



# Council Agenda Report

Item 6b

**Department:** Administration  
**Cost Center:** 4006  
**For Agenda of:** 7/5/2022  
**Placement:** Public Hearing  
**Estimated Time:** 75 Minutes

**FROM:** Greg Hermann, Deputy City Manager  
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**Prepared By:** Chris Read, Sustainability Manager; Lucia Pohlman, Sustainability and Natural Resources Analyst

**SUBJECT:** CLEAN ENERGY FOR NEW BUILDINGS – 2022 PROGRAM UPDATE

## RECOMMENDATION

1. Introduce an Ordinance entitled, “An Ordinance of the City Council of the City of San Luis Obispo, California, amending Title 8 (Health and Safety) of the San Luis Obispo Municipal Code by adding Chapter 8.10 requiring all-electric new buildings”; and
2. Introduce an Ordinance entitled, “An Ordinance of the City Council of the City of San Luis Obispo, California, amending Title 17 (Zoning Regulations) of the Municipal Code supporting the Clean Energy for New Buildings Program (PL-CODE-0286-2022)” to provide regulatory flexibility through December 31, 2025 in support of the Clean Energy for New Buildings Incentive Program; and
3. Direct Staff to return to Council by December 31, 2025 to report on the effectiveness and appropriateness of the proposed exemptions and incentives and, if necessary, propose amendments.

## POLICY CONTEXT

1. Resolution [11159 \(2020 Series\)](#) adopts the Climate Action Plan for Community Recovery, includes the goal of carbon neutrality by 2035, and includes a building sector goal of zero operational greenhouse gas (GHG) emissions from new buildings.
2. Resolution [11133 \(2020 Series\)](#) states that, “it is the Policy of the City that new buildings should be all-electric.”

## REPORT-IN-BRIEF

This item is on the agenda because the City Council approved a Major City Goal work program that included analyzing the existing Clean Energy Choice Program for New Buildings, evaluating its effectiveness, and determining if any changes were warranted to meet the City’s climate goals. The purpose of this items is for the Council to consider two ordinances that would implement Council strategic direction provided on February 1, 2022.

On August 19, 2020, City Council approved the City's Climate Action Plan for Community Recovery, and adopted Resolution 11159 (2020 Series), which includes the goal of carbon neutrality by 2035 and a building sector goal of zero operational greenhouse gas (GHG) emissions from *new* buildings by 2020. In support of achieving these goals, Council also adopted the Clean Energy Choice Program for New Buildings (Program) in 2020, which encourages all-electric new buildings through City policy, local amendments to the California Energy Code, and incentives.

The current Program is tied to the 2019 California Energy Code, which is set to expire at the end of 2022. Staff has been working on the update to the Program since Fall 2021 and based on current performance, statewide trends favoring all-electric new buildings, public health and safety risks from natural gas infrastructure, strategic City Council direction, and ongoing community engagement, staff is proposing an all-electric requirement for new buildings codified in Title 8 (Health and Safety) of the Municipal Code. The Program, now referred to as the Clean Energy Program for New Buildings, includes reasonable exemptions and is supported with an incentive program that provides technical assistance, trainings, and regulatory flexibility. Staff's recommendation also includes direction to return to Council prior to December 31, 2025 to report on the effectiveness and appropriateness of the proposed exemptions and incentives.

The updated Program was developed with input from local developers, builders, designers, peer cities, utility partners, and community members. Should Council move forward with staff's recommendation, the second reading of the Ordinances would occur on July 19, 2022 and the Program in its entirety would go into effect on January 1, 2023.

## DISCUSSION

The discussion section of this report provides historical background for the Clean Energy Choice Program for New Buildings, including an overview of program performance during the past year, an update on statewide building climate policy, and an overview of staff's recommendations for the Clean Energy for New Buildings 2022 Program update. The discussion section concludes with information about public health and safety risk from natural gas infrastructure, community resilience considerations, and cost effectiveness information.

