **Light motor vehicles (LMV)**
  - Home-based work trips (HBW)
  - Home-based other trips (HBO)
  - Non-home-based trips (NHB)

- **Heavy-duty trucks (HDT)**
  - Light heavy-duty trucks (8.5-14K lbs. gross vehicle weight) (LHDT)
  - Medium heavy-duty trucks (14-33K lbs. gross vehicle weight) (MHDT)
  - Heavy heavy-duty trucks (>33K lbs. gross vehicle weight) (HHDT)

LMV VMT comprises over 95% of the City’s total VMT in every forecast year. HBW VMT is consistently approximately 42% of total LMV VMT, HBO VMT is approximately 38%, and NHB VMT is 20-21%.
<table>
<thead>
<tr>
<th>Year</th>
<th>Configuration</th>
<th>LMV</th>
<th>HDT</th>
<th>Total LMV</th>
<th>Total HDT</th>
<th>Total VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>HBW</td>
<td>HBO</td>
<td>NHB</td>
<td>Total</td>
<td>LHDT</td>
</tr>
<tr>
<td>2015</td>
<td>Internal-Internal (I/I)</td>
<td>3,827</td>
<td>7,337</td>
<td>8,045</td>
<td>19,208</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Internal-External (I/X)</td>
<td>66,117</td>
<td>48,498</td>
<td>158,502</td>
<td>273,117</td>
<td>4,377</td>
</tr>
<tr>
<td></td>
<td>External-Internal (X/I)</td>
<td>498,559</td>
<td>462,433</td>
<td>111,880</td>
<td>1,072,872</td>
<td>4,661</td>
</tr>
<tr>
<td></td>
<td>Total VMT</td>
<td>568,503</td>
<td>518,268</td>
<td>278,426</td>
<td>1,365,197</td>
<td>9,208</td>
</tr>
<tr>
<td>2019</td>
<td>Internal-Internal (I/I)</td>
<td>3,867</td>
<td>7,413</td>
<td>8,352</td>
<td>19,632</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Internal-External (I/X)</td>
<td>65,934</td>
<td>48,775</td>
<td>160,116</td>
<td>274,825</td>
<td>4,591</td>
</tr>
<tr>
<td></td>
<td>External-Internal (X/I)</td>
<td>504,216</td>
<td>466,940</td>
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Item 6
RECOMMENDATION
The Co-chairs have requested an agenda item to allow for an ongoing general discussion regarding greenhouse gas (GHG) emission goals and target settings.

DISCUSSION
To begin this discussion, staff is providing for reference the minimum provisional GHG reduction targets in the technical memo. Figure 1 illustrates the provisional target settings.

Figure 1- Past and Future GHG Emissions and State Minimum Target Pathways
These targets are based on state adopted regulations. These are:

1. SB 32 – Reduce GHG emissions to 40% below 1990 levels by 2030.
2. SB 32 Interim Goal- Reduce GHG emissions to 80% by 2040.

3. EO B-55-18 – Achieve carbon neutrality by 2045.

The illustration provides an idea of the GHG emissions reduction that would be needed to bridge the gap between the adjusted forecast and the state goals. By first seeing where the City stands compared to the state, it is then possible to move forward with discussions about the City’s path.

Setting the GHG emission baseline to 1990 levels is one of the data challenges in a CAAP. It is very uncommon that municipalities have 1990 data to set it as their baseline. Therefore, sound assumptions had to be made to reflect the City’s 1990 emissions. The most sound assumption is to use the City’s 2015 GHG emission as its 1990 emissions. This assumption is based on the state reaching 1990 emissions level by 2015. The state reached this level by adopting many regulations in the energy and transportation sectors. These regulations have consequently lowered the emissions from municipalities. Figure 2 illustrates the state reaching 1990 emissions level by 2015.

![California GHG Emissions Chart](image)

**Figure 2: California GHG emissions and targets.**

The follow up discussion on the pathways will be included in the GHG reduction measures and target goals. Besides climate action, the committee will be discussing adaptation goals, which is the City’s plan to manage the effects of climate change.
Item 7
TO:                      Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)
FROM:                    Shana Epstein, Director of Public Works
DATE:                    November 30, 2021
SUBJECT:                 Measures to Achieve Reductions
ATTACHMENTS:             1. Resume’s for Raimi and Associates

RECOMMENDATION
The co-chairs have requested an agenda item to allow for a general discussion regarding measures to be considered to achieve carbon neutrality goals.

DISCUSSION
The list below serves as a non-inclusive list of measures to assist in the brainstorming exercise:

a. Energy
   i. CPA
   ii. Energy Efficiency Facilities
   iii. Energy Efficient Building Codes – Reach Code
   iv. Other
b. Transportation
   i. Fleet
   ii. Parking
   iii. Electric Infrastructure
   iv. Other
c. Waste
   i. Purchasing policies
   ii. Organics
   iii. Recycling
   iv. Other
d. Water
   i. Irrigation
   ii. Leak Detection
   iii. Building Code
   iv. Other
NEXT STEPS
The Co-chairs in collaboration with City staff and Walker Wells and Sami Taylor from Raimi and Associates will assist in facilitating the discussion and report back to the full committee. Resumes for the consultants are attached. This will set up the discussion on prioritizing these measures to achieve the carbon neutrality targets.
Attachment 1
WALKER WELLS, AICP, LEED AP

WALKER WELLS, AICP, LEED AP

PRINCIPAL

Walker Wells is an industry-leading expert in urban sustainability, green building, and renewable energy. He has experience working with local governments, affordable housing developers, and non-profit organizations across the country to further sustainable development practices via technical assistance, charrettes, workshops, and developing public policy. He is a lecturer in green urbanism at the Claremont Colleges and the UCLA Urban Planning Program. Walker holds degrees from UC Santa Barbara and California Polytechnic State University San Luis Obispo, he studied at Lund University and Lund Polytechnic School of Architecture in Sweden.

EDUCATION

Fulbright Fellow, Sustainable Urbanism, Royal Institute of Technology
Stockholm, Sweden 2015

Master of City and Regional Planning, California Polytechnic State University, San Luis Obispo, 1993

Bachelor of Arts in Environmental Studies and Sociology (Double Major with Honors) University of California Santa Barbara 1989

AFFILIATIONS & CERTIFICATIONS

LEED Accredited Professional and Certified Green Rater

American Institute of Certified Planners

Los Angeles Regional Collaborative for Climate Action (LARC) Executive Committee Member

Chair, LEED for Cities and Communities Working Group

EXPERIENCE

Raimi + Associates
Los Angeles, CA
Principal, 2018-present

Global Green USA
Santa Monica, CA
Executive Director, VP of Programs 1999-2018

City of Santa Monica
Santa Monica, CA
Associate Planner, 1998-1999

Gruen Associates
Los Angeles, CA
Senior Urban Designer, 1993-1998

City of Malmo
Malmo, Sweden
Urban Planner, 1990-1991

KEY PROJECTS

- Los Angeles County Metropolitan Transportation Authority, Strategic Advisor | Los Angeles, CA (2019 - present)
  Preparing drafts of the equity, economic development, and livable neighborhoods sections of the sustainability plan; providing guidance on stakeholder outreach; and sharing best practices from other sustainability efforts. Reviewing draft specific plans prepared through Metro grant funding to determine consistency with the Transit Supportive Development Toolkit.

- San Luis Obispo Climate Action Plan | San Luis Obispo, CA (2019-present)
  Serving as project manager leading a multi-disciplinary team in updating the Climate Action Plan with a goal of carbon neutrality by 2035. Leading analysis and development of climate action measures related buildings and sequestration.

- GHG Reductions Analysis for AHSC Applicants | Statewide, CA (2018-Present)
  Conducting greenhouse gas reductions (GHG) analysis and project scope advice for multiple affordable housing developments submitting applications for the Affordable Housing and Sustainable Communities (AHSC) grant program. Also advised on project application scopes of work to ensure the project will achieve the greatest environmental and co-benefits.

- Los Angeles County, Sustainability Plan, Strategic Advisor | Los Angeles, CA (2017 - present)
  Providing technical assistance to the Los Angeles County Chief Sustainability Officer in development and implementation of the County's first ever Sustainability Plan. Analyzed the roles and authority of County agencies, identified best practices from other plans, reviewed the alignment of current County programs with UN Sustainable Development Goals and STAR Communities criteria. Assisted in review of goals, strategies, and indicators.

- Santa Monica Climate Action and Adaptation Plan*
  While at Global Green, worked to structure the stakeholder outreach process. The approach included a combination of an expert advisory committee, a community advisory committee, and an internal staff working group. A series of workshops were conducted to build awareness of the City’s current GHG profile, review GHG reduction strategies, and discuss the policy options and implications of pursuing a goal of carbon neutrality by 2050. Prepared an analysis of the carbon sequestration options that included expansion of the urban forest, park and open space management practices, opportunities to restore coastal resources including dunes, salt grass estuaries, and the kelp forest, and investment in off-site forest preservation, that also identified co-benefits.

*Indicates projects completed while serving as key staff at other organizations.

www.raimiassociates.com
PUBLICATIONS
- Planetizen Exchange Invited Blogger 2010 - present
- *Design and Architecture, Radio Interview on Distributed Infrastructure* 2015
- *Planning Magazine, Sweden the Green Giant* February 2014
- *Planning Magazine, Mainstreaming Green* November 2013
- *Urban Planning and Climate Change, Southern California Association of Governments*, Contributor 2009
- *Blueprint for Greening Affordable Housing*, *Global Green* 2008 (editor and co-author)
- *Design and Architecture, Radio Interview on Green Building Materials* 2007

ACADEMIC & TEACHING EXPERIENCE
- Pomona College, Claremont, California 2006 - present
- UCLA, Department of Urban Planning 2008 - Present
- Antioch University Los Angeles 2010 – 2012
- UCLA Extension, Sustainability Certification Program 2009

LECTURES
- UC Santa Barbara, Environmental Studies Program 2015
- Annenberg Foundation Photo Space, Sink of Swim Series 2015
- National Building Museum, Smart Growth Lecture Series 2014
- UC Davis Landscape Extension Graduation, Keynote Speaker 2014
- US Department of Energy, City Partnership, Los Angeles Keynote 2012
- University of Virginia School of Architecture and Urban Planning 2009
- Harvey Mudd College, Nelson Lecture Series 2007
- UC Santa Barbara, Environmental Planning 2013
- University of Southern California, Housing Graduate Studio 2008-2012
- Occidental College Housing Fundamentals Course 2011

RECENT PRESENTATIONS
- Green Affordable Housing, New Hampshire Housing Finance, 2019
- Building Equitable Communities: A Housing & Park Summit, 2017
- California Building Officials Conference, 2017, Emerging Issues in Green Building
- California APA, 2016 Collaborative Community Development Strategies
- South by Southwest Eco, 2016, Place by Design Jury member
- Housing California, 2016 Sustainable Neighborhood Planning
- Dwell on Design 2016, Sustainable Neighborhood Planning
- Municipal Green Building Conference and Expo, 2016 Green Affordable Housing
- City Resilience Summit, 2015
- Housing California, 2001-2011, 2015
- Green Build, 2005-2011, 2014
- Western Green Tech Open, 2014
- Southern California of Non-Profit Housing Conference, 2014
- Eco Districts Summit, 2013
- Neighborworks America, Green Leadership Summit, 2013
- American Institute of Architects National 2007, 2009
SAMI TAYLOR, ECODISTRICT AP
SENIOR SUSTAINABILITY PLANNER

Sami Taylor has an extensive background in sustainable policy and planning and brings with her seven years of experience in a variety of sectors including local government and private institutions. With experience spanning each component of sustainability, she enhances sustainability planning work and has coordinated the implementation of various sustainability programs and community engagement efforts. Above all, Sami is eager to share knowledge with others that will empower them to make the changes and choices that lead to a sustainable life.

EDUCATION
University of Southern California, Los Angeles, CA
Master of Public Administration: Environmental Management and Land Use Policy, Certificate in Sustainable Policy and Planning

Oberlin College, Oberlin, OH
Bachelor of Arts: Environmental Studies & Geology

CERTIFICATION
EcoDistrict AP (CA, Green Building)

EXPERIENCE
Raimi + Associates
Los Angeles, CA
Sustainability Planner, 2019-present

The Robert Group
West Hollywood, CA
Sustainability Planner

City of Arcadia
Arcadia, CA
Water Conservation Analyst

USC Office of Sustainability
Waste Diversion Coordinator

Los Angeles Food Policy Council
Los Angeles, CA
Good Food Purchasing Policy Intern

KEY PROJECTS

- **City of Santa Clara CAP (Santa Clara, CA)**
  Prepared GHG forecast to assist in CAP carbon reduction target setting. Planned and conducted virtual community engagement including online surveys and interactive Zoom workshops. As well as assisted in the preparation for Planning Commission and City Council Study Sessions. Completed quantitative analysis to determine the strategies and magnitudes of implementation needed to achieve GHG reduction targets.

- **City of San Luis Obispo CAP Technical Analysis (San Luis Obispo, CA)**
  Supported project management in the development of a Greenhouse Gas (GHG) Reductions Analysis tool to analyze the impact of GHG mitigation strategies. Completed technical analysis to determine the strategies and magnitudes of implementation needed to achieve carbon neutrality by 2035. Assisted in preparing community engagement plan and “Climate Crate,” a set of materials to be used for future climate action outreach.

- **City of Cupertino Electrification Reach Code (Cupertino, CA)**
  Supported project management in the development of an all-electric building reach code for residential and nonresidential new construction. Engaged with City commissions and facilitated workshops to gather input for new requirements. Prepared presentations, educational materials, final building code language, and California Energy Commission filing.

- **General Plan Greenhouse Gas Analysis (Statewide, CA)**
  Prepared greenhouse gas inventories and forecasts as part of the existing conditions analysis for General Plan updates and to inform the development of future Climate Action Plans for various cities including Palmdale and South San Francisco. Performed EIR GHG calculations and determined thresholds of significance for the Beaumont General Plan Update.

- **GHG-Reduction Technical Assistance for AHSC Applicants (Statewide, CA)**
  Conducted quality assurance for Affordable Housing and Sustainable Communities (AHSC) applicant materials; ensuring consistency of inputs and documentation with the AHSC Benefits Calculator Tool to provide reliable estimates of greenhouse gas (GHG) emissions reductions.

- **Climate Action Plan Implementation and Monitoring Tool (West Hollywood, CA)**
  Project Manager and extension of staff. Supported the development of a climate action plan implementation and monitoring tool by conducting research and provided data, participating in the greenhouse gas inventory update, writing the new annual progress report template, and designing community-oriented infographics.

  (* Indicates projects completed while key staff for other organization)
Item 8
RECOMMENDATION
This agenda item is a committee discussion on community engagement topics and will serve as a rolling agenda item.

NEXT STEPS
The Community Advisory Committee (CAC) meetings serve as part of the public engagement process since it is a large multi-discipline committee and open to the public. Aside from the CAC meetings, Committee members will provide ideas for future community outreach topics. A suggestion already has been community movie nights featuring climate change documentaries.
Item 9
TO: Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)

FROM: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

DATE: November 30, 2021

SUBJECT: Setting the Next Meeting Date

RECOMMENDATION
Staff requests the committee select the next meeting date and share any future meeting topics.

DISCUSSION
Staff recommends setting the date to the next Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC). Possible meeting dates are listed below.

- Monday, January 24, 2022, 2 p.m. to 4 p.m.
- Wednesday, January 26, 2022, 2 p.m. to 4 p.m.
- Monday, January 31, 2022, 2 p.m. to 4 p.m.

Potential future meeting topics include:
- Waste Stream Process and Waste Diversion- Athens (Solid Waste Hauler)
- Green House Gas Emission Measures
- Green House Gas Emission Reduction Targets
Item 10
TO: Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)

FROM: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

DATE: November 30, 2021

SUBJECT: Chair’s Report

The following items will be presented:

Item 11
CITY OF BEVERLY HILLS
PUBLIC WORKS DEPARTMENT

MEMORANDUM

TO: Climate Action and Adaptation Plan (CAAP) Community Advisory Committee (CAC)

FROM: Josette Descalzo, Environmental Compliance and Sustainability Programs Manager

DATE: November 30, 2021

SUBJECT: Director’s Report

The following items will be presented:

1. Upcoming City Council and Commission Agenda Items of Interest
   a. City Council Items: Clean Power Alliance and Urban Forest Master Plan
   c. Public Works Commission: Net Zero Water Policy