



**AGENDA**  
**ENERGY & GREEN ISSUES STANDING COMMITTEE MEETING**

**Goleta City Hall  
130 Cremona Drive, Suite B  
Goleta, California**

**Tuesday, January 30, 2024  
1:30 – 3:00 PM  
Conference Room # 1**

Luz Reyes-Martín, Mayor Pro Tempore  
Kyle Richards, Councilmember  
Robert Nisbet, City Manager  
Peter Imhof, Planning and Environmental Review Director  
Dana Murray, Sustainability Manager  
Angeline Foshay, Sustainability Analyst

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**OPTIONS FOR PUBLIC PARTICIPATION WILL BE IN PERSON OR ONLINE VIA  
ZOOM**

If you wish to make a general public comment or to comment on a specific agenda item, the following methods are available:

**Distribution to the Energy & Green Issues Standing Committee** - Submit your comment via email up to Tuesday, January 30 at 10:00 AM prior to the Energy / Green Issues Standing Committee meeting. Please submit your comment to Dana Murray at: [dmurray@cityofgoleta.org](mailto:dmurray@cityofgoleta.org). Your comment will be placed into the record and distributed appropriately.

Please register for the Energy / Green Issues Standing Committee Meeting on January 30, 2024, 1:30 PM PT at:

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**AGENDA**

- I. Public Comment (5 minutes)
- II. Electric Vehicle (EV) Reach Code (30 minutes)
  - a. Update
  - b. Recommendation Request
- III. Transition to 100% Renewable Energy & Monarch 1 Performance (20 minutes)
  - a. Recommendation Request
- IV. Building Electrification - Permit Fee Waivers (20 minutes)
  - a. Update
  - b. Recommendation Request

***Note: In compliance with the Americans with Disabilities Act, if you need assistance to participate in this meeting, (including assisted listening devices), please contact Deborah Lopez, City Clerk, at (805) 961-7505 at least 72 hours prior***

***to the meeting. Notification helps to ensure that reasonable arrangements can be made to provide accessibility to the meeting.***



**DATE:** January 25, 2024

**TO:** Energy & Green Issues Standing Committee

**FROM:** Peter Imhof, Planning and Environmental Review Director

**CONTACT:** Dana Murray, Sustainability Manager  
Angeline Foshay, Sustainability Analyst

**SUBJECT:** Background Information for the January 30, 2024 Energy & Green Issues Standing Committee (“Green Committee”) Meeting (please see attached agenda)

#### **ITEM I: PUBLIC COMMENT**

#### **ITEM II: ELECTRIC VEHICLE REACH CODE UPDATE**

The purpose of this item is to update the Green Committee on the development of an Electric Vehicle (EV) Reach Code, including recent updates from the State on new EV charger Building Code requirements, and to seek recommendations from the Green Committee on single family residential, multifamily residential, and commercial/office building requirements.

Following this Green Committee update, discussion, and Committee recommendation, staff will continue to develop the EV Reach Code with technical experts, which will require amendments to Part 11, Title 24 of the California Green Building Standards Code (CALGreen) and minor revisions to Section G of Chapter 17.38.110 of the Goleta Municipal Code (GMC) to expand and simplify the EV charging requirements for new construction.

#### **Background:**

Investing in the development and installation of EV charging infrastructure is identified in the City’s budget priorities and Strategic Plan as a means of supporting environmental vitality and the City’s transition to a clean energy future. Additionally, ‘Electrical Vehicle Readiness Planning’ is a top priority in the City’s adopted Planning & Environmental Review Department’s FY 2023-24 Annual Work Program. The City Council adopted an EV Charging Station Permit Streamlining Ordinance in April 2020.

In September 2020, Governor Newsom issued an Executive Order requiring sales of all new passenger vehicles to be zero-emission by 2035 and additional measures to eliminate harmful emissions from the transportation sector. The Executive Order directs the California Air Resources Board (CARB), California Energy Commission (CEC), California Public Utilities Commission, other State agencies, and local agencies to accelerate deployment of affordable fueling and charging options for zero-emission

vehicles (ZEVs) in ways that serve all communities, and specifically low-income and disadvantaged communities.

Transportation accounts for just over half of the greenhouse gas (GHG) emissions in Santa Barbara County. One of the key strategies to reduce emissions and meet the ambitious climate goals of the State is encouraging the use of EVs and expanding EV charging infrastructure. The most common barrier to switching to an EV, especially for residents of multi-family buildings, is the lack of access to reliable charging at the home or workplace. Requiring EV charging infrastructure in new buildings is a significant way to support the transition to EVs and is significantly less expensive than future retrofits to add EV charging.

California has a goal to install 250,000 EV chargers to support 1.5 million ZEVs by 2025 and infrastructure to support 5 million ZEVs by 2030. To meet future EV demand along the Central Coast, it is estimated that an additional 25,481 public Level 2 EV charging stations will be required by 2030, as well as an additional 1,223 public Direct Current Fast Charging (DCFC) charging stations. 12,418 of those chargers would be needed within Santa Barbara County, according to the Santa Barbara County Association of Government's (SBCAG) Central Coast Zero Emission Vehicle Strategy (Draft, April 2023). CEC's estimated projection of the number of public Level 2 EV charging stations needed to support the interim 2025 ZEV goal is 972 chargers in Santa Barbara County.

To meet the growing need for access to EV chargers, local jurisdictions often adopt "Reach Codes" to increase the number of EV charging spaces required in new development, particularly related to multifamily buildings. A Reach Code is a local Building Energy Code that "reaches" beyond the state minimum requirements for energy use in building design and construction, creating opportunities for local governments to lead beyond state requirements. Reach Codes help encourage development of energy efficient and increasingly electrified, sustainable buildings as well as support EV adoption through EV charging standards. The 2022 California Building Standards Code (CBSC) included increased EV charging requirements compared to previous code cycles, but it does not go far enough to significantly improve access to EV charging, given the pace of transition needed to meet state goals and meaningfully address the climate crisis. Most of the buildings built in or after 2023 will continue to exist in 2035, and these EVs will need a place to charge. The State recently developed and adopted adjustments to their Building Codes and Standards in between the three-year adoption cycle, known as intervening cycle changes, which are described in the Discussion section below.

More than 44 local government jurisdictions in California have adopted EV Reach Codes. These jurisdictions have increased EV infrastructure requirements in their Building Codes to help provide critical charging infrastructure for housing and workplaces. EV Reach Codes help jurisdictions meet the growing gap in EV charging demand and availability. Adopting a Reach Code component that addresses EV charging infrastructure will help Goleta further electrify our transportation sector, which accounts for over 55% of the City's emissions. With bold EV adoption and infrastructure goals set by the state, Goleta can further support the transportation electrification transition by increasing the minimum requirements for EV infrastructure in new construction.

As of January 2024, there are about 90 privately-owned public chargers currently within Goleta and the City is actively expanding the public charging network, but the City will not be able to support the level of EV charging infrastructure needed without significant increases in EV chargers in multi-family residential and non-residential projects. During the development of Goleta's New Zoning Ordinance (NZO), adopted in April 2020, EV charging requirements were added to Title 17 to support transportation electrification in residential, office and lodging for designated uses. These requirements have helped Goleta secure better EV charging infrastructure in multi-family developments, but stronger regulations can support further EV adoption.

To help achieve GHG emission reductions and EV goals, and in acknowledgement of the existing gaps in local EV charging infrastructure, staff introduced research and background on this issue at the October 12, 2022 Green Committee meeting. The Committee recommended that staff research different avenues of incorporating EV charger requirements into a City Reach Code. An "EV Charger Reach Code" would involve the City passing an amendment to CALGreen to require new projects increase the number of EV charging spaces, helping to ensure that EV drivers have a spot to plug in, particularly in new multifamily buildings. At the Green Committee meeting on September 28, 2023, Committee members directed staff to look into developing a model code similar to those adopted by Bay Area jurisdictions and recommended by 3CE, focusing on maximizing EV charging access for multifamily residential buildings, hotels and offices. Staff have begun the process of working with utility consultants from 3CE and SCE to develop an ordinance that balances the Committee's policy requests and eases implementation for the Planning and Environmental Review's Building & Safety Division.

## **Discussion:**

### ***Intervening Building Code Cycle Changes***

The State develops and adopts adjustments to its Building Codes and standards in between the regular three-year adoption cycle, known as intervening cycle changes. Intervening cycle changes for the 2022 California Building Code and Standards include adjustments to CALGreen for multifamily, hotel, motel and nonresidential EV charging requirements. All jurisdictions are required to automatically adhere to the Intervening Code Adoption Cycle versions of Title 24 on July 1, 2024.

Adjustments to EV-related definitions, as adopted in August 2023 by the State's Buildings and Standards Commission, that are relevant to this discussion are as follows:

- **ELECTRIC VEHICLE CHARGING STATION (EVCS).** [HCD] One or more electric vehicle charging spaces served by EVSE or receptacle(s).~~electric vehicle charger(s) or other charging equipment allowing charging of electric vehicles. Electric vehicle charging stations are not considered parking spaces~~
- **ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** [HCD] The conductors, including the ungrounded, grounded and equipment grounding conductors and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

- **LEVEL 2 ELECTRIC VEHICLE (EV) CHARGER.** [HCD] A 208/240-volt 30-ampere minimum electric vehicle charger connected to the premises electrical system capable of charging electric vehicles.
- **LOW POWER LEVEL 2 ELECTRIC VEHICLE (EV) CHARGING RECEPTACLE.** [HCD] A 208/240-volt 20-ampere minimum branch circuit and a receptacle for use by an EV driver to charge their electric vehicle or hybrid electric vehicle.

In addition to adjustments to definitions, the EV charging requirements for multifamily, hotel, motel and nonresidential developments all increased for the intervening cycle.

***Single-family Residential***

There were no changes in the intervening cycle code to the single-family residential building EV requirements. The base requirements in the code are that new single-family homes be EV capable with service panel or subpanel capacity. Staff recommends adopting a simple Reach Code for single-family residential, requiring one Level 2 EV Ready circuit and one Level 1 EV Ready circuit. This expands upon the minimum 2022 CBSC requirement of one Level 2 EV Capable circuit for one parking space per dwelling unit.

***Multifamily Residential, Hotels and Motels***

This designation will see the most changes in the intervening cycle update beginning July 1, 2024. The mandatory requirements of the CALGreen intervening cycle will require 40% of total parking spaces under this designation to have Low Power Level 2 EV Ready Receptacles and 10% of total parking spaces to have Level 2 EVCS installed. The new CALGreen Voluntary Tier 1A measures would require 50% of total parking spaces to have Low Power Level 2 EV Ready Receptacles and 15% of total parking spaces to have Level 2 EVCS, the CALGreen Voluntary Tier 1B measures would require 100% of total parking spaces to have Low Power Level 2 EV Ready Receptacles, the CALGreen Voluntary Tier 2A measures would require 55% of total parking spaces to have Low Power Level 2 EV Ready Receptacles and 20% of total parking spaces to have Level 2 EVCS, and the CALGreen Voluntary Tier 2B measures would require 100% of total parking spaces to have Low Power Level 2 EV Ready Receptacles and 20% of total parking spaces to have Level 2 EVCS. These requirements are the same regardless of parking lot size, building size and number of units.

During the Energy & Green Issues Standing Committee in September 2023, the Committee directed staff to pursue a model code adopted by many Bay Area cities that maximized EV charging access in multifamily residential developments. Of the two presented model code options, the Committee selected the “low power” option, that would require 40% Level 2 EVCS and 60% Level 1 EV Ready as a percent of dwelling units with parking spaces.

*Table 1. Summary of Options for Multifamily/Hotel/Motel Requirements for EV Charging*

	Low Power Level 2 EV Ready Receptacles (percentage of total parking spaces)	Level 2 EVCS (percentage of total parking spaces)	Level 1 EV Ready (percentage of total parking spaces)

CALGreen Mandatory	40%	10%	0%
CALGreen Voluntary Tier 1A	50%	15%	0%
CALGreen Voluntary Tier 1B	100%	0%	0%
CALGreen Voluntary Tier 2A	55%	20%	0%
CALGreen Voluntary Tier 2B	100%	20%	0%

Looking beyond the intervening updates, the 2025 model code language in development has distinct requirements for Multifamily and Hotels/Motels. The language currently proposes that Multifamily buildings increase their requirement to 100% of total parking spaces provide Low Power Level 2 EV Ready Receptacles and 20% of total parking spaces to have Level 2 EVCS, and that Hotels/Motels continue requiring 40% of total parking spaces to have Low Power Level 2 EV Ready Receptacles and increase to 25% of total parking spaces having Level 2 EVCS.

*Table 2. Proposed 2025 CALGreen Language for Multifamily and Hotels/Motels (subject to change)*

	Low Power Level 2 EV Ready Receptacles (percentage of total parking spaces)	Level 2 EVCS (percentage of total parking spaces)	Level 1 EV Ready (percentage of total parking spaces)
2025 CALGreen Proposed: Mandatory Multifamily	100%	20%	0%
2025 CALGreen Proposed: Mandatory Hotels/Motels	40%	25%	0%

Given the changes to the intervening code and the potential future changes to the 2025 code, the Committee could consider recommending the CALGreen Voluntary Tier 2B as mandatory. This would align with the future direction of the CALGreen code and align with current voluntary tiers of the CALGreen code.

**Nonresidential Development**

The intervening cycle update for nonresidential development includes multiple pathways to meet EV charging requirements. The traditional method requires a particular number of parking spaces to be EV Capable and/or provide Level 2 EVSE per the total size of the parking lot. The Power Allocation Method allows more flexibility in combinations of EV Capable spaces, low power Level 2, Level 2 or DCFC EVSE to meet the required kilo-volt-amperes (kVA) per the total size of the parking lot. The installation of each DCFC EVSE can reduce the minimum number required EV capable spaces with or without Level 2 EVSE by five. Additionally, the installation of two low power Level 2 EV charging receptacles can reduce the minimum number of EV capable spaces (without EVSE) by one. Under the Power Allocation Method, at least 1 Level 2 EVSE shall be provided. The Power Allocation Method offers greater flexibility to developers to meet the CALGreen EV charging requirements and could assist reducing EV charging infrastructure project costs for larger nonresidential developments.

The CALGreen mandatory measures for the intervening code are as follows for both available methods:



### Number of Parking Spaces Method:

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE) <sup>2, 3</sup>
0–9	0	0
10–25	4	0
26–50	8	2
51–75	13	3
76–100	17	4
101–150	25	6
151–200	35	9
201 and over	20 percent of actual parking spaces <sup>1</sup>	25 percent of EV capable spaces <sup>1</sup>

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.
3. At least one Level 2 EVSE shall be provided.

### Power Allocation Method:

TOTAL NUMBER OF ACTUAL PARKING SPACES	MINIMUM TOTAL KVA @ 6.6 kVA	TOTAL KVA REQUIRED IN ANY COMBINATION OF EV CAPABLE, <sup>3,4</sup> LOW POWER LEVEL 2, LEVEL 2, <sup>1, 2</sup> OR DCFC
0–9	0	0
10–25	26.4	26.4
26–50	52.8	52.8
51–75	85.8	85.8
76–100	112.2	112.2
101–150	165	165
151–200	231	231
201 and over	20 percent of actual parking spaces × 6.6	Total required kVA = P × .20 × 6.6 Where P = Parking spaces in facility

1. Level 2 EVSE @ 6.6 kVA minimum.
2. At least one Level 2 EVSE shall be provided.
3. Maximum allowed kVA to be utilized for EV capable spaces is 75 percent.
4. If EV capable spaces are utilized, they shall meet the requirements of Section 5.106.5.3.1 EV capable spaces.

Voluntary Tier 1 CALGreen measures are as follows for both available methods:  
 Number of Parking Spaces Method:

TOTAL NUMBER OF ACTUAL PARKING SPACES	TIER 1 NUMBER OF REQUIRED EV CAPABLE SPACES	TIER 1 NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE) <sup>2, 3</sup>
0–9	2	0
10–25	5	2
26–50	11	4
51–75	19	5
76–100	26	9
101–150	38	13
151–200	53	18
201 and over	30 percent of actual parking spaces <sup>1</sup>	33 percent of EV capable spaces <sup>1</sup>

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.
3. At least one Level 2 EVSE shall be provided.

Power Allocation Method:

TOTAL NUMBER OF ACTUAL PARKING SPACES	MINIMUM TOTAL kVA @ 6.6 kVA	TOTAL kVA REQUIRED IN ANY COMBINATION OF EV CAPABLE <sup>3,4</sup> , LOW POWER LEVEL 2 LEVEL 2 <sup>1, 2</sup> , OR DCFC
0–9	13.2	13.2
10–25	33	33
26–50	72.6	72.6
51–75	125.4	125.4
76–100	171.6	171.6
101–150	250.8	250.8
151–200	349.8	349.8
201 and over	30 percent of actual parking spaces × 6.6	Total required kVA = P × .30 × 6.6 Where P = Parking spaces in facility

1. Level 2 EVSE @ 6.6 kVA minimum.
2. At least one Level 2 EVSE shall be provided.
3. Maximum allowed kVA to be utilized for EV capable spaces is 67 percent.
4. If EV capable spaces are utilized, they shall meet the requirements of Section 5.106.5.3.1 EV capable spaces.

Voluntary Tier 2 CALGreen measures are as follows for both available methods:

Number of Parking Spaces Method:

TOTAL NUMBER OF ACTUAL PARKING SPACES	TIER 2 NUMBER OF REQUIRED EV CAPABLE SPACES	TIER 2 NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE) <sup>2, 3</sup>
0–9	3	0
10–25	8	3
26–50	17	6
51–75	28	9
76–100	40	13
101–150	57	19
151–200	79	26
201 and over	45 percent of actual parking spaces <sup>1</sup>	33 percent of EV capable spaces <sup>1</sup>

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.
3. At least one Level 2 EVSE shall be provided.

Power Allocation Method:

TOTAL NUMBER OF ACTUAL PARKING SPACES	MINIMUM TOTAL KVA @ 6.6 KVA	TOTAL KVA REQUIRED IN ANY COMBINATION OF EV CAPABLE <sup>3,4</sup> , LOW POWER LEVEL 2 LEVEL 2 <sup>1, 2</sup> , OR DCFC
0–9	28.8	28.8
10–25	76.8	76.8
26–50	163.2	163.2
51–75	268.8	268.8
76–100	384	384
101–150	547.2	547.2
151–200	758.4	758.4
201 and over	45 percent of actual parking spaces × 6.6	Total required kVA = P × .45 × 6.6 Where P = Parking spaces in facility

1. Level 2 EVSE @ 6.6 kVA minimum.
2. At least one Level 2 EVSE shall be provided.
3. Maximum allowed kVA to be utilized for EV capable spaces is 75 percent.
4. If EV capable spaces are utilized, they shall meet the requirements of Section 5.106.5.3.1 EV capable spaces.

Table 1. Summary of Options for Nonresidential Requirements for EV Charging, Percentage of Spaces Requirements

	EV Capable (percentage of total parking spaces)	Level 2 EVCS (percentage of total parking spaces)
CALGreen Mandatory	15%	5%
CALGreen Voluntary Tier 1	20%	10%
CALGreen Voluntary Tier 2	30%	15%
Model Code – Offices	30%	20%
Model Code – All Other	10%	10%

Looking beyond the intervening updates, the 2025 model code language in development has distinct requirements for Nonresidential buildings, separated between Office/Retail and All Other buildings. The language currently proposes that Office/Retail buildings increase their requirement from 5% to 15% of total parking spaces that have Level 2 EVCS spaces, and that All Other Nonresidential buildings increase their requirement from 5% to 10% of total parking spaces that have Level 2 EVCS spaces.

Table 2. Proposed 2025 CALGreen Language for Nonresidential Buildings (subject to change)

	EV Capable (percentage of total parking spaces)	Level 2 EVCS (percentage of total parking spaces)
2025 CALGreen Proposed: Mandatory Office/Retail	5%	15%
2025 CALGreen Proposed: Mandatory All Other	10%	10%

During the September 2023 Green Committee meeting, the Committee indicated interest in pursuing the model ordinances as opposed to adopting CALGreen voluntary tiers as mandatory. The model ordinances presented in September include requirements that newly constructed offices provide 20% Level 2 EVCS and 30% Level 2 EV Capable spaces. All other nonresidential would require 10% Level 2 EVCS and 10% Level 2 EV Capable spaces.

During discussions with the Current Planning and Building & Safety Divisions, staff recommended that aligning with the options already provided by the Building Code (CALGreen Voluntary Tiers) would simplify the review process for permitting staff and ease concerns from applicants. Given the flexibility offered by the new intervening code’s CALGreen Tiers and internal feedback received, staff recommends either CALGreen Voluntary Tier 2 mandatory for nonresidential development.

### **Recommendations & Next Steps**

Given the developments of the intervening code cycle, there are many great options for Reach Code development that can increase EV charging capacity. Staff seeks feedback and a recommendation on the following components for an EV reach code:

- **Single Family Residential**
  - Reconfirm staff recommendation of model reach code adoption of one Level 2 EV Ready circuit and one Level 1 EV Ready circuit.

- **Multifamily Residential, Hotels and Motels (4 options)**
  - Tier 1A: Adopt CALGreen Voluntary Tier 1 mandatory for residential development, which would require 50% Low Power Level 2 Receptacles and 15% Level 2 EVSE.
  - Tier 1B: Adopt CALGreen Voluntary Tier 2 mandatory for residential development, which would require 100% Low Power Level 2 Receptacles.
  - Tier 2A: Adopt CALGreen Voluntary Tier 2 mandatory for residential development, which would require 55% Low Power Level 2 Receptacles and 20% Level 2 EVSE spaces.
  - Tier 2B: Adopt CALGreen Voluntary Tier 2 mandatory for residential development, which would require 100% Low Power Level 2 Receptacles and 20% Level 2 EVSE spaces.
  - Staff recommends adopting CALGreen Voluntary Tier 2B as mandatory for residential development.
  
- **Nonresidential (3 options)**
  - Option 1: Adopt model reach code option of office buildings at 20% Level 2 EV chargers and 30% Level 2 EV charging receptacles; all other nonresidential would require 10% Level 2 EV chargers and 10% Level 2 EV charging receptacles.
  - Option 2: Adopt CALGreen Voluntary Tier 1 mandatory for nonresidential development. (Tables in section above)
  - Option 3: Adopt CALGreen Voluntary Tier 2 mandatory for nonresidential development. (Tables in section above)
  - Staff recommends adopting Option 3, which aligns with the CALGreen Voluntary Tier 2 mandatory for nonresidential development.

Following Committee recommendation, staff will continue to develop a draft EV Reach Code with assistance from technical code experts contracted with 3CE and SCE. Once a draft EV Reach Code is developed, staff will conduct outreach to local stakeholders and bring the ordinance draft to City Council for discussion and possible adoption. Staff will also bring Title 17 Zoning Code amendments to Planning Commission and City Council to remove duplicative EV charging requirements. Should the City Council approve an EV Reach Code, all amendments to the State Code must then be filed with the California Building Standards Commission.

### **ITEM III: TRANSITION TO 100% RENEWABLE ENERGY & MONARCH PERFORMANCE**

The purpose of this item is to review the performance of the City Hall solar installation, Monarch 1; receive an update on the City's progress towards 100% renewable energy; and consider actions to accelerate the City's renewable electricity mix for municipal facilities.

#### **Background:**

Cities are on the front lines when it comes to combating climate change. Cities are also leading the world in reducing carbon emissions through aggressive policies and adoption of clean technologies. The City of Goleta has a strong history of taking climate action and moving towards sustainability, and how much renewable energy is in our municipal electricity has a direct correlation with lowering GHG emissions. The City's efforts have kept us on track with state requirements for renewable energy (SB 100) and waste diversion (AB 341). California's Assembly Bill 32 (the California Global Warming Solutions Act of 2006) sets the State's goal for a more sustainable future.

The 14th annual *California Green Innovation Index* released in December 2022 finds that California will face significant challenges in meeting its 2030 climate targets. Advancements in state policy continue to push renewable energy targets further, with the goal of reaching 100% zero carbon, renewable electricity by 2045 (SB 100, 2018). Despite this ambitious target-setting for renewable generation, the percentage of total power mix (in-state generation plus imports) from renewable sources rose just 0.5 percent to 33.6 percent in 2021, and in-state generation of renewables actually declined. In August 2022, the California Legislature additionally passed SB 1020, setting interim targets of 90 percent clean electricity by 2035 and 95 percent by 2040. At the current pace of growth, California is at risk of missing the 50 percent Renewable Portfolio Standards (RPS) goal by 2026.

More than ever, it is essential that local governments partner with their utilities and push to advance renewable energy generation to reduce statewide and community emissions. Encouraging renewable energy generation and its use through installation of solar panels, battery energy storage, electric vehicle (EV) charging stations and similar measures at City-owned facilities is identified in the City's Strategic Plan and Resolution 17-52, which adopted the City's 100% Renewable Energy Goal for the City by 2030. This resolution also includes an interim goal for at least 50% of electricity use by municipal facilities to come from renewable sources by 2025. The acquisition of the City Hall building allowed the City to implement a high-visibility clean energy project to support the City's goal with the installation of the Monarch 1 solar carport at City Hall.

With the Monarch 1 fully installed and online since August 2022, the installation has been online for over a year and providing renewable electricity to City Hall. Committee members requested an update on the performance of the Monarch 1 project to track its generation and impact on municipal facility emissions. A summary of the performance and impact of the system can be found below, and the full report prepared by the City's consultant for the project, Optony, is attached to this memo (Attachment 1). Committee

members also requested an update on the City's transition to 100% renewable energy, which is provided below.

### ***Monarch Solar Array Performance***

In December 2020, City Council authorized a letter of intent to proceed with an agreement for a solar photovoltaic (PV) project on its recently acquired City Hall building, consistent with the adopted Strategic Energy Plan and 100% Renewable Energy Goal. On October 19, 2021, City Council approved the agreements to proceed with the solar PV project. On August 25, 2022, the solar PV system, Monarch Solar Array, was installed at City Hall. It was expected to produce approximately 313,721 kilowatt-hours (kWh) of electricity in the first year of production. Staff worked with Optony to review the performance from the first year. Below are the highlights:

- In Year 1 of operation, the solar PV system generated 303,132 kWh. Monarch produced 96.6% of expected kWh, with room for improvement from system configuration changes by the solar developer, Symbiont. Those configuration changes are in process now.
- Roughly 84% of City Hall electricity usage was supplied by the PV system in Year 1 of operation.
- Compared to generation costs from 3CE and/or SCE, the City has saved roughly \$6,000. It was originally expected that Year 1 might lead to increased bills, but SCE rates rose more than expected.
- About 75.7 metric tons of CO<sub>2</sub> emissions have been avoided (equivalent to carbon sequestered by 90 acres of U.S. Forest in one year or removing 17 gas vehicles from the road for one year.)

### ***Transition to 100% Renewable Energy***

With the adoption of Resolution 17-52, the City set itself on an ambitious path to 100% renewable electricity. Backed by recommendations from both the City's Climate Action Plan (2014) and Strategic Energy Plan (2019), the most impactful and quickest way for the City to decarbonize its energy was to join a Community Choice Energy (CCE) program. After years of analysis, public outreach, and collaboration with neighboring jurisdictions on evaluating CCE programs, on August 20, 2019, the Goleta City Council voted to join Central Coast Community Energy (3CE; formerly Monterey Bay Community Power), a CCE provider operating along the Central Coast.

Mirroring the City's Resolution 17-52, 3CE has also committed to advancing its clean energy procurement to 100% renewable electricity by 2030, ensuring that the City would meet its ultimate goal by its intended deadline. 3CE will release its official 2023 Power Content Label this summer, and is on track to meet state and 3CE goals for renewable energy. 3CE's 2022 power content label for 3C Choice, the base program option, was 35.8% renewable (mix of solar, wind, geothermal, etc), 5.9% large hydroelectric, and 58.3% unspecified energy. Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source. In 2022, due to the high percentage of unspecified power in 3CE's Power Content Label, the GHG emissions intensity of 3CE Choice program was higher than the 2022 California utility average. For the premium 100% renewable electricity option, 3CPrime, 50% of the

electricity comes from solar and 50% comes from wind sources. 3CE's ultimate goal is to have 100% renewable energy supplied by 3CE to all customers by 2030.

### **Discussion:**

In advance of 2030, cities in 3CE and other community choice energy programs have the opportunity to "opt up" to 100% renewable energy at any time. 3CE offers this program through "3C Prime." Jurisdictions like Goleta have the option to purchase up to 100% renewable, clean electricity - procured from non-polluting, clean and renewable sources with an approximate 50/50 split using solar and wind. Unlike fossil fuels, such as oil, natural gas, and coal, which cannot be replaced and produce GHG emissions, renewable energy regenerates naturally in a short period of time.

3CE's 3C Prime is procured from non-polluting, clean, and renewable sources such as solar and wind. The exact proportion of each source varies with time, based on demand and availability. Each year, 3CE procures an amount of renewable energy sufficient to meet the sum of the individual choices of all its customers. As a 3CE customer, the City's energy choices (default or 3C Prime) directly impact the overall amount of renewable power 3CE is buying. Selecting 3Cprime at 100% clean power means that 3CE will procure additional, incremental renewable power to meet that demand. 3CE procures 100% clean and renewable energy for 3CPrime customers separately from the energy that is procured for 3C Choice customers, meaning that 3C Prime cities/customers do not make the 3C Choice energy mix dirtier by increasing Prime load.

Of the jurisdictions that make up 3CE's service territory from Carpinteria to Santa Cruz, only the Cities of Watsonville and Monterey have opted up to 100% clean electricity for municipal facilities via 3CPrime. The City of Santa Barbara also procures 100% carbon-free electricity (renewable, large hydroelectric) for all municipal accounts and community customers via its citywide CCE program, Santa Barbara Clean Energy. Electing 100% renewable options is additionally common practice with Clean Power Alliance customers, such as the City of Ojai, County and City of Ventura, City of Oxnard, City of Camarillo, and many more jurisdictions in Los Angeles County and the Inland Empire. Switching to 100% renewable would allow the City of Goleta to join the growing number of jurisdictions significantly reducing their electricity emissions in California and position it as a leader within 3CE territory by switching all municipal accounts to 3CPrime, meeting and surpassing our interim goals detailed in Resolution 17-52.

### ***GHG Reductions***

Selecting 3C Prime energy would enable Goleta to join other regional jurisdictions in meeting the California's SB 100 mandate early, to power 100% of the state's electricity consumption with zero-carbon, clean renewable energy electricity by 2045.

In 2022, City municipal electricity usage for all facilities totaled 1,266,829 kilowatt-hours (kWh), which, when incorporating the percentage of renewables provided by 3CE's 3C Choice program, equates to approximately 242.4 metric tons of CO2 emitted. Moving the City's municipal electricity accounts to 3C Prime and 100% clean, renewable energy would effectively reduce those carbon emissions to zero, reducing the City's total municipal GHG emissions by approximately 20%. This choice would have the added



benefit of counting toward our current and future State-required emissions reductions while also leading by example within 3CE territory and along the Central Coast.

City facilities only account for a portion of the community-wide emissions. According to the City's most recent community GHG emissions inventory report from 2020, about 40.4%% of the community's GHG emissions came from commercial and residential energy when accounting for both electricity and natural gas use, with 34,373 metric tons of CO2 emitted annually from residential energy and 46,790 metric tons of CO2 emitted annually from commercial energy. When looking at the composition of 2020 communitywide energy emissions for Goleta, electricity accounts for 60% of total energy-related emissions in Goleta at 48,871 metric tons of CO2, with natural gas accounting for 40% at 32,292 metric tons of CO2. Should the City elect in the future to switch the community from 3C Choice to 3C Prime, it would reduce the community's overall emissions by approximately 25%, which would further Goleta's emissions reduction goals set by the state.

### ***Fiscal Impact***

Based on an analysis by 3CE, the City of Goleta's municipal electricity accounts consumed 1,266,829 kWh for the calendar year 2022. Based on that annual electricity load and 3CE's 3C Prime premium of .008 cents per kWh, switching to 3C Prime would cause the City of Goleta's electricity costs to increase by approximately \$10,000 per year. As a note, 3CE's calculations were done by calendar year, which includes 6+ months before the Monarch Solar array was in operation. Staff has requested an updated analysis from 3CE using 2023 data, and initial estimates from 3CE indicate the cost premium for the City would be approximately \$7,000 annually. Staff is working with 3CE on a complete analysis, which 3CE will have available in late March.

### **Recommendations & Next Steps:**

Staff requests the Committee's feedback and recommendation on the following:

- Does the Green Committee want staff to bring the discussion of moving to 100% renewable energy for municipal accounts to the full City Council?
- Does the Green Committee recommend moving municipal electricity accounts to 100% renewable energy through 3C Prime?

Should the Committee recommend bringing this item for Council consideration, staff will collaborate with 3CE, the Finance Department and General Services Department to analyze account impacts further and to identify funds to support the transition to 100% renewable energy.

## **ITEM IV: BUILDING ELECTRIFICATION - PERMIT FEE WAIVERS**

The purpose of this item is to propose a potential program to incentivize building electrification via permit fee waivers for heat pumps, water and/or space-heating projects. This fee waiver program would require setting aside a reserve from the General Fund to offset permit fees used as compensation for the City's contracted Building & Safety permit services.

### **Background:**

As climate data has become more definitive, revealing the urgent need for regulatory action, California has adopted comprehensive goals to reduce GHG emissions and support local governments in carrying out community-level emissions reductions strategies. With the passage of Senate Bill 32 in 2016, California set targets to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030 and 80% below 1990 levels by 2050. To reach the required emissions targets set by the state, decarbonizing the building sector is essential. The primary method for the decarbonization of buildings is electrification, as escalating renewable portfolio standards have been and will continue to reduce the emissions content of our electricity.

The California Air Resources Board (CARB) 2022 Scoping Plan provides an implementation pathway to meet the State's carbon reduction goals. Statewide, residential and commercial buildings are responsible for approximately 25% of California's greenhouse gas (GHG) emissions when accounting for fossil fuels, such as natural gas consumed onsite and electricity demand. The Scoping Plan recommends all-electric buildings become standard for residential construction starting in 2026 and non-residential construction starting in 2029 to improve indoor air quality and reduce GHG emissions to meet state goals.

An additional potential regulation from CARB's 2022 Scoping Plan included a zero emissions appliance requirement by 2030. The concept for zero-emission standards for commercial and residential space and water heater appliances would mean that any time a person or business purchases a new space or water heater (whether for new construction or to replace in existing buildings) after 2030, they would only be able to purchase zero-emission units. Existing gas appliances could remain in operation after 2030. Space and water heaters, comprising nearly 90 percent of all building-related fossil gas demand, contribute most to GHG and NOx emissions from fossil gas combustion in buildings. This regulation has not officially been proposed or finalized, but is currently undergoing CARB's internal rulemaking process and is expected to be brought forward to the Board for consideration in 2025 and implementation in 2030.

In 2020, Goleta's energy use (from both electricity and natural gas) accounted for 40.4% of the community's total emissions. Of that total energy use, natural gas use in buildings accounted for 40% of Goleta's energy emissions. While efforts have been made to decarbonize the natural gas system through the development of renewable natural gas, there are insufficient supplies to properly meet state and local demand, ultimately leaving the full decarbonization of the natural gas system infeasible. As stated in the 2021 California Energy Commission (CEC) Integrated Energy Policy Report, "Building

electrification is the most promising decarbonization strategy and could result in significant reductions in residential and commercial building gas demand.”

Taking action locally, the Goleta City Council voted unanimously to pass an all-electric new construction ordinance on April 18, 2023. Due to the Ninth Circuit’s decision to overturn the City of Berkeley’s natural gas ban for new construction in favor of the California Restaurant Association, Goleta’s second reading to pass the ordinance has been placed indefinitely on hold. Although there was a chance that the decision would be heard again and potentially reversed, in January 2024, the Ninth Circuit refused to consider the City of Berkeley’s requested en banc hearing. City staff continues to track developments on this case and is in close communication with technical experts and other jurisdictions in California.

Efforts to make further progress on building electrification for new construction continue across California despite legal challenges associated with the City of Berkeley case. Many jurisdictions with previously developed or adopted all-electric Reach Codes are evaluating alternative options to pursue electrification and decarbonize their new and existing building stock. Notably, the Cities of San Luis Obispo and Santa Cruz have recently adopted electric-preferred policies for new construction in late 2023, which Goleta staff have been tracking closely. Consideration of similar policies will be ongoing as staff begin to outline future work program items and evaluate the best strategies to reduce the City’s emissions.

With the City’s all-electric ordinance for new construction on pause, supporting policies and programs that remove barriers to electrification in existing buildings provides an opportunity to reduce carbon emissions and improve indoor air quality for Goleta residents. According to CARB, buildings emit about 66 tons per day (tpd) of NOx[2] to the ambient air, about four times the emissions from electric utilities and nearly two-thirds the emissions from light-duty vehicles statewide. Electric heat pumps for space and water heating are more efficient than their natural gas counterparts, and have the added safety benefits of lowering the potential for carbon monoxide poisoning and gas explosions.

There are significant tax credits and rebates available to support the transition away from fossil fuels in homes, enhanced by the passage of the federal Inflation Reduction Act and local programs, such as Central Coast Community Energy’s (3CE) Electrify Your Home, Go Green Financing, the Energy Savings Assistance Program, and Tri-County Regional Energy Network’s Incentive Finder. The City can further support electrification projects by eliminating cost barriers and sharing information about the available programs and incentives with the community and operating contractors. Other ways cities have supported building electrification is by adopting permit fee waivers for efficient and fossil-free appliances, such as electric heat pumps. During the City’s Green Committee meeting in late September 2023, Committee members expressed interest and support for City staff pursuing options to support existing building electrification policies via establishing permit fee waivers for electric heat pump conversions.

### **Discussion:**

Phasing out gas and other fossil fuels from buildings will ultimately require changes to the regulations and systems that currently support our buildings and infrastructure, to help

facilitate the transition to decarbonized buildings. These changes could include policy changes that allow reprioritization of resources, changes to permit requirements, or regulations on appliances and fuel use, while assuring tenant protections.

Establishing waiver programs for permit fees associated with climate-friendly projects has been a strategy used by jurisdictions in the past two decades to incentivize and reduce barriers to sustainability-related projects. In 2014, Mono County was an early adopter of this strategy, waiving permit fees for residential and commercial solar, and ground-source space and water conditioning systems for projects with a valuation under \$75,000. This policy was adopted to support Mono County's residential and commercial property owners interested in investing in cost saving energy efficient and renewable energy generation. Another example comes from the City of Encinitas, which waived permit fees for electric-vehicle charging stations and solar panel projects as part of a pilot program in 2012, which has continued to date due to programmatic success and community support.

Adopting a permit fee waiver policy for building electrification-related projects more specifically can support electrification of existing buildings and appliances at the time of replacement and renovation. Focusing on replacing fossil fuel equipment at the end of its useful life, either when the gas equipment fails or when a major building renovation is taking place, is one of the most cost-effective times to install electric heating/cooling systems and appliances. With increasing tax and rebate incentives for heat pump conversions and building electrification-related projects, the City could provide an additional benefit of waiving fees on such projects.

Jurisdictions that waive permit fees for electrification projects include Menlo Park, which applies a \$250 to \$500 credit depending on the scope of a project and amount of heating equipment being converted to electric. Applications are reviewed automatically for eligibility using the City's online permitting system questionnaire and review of the project scope. Menlo Park has set aside \$150,000 for the expansion of its fee waiver pilot program, which had initially just covered solar project fees. The pilot funds have been expanded to cover permit fees for heat pumps, EV chargers, solar PV, induction cooktop conversions, and electric dryers. Since the expansion of the program, staff have noted an uptick in electrification and heat pump-related projects as the fee waivers, national rebates and local programs have reduced financial barriers to residents and contractors. Menlo Park also compiles and keeps a list of available electrification rebates and funding resources on their website for ease of community reference.

At this time, the City does not currently implement tracking for heat pump projects within its permit tracking system. If a fee waiver program were to be established, staff would develop adjustments to permit questions to better identify heat pump related projects that would qualify for the program. Initial discussions with Goleta's Building & Safety staff and research into the City's permit management system revealed that about 10-20 permits are processed per year for water heating and space heating/cooling-related projects that could potentially qualify for a heat pump fee waiver, were those units to be replaced with an electric heat pump. The City currently contracts with Willdan Group, an engineering services company, for its Building & Safety permitting review services. As Willdan is paid in part via a percentage of the permit fees collected for the permits it issues, the City would need to set up a reserve fund to cover the portion of permit fees for heat pump

conversions to which Willdan would otherwise be entitled, should the City Council approve a permit fee waiver program.

Staff analyzed permit fees for potentially applicable projects to estimate the cost for permits. Projects installing electric heat pumps for water heating would potentially need to apply for both plumbing and electrical permits depending on the pre-existing infrastructure. Heat pumps for space heating would require an electrical and mechanical permit. With residential applications, the City charges a minimum fee of \$77.52 and an issuance fee of \$31.40 for a total of \$108.92. If there's electrical work to be done with the new heat pump, then it would be an additional \$108.92 for a total of \$217.84. As many residential projects are anticipated to be conversions from natural gas to electric heat pumps with the influx of federal funding and rebates, we can expect that the typical permit cost for a small residential project would be around \$220.

When researching permit fee waivers and consulting this potential program with local stakeholders, some stakeholders raised concerns that contractors may be undertaking many projects that could qualify for these fee waivers and rebates without permits due to cost and time considerations. Eliminating permit fees could incentivize local contractors to obtain permits for their work and additionally allow contractors to cash in on available rebates from the state and electric utilities (including SCE and 3CE) for building electrification.

With an average of 20 permits per year historically reported by Building and Safety, multiplied by the average cost for those permits at \$220, multiplied by Willdan's 80% share of permit fees, Staff's best estimate for the cost of covering existing qualifying permit fees would be approximately \$3,520 per year. Given that Menlo Park noted an increase in permit applications after implementing a permit fee waiver program, Staff recommends doubling that number and rounding up to set up a pilot reserve fund of \$10,000 to cover permit fees for electrification projects for the first year of the program.

### **Recommendations & Next Steps:**

With implementation of the City's building electrification ordinance for new construction on hold indefinitely, supporting existing building electrification through permit fee waivers provides an opportunity for the City to support the state-endorsed transition from natural gas to electricity to reduce GHG emissions.

Staff is seeking a recommendation from the Energy & Green Issues Standing Committee to bring permit fee waivers for heat pumps and other electric, emission-free appliances to City Council for consideration, including setting up a fund to cover permit fees for heat pump space and water heating projects. If so recommended by the Committee, Sustainability staff will collaborate with Building, Planning, and Finance staff to identify how best to design a permit fee waiver program and process, given that permitting fees collected currently support the City's work and contract with Willdan for Building & Safety permitting services.

In addition, should the Committee have interest in potentially expanding permit fee waivers to other electrification and sustainability-related projects, such as residential solar, battery storage, electric vehicle charging, and/or induction cooktop installation, staff

can return with further information on potential costs and opportunities at a future Committee meeting.

**ATTACHMENTS:**

- **Attachment 1: Monarch 1 Solar Performance Report – Prepared by Optony**



**TO:** Matthew Fore, City of Goleta  
**FROM:** Jonathan Whelan and Amanda Craparotta, Optony Inc.  
**DATE:** November 17, 2023  
**RE:** City of Goleta City Hall Solar PV System Year 1 Summary

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## CITY OF GOLETA CITY HALL SOLAR PV SYSTEM YEAR 1 SUMMARY

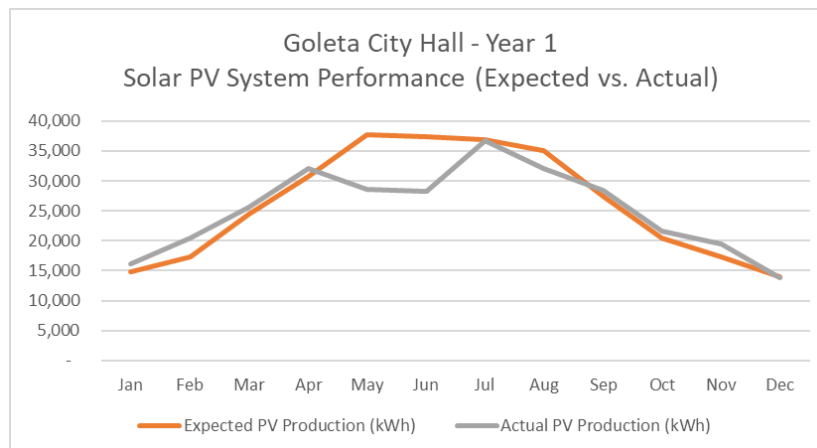
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### Solar PV System Background and Expectations

On August 25, 2022, a 180 kW-AC / 208.3 kW-DC solar photovoltaic (PV) system was installed at Goleta City Hall, located at 130 Cremona Drive in Goleta, CA, under a Power Purchase Agreement between the City of Goleta and solar developer/financier Symbiont. This solar system is constructed on steel shade structures in the City Hall parking lot and is expected to produce approximately 313,721 kilowatt-hours (kWh) of electricity in the first Year of production, with an expected 0.5% degradation rate for subsequent years, and was sized to offset approximately 99% of the historic (pre-2019) energy consumption at City Hall. This calculation of historic consumption was performed shortly after the City had procured the upstairs suite of offices at City Hall, so electrical usage from the full current space was not available or included in the offset calculations.

### Solar PV System Operation and Production

According to the solar monitoring software platform (AlsoEnergy PowerTrack), the solar system produced 303,132 kWh in the first-year of operation, which means the system produced energy at 96.6% of expectations. A review of system performance by Optony indicates that there may be alternatives to improve solar performance in coming years, leading to optimism that the solar system may actually produce over 100% of its expected energy in upcoming years. Symbiont (through its service provider) has committed to investigating the opportunity to make system configuration changes to enable the improved performance, at no cost to the City.



With the increased City operational usage of the second floor of City Hall, the energy usage of the site has also increased, and the solar was not able to offset close to 100% of energy usage. The measured Year 1 solar production of 303,132 kWh was able to offset approximately 84% of the 359,741 kWh that was used at City Hall. Again, with proposed improvements to the solar system configuration, the offset percentage may be able to be increased.

In Year 1 of the PPA, the City paid Symbiont approximately \$45,000 for the purchase of the 303,132 kWh generated by the solar system. Under a Net Energy Metering Aggregation (NEMA) interconnection with the electric utility, the approximate value of the solar production was roughly \$51,000, leading to modest, but real, bill savings.

### **Avoided Carbon Emissions**

By utilizing the eGRID California subregion CO<sub>2</sub> output emission rate of 531.7 lb/MWh<sup>1</sup>, Optony has calculated that the City has avoided emitting approximately 166,805 lbs., or 75.7 metric tons, of CO<sub>2</sub> by negating the delivery of 303,132 kWh from the grid by supplying that consumption with on-site renewable energy. According to the US Environmental Protection Agency (EPA) emissions calculator<sup>2</sup>, this CO<sub>2</sub> offset is equivalent to removing 17 gas vehicles from the road, or equivalent to recycling 26 tons of waste rather than landfilling, or equivalent to the carbon sequestration of 90 acres of American forests for one year.

Optony has been proud to support the City of Goleta in taking real, impactful, actions to reduce air pollution and mitigate the impacts of emissions-caused climate change.

Any questions can be directed to Jonathan Whelan (Jonathan.Whelan@OptonyUSA.com) and Amanda Craparotta (Amanda.Craparotta@OptonyUSA.com).

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<sup>1</sup> [https://www.epa.gov/system/files/documents/2023-01/eGRID2021\\_summary\\_tables.pdf](https://www.epa.gov/system/files/documents/2023-01/eGRID2021_summary_tables.pdf)

<sup>2</sup> <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>