### Background

#### *Climate Action Plan for Community Recovery*

On August 19, 2020, City Council approved the [City's Climate Action Plan for Community Recovery](#), and adopted [Resolution 11159 \(2020 Series\)](#), which includes the goal of carbon neutrality by 2035 and a building sector goal of zero operational greenhouse gas (GHG) emissions from new buildings by 2020. This new-buildings sector goal is achieved through all-electric new buildings, which provide a least-cost approach to avoiding the addition of new emissions sources while the community works to achieve its climate goals.<sup>1</sup>

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<sup>1</sup> See previous discussion explaining why all-electric new buildings with high efficiency appliances plugged into the California electrical grid are the most cost effective solution for new buildings in the

*The City's Current Approach to All-Electric New Buildings*

The City has discussed all-electric buildings as far back as the public process for the Avila Ranch and San Luis Ranch Development Agreements in 2017 and 2018. Since then, the topic has been presented to the City Council and community on numerous occasions. As a primary implementing action, City Council unanimously approved the Clean Energy Choice Program for New Buildings on June 16, 2020. The Program, which went into effect September 1, 2020, includes:<sup>2</sup>

1. Resolution [11133 \(2020 Series\)](#) stating that, "it is the Policy of the City that new buildings should be all-electric."
2. Ordinance [1684 \(2020 Series\)](#) which requires that mixed-fuel buildings be substantially higher performing than all-electric buildings and requires solar installations on nonresidential buildings.
3. Incentives including funding for [technical assistance](#) for builders to help them successfully process permits for all-electric buildings, as well as advocacy with external partners for additional [financial incentives](#).
4. Ordinance [1685 \(2020 Series\)](#) allowing limited term regulatory flexibility.

*Information Learned Since Clean Energy Choice for New Buildings Program Adoption*

In support of the Program update, staff presented a Council Study Session on February 1, 2022 with information about local program participation and statewide building electrification trends.<sup>3</sup> Summary findings, with minor updates, include:

1. **Local Program Participation:** Based on an analysis of program results between September 1, 2020, and September 1, 2021, when provided a choice, developers are selecting a mixed-fuel option about half of the time. This rate is not sufficient to accomplish City adopted goals for greenhouse gas emissions reductions.
2. **Local Incentive Success:** Program incentives were well utilized and have facilitated successful permit review processes. City staff successfully supported the creation of a program at Central Coast Community Energy (3CE) to provide direct incentives to developers of multi-family and affordable housing units to choose all-electric buildings. Of the \$1.2 million set aside for the 3CE program in Fiscal Year 2020-21, \$844,000 in incentives supporting 502 units across eight projects were awarded and reserved. This program continues and is now exclusively focused on affordable housing. The City also established the Energy Reach Code Virtual Help Desk launched on September 1, 2020, in parallel with the Clean Energy Choice Program effective date. Since the launch of the help desk, nearly 100 visitors used the help desk as a compliance resource.

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September 3, 2019 Council Agenda Report, available at:

<http://opengov.slocity.org/WebLink/DocView.aspx?id=96415&dbid=0&repo=CityClerk>

<sup>2</sup> Note that although the Climate Action Plan was adopted *after* the Clean Energy Choice Program for New Buildings (adopted June 16, 2020), the two items had been seen as integral to each other's success since as early as Fall of 2018.

<sup>3</sup> The February 1, 2020 Council Agenda Report is available at:

<http://opengov.slocity.org/WebLink/DocView.aspx?id=154251&dbid=0&repo=CityClerk>.

3. **Statewide Trends - Local Action:** To-date, 55 California local governments have adopted building electrification ordinances to either encourage or require all-electric new buildings. Approximately 46 of those approaches outright prohibit natural gas in new buildings in one or more building sectors. With the recent addition of the City of Los Angeles, 10 million Californians, or approximately a quarter of the State's population now live in a jurisdiction with all-electric new buildings policy.<sup>4</sup> Comparable cities with all-electric requirements include Santa Barbara, Santa Cruz, Petaluma, and Davis.
4. **Statewide Trends - 2022 California Energy Code:** In December of 2021, the California Energy Commission unanimously adopted the 2022 California Energy Code.<sup>5</sup> The 2022 Code reflects a desire by the California Energy Commission to improve indoor air quality in buildings, reduce emissions, and move towards all-electric new buildings. According to the California Energy Commission, the 2022 Energy Code focuses on electrification of new buildings including, encouraging electric heat pump technology for space and water heating, establishing electric-ready requirements for single-family housing, expanding solar photovoltaic (PV) system and battery storage standards, and strengthening ventilation standards to improve indoor air quality.
5. **Statewide Trends - California Air Resources Board 2022 Scoping Plan:** In May of 2022, the California Air Resource Board released the draft 2022 Scoping Plan, which lays out direction to California agencies to achieve statewide greenhouse gas emissions reduction goals.<sup>6</sup> Notably, the draft plan includes a goal of 80% of statewide residential appliance sales being electric by 2030 and 100% appliance sales being electric by 2035. The draft 2022 Scoping Plan reflects extensive outreach conducted across the state and plan is required to be approved by the end of 2022.
6. **Public Health and Safety:** In addition to the public health and safety findings identified in the 2020 adopting ordinances, an emerging body of literature has documented public health and safety risks associated with natural gas infrastructure and climate change impacts, seismic events, and indoor air quality. The combustion of natural gas inside buildings and its effect on indoor air quality is the most notable new finding.<sup>7</sup> Natural gas combustion and gas appliances emit a wide range of air pollutants, such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>, including nitrogen dioxide (NO<sub>2</sub>)), particulate matter (PM), and formaldehyde, which have been linked to various acute and chronic health effects and exceed national and California-based ambient air quality standards. More detail about the City's findings related to public health and safety are provided below.

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<sup>4</sup> The Sierra Club maintains a list of adopted policies at:

<https://www.sierraclub.org/articles/2021/07/californias-cities-lead-way-gas-free-future>.

<sup>5</sup> The 2022 California Energy Code is available at: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>.

<sup>6</sup> The Draft 2022 Scoping Plan is available at: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>.

<sup>7</sup> This finding was presented in the February 1, 2022 Study Session.

## **2022 Program Update**

The local amendments to the California Energy Code made via Ordinance No.1684 apply to the 2019 version of the triennial statewide code and will be enforceable and valid through December 31, 2022. As described below, the proposed update is not tied to the California Energy Code; however, to support continuity, the proposed update would begin on January 1, 2023.

On February 1, 2022, in support of this update, staff provided a study session to Council and received strategic direction to develop an all-electric new buildings program via an amendment to the City's municipal code. Council also provided strategic direction to update the incentive program, conduct community outreach, and review issues related to energy resiliency.

In response to this direction, staff has developed two ordinances that will amend the Municipal Code. One ordinance will amend the Municipal Code with health and safety findings to require that planning or building permit applications for new buildings be all-electric starting January 1, 2023 (Attachment A). The other ordinance will amend the Zoning Regulations (Municipal Code Section 17.70.095) to support the Program by extending temporary incentives in the application of site development standards, in support of all-electric buildings (Attachment B). Attachment B also includes a "clean-up" edit to Chapter 17.158 (General Definitions) that updates the "All-Electric Building" definition.

## **2022 Program Component #1: Ordinance Requiring All-Electric New Buildings**

### *All-Electric New Building Requirement*

The draft ordinance requiring all-electric new buildings includes a requirement that building permit applications for new buildings and associated on-site equipment be all-electric beginning on January 1, 2023. The draft ordinance includes findings related to the health and safety benefits of requiring all-electric new buildings and, as such, staff proposes to place the requirements in Title 8 (Health and Safety) of the Municipal Code.

### Exemptions

The draft ordinance provides exemptions for natural gas infrastructure for certain end uses when no viable all-electric alternative is commercially available or viable. Proposed end uses eligible for ongoing technical exemptions are:

1. Back-up power for Critical Infrastructure necessary to protect public health and safety in the event of an electric grid outage (ongoing).
2. Process Loads in a Newly Constructed Manufacturing and Industrial Facility (ongoing).
3. Commercial Kitchen Equipment in a Newly Constructed Eating and Drinking Establishment (through December 31, 2025).
4. Water heating and space heating in an attached Accessory Dwelling Unit where equipment in the existing building is serving the attached Accessory Dwelling Unit. (through December 31, 2025).
5. A swimming pool that is provided as a public amenity (through December 31, 2025).

The proposed ordinance would require that project applicants provide a description of how the purpose and intent of the Program is addressed to the maximum extent feasible. The information must be to the satisfaction of the Community Development Director and their decision would then become a condition of approval and be noted on the plans approved in association with the building permit issued for the project.

The draft ordinance also includes a public interest exemption that would allow limited natural gas infrastructure in certain newly constructed buildings if the Community Development Director makes findings related to site feasibility, the project's alignment with the City's adopted sustainability and environmental policies, and the project's commitment to public health and safety.

### Other Considerations

The draft ordinance differs from the previous "reach code" approach in that it uses the City's authority under the California Constitution to enact regulations that benefit community health and safety. Key differences between this approach and the previous approach include:

1. The proposed approach is not tied to the energy code and explicitly shall not be construed as amending California Energy Code requirements under California Code of Regulations, Title 24, Part 6, nor as requiring the use or installation of any specific appliance or system as a condition of approval. As a result, the update does not require California Energy Commission approval, nor does it require that the City make findings related to cost effectiveness.
2. The proposed approach does not impinge on the California Public Utility Commission's (CPUC's) jurisdiction, whose gas regulatory authority ends at the building's gas meter or point of delivery from within any given property.<sup>8</sup>
3. The proposed approach also does not impinge on the City's Franchise Agreement with SoCal Gas, which provides access to City right of way for natural gas infrastructure but does not make commitments related to extending that infrastructure onto private property<sup>9</sup>.

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<sup>8</sup> Although the legislature empowered the Commission to "require each gas corporation to provide bundled basic gas service to all core customers in its service territory," it did not require customers to install fuel gas piping in or in connection with a building, structure or within the property lines of premises behind the gas meter. See California Code, Public Utilities Code - PUC § 963, [https://leginfo.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PUC&division=1.&title=&part=1.&chapter=4.5.&article=2](https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=PUC&division=1.&title=&part=1.&chapter=4.5.&article=2)

<sup>9</sup> The City's Franchise Agreement with SoCal Gas is codified in Ordinance 770 (1978 Series) and is available at: <http://opengov.slocity.org/WebLink/DocView.aspx?id=51783&dbid=0&repo=CityClerk&searchid=6f10957c-313a-4ff0-aeab-0c183d65be73>.

## **2022 Program Component #2: Incentive Program Including Ordinance Extending Regulatory Flexibility**

A major theme emerging from ongoing outreach with the building and development community is the importance of incentives and technical support. The section below provides summary requests from these conversations and staff's proposals for addressing the requests:

### *Extended Regulatory Flexibility*

Staff learned that in some higher density infill projects designed prior to awareness of all-electric requirements, space for electric appliances and related infrastructure can be a limiting factor. In certain instances, the additional electrical or mechanical equipment necessary for all-electric development could be challenging to locate given other site development standards including height and setback limitations and parking requirements. In response to this information, staff has developed an ordinance to amend Municipal Code Section 17.70.095 to extend the provision of temporary incentives in the application of site development standards for new all-electric buildings. The proposed amendments in this ordinance include the addition of parking requirements to the list of site development standards eligible for flexibility and the extension of the incentive term from December 31, 2022, to December 31, 2025. The Planning Commission reviewed this proposal at its June 22, 2022, meeting and recommended that the City Council adopt the ordinance (Attachment B).<sup>10</sup>

### *Technical Training*

Staff learned that there is an interest from the building community to receive trainings related to all-electric new buildings and new requirements found in the 2022 California Energy Code. 3C-REN has allocated staff and budget for education and City staff has connected with 3C-REN to request local trainings about these topics. City staff are currently working with 3C-REN staff to identify the most relevant trainings and to schedule those trainings.<sup>11</sup>

### *Community Forum*

Staff learned that there is interest in the building community to convene builders for the purpose of discussing best practices for common all-electric building design challenges. In response, the City is collaborating with 3C-REN to convene a best practices forum for builders and developers. This forum would cover topics related to equipment, design, and operations and would meet at a frequency identified by participants.

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<sup>10</sup> The Planning Commission Resolution (PC-1063-2022) in support of the ordinance is available at <http://opengov.slocity.org/WebLink/DocView.aspx?id=161457&dbid=0&repo=CityClerk>

<sup>11</sup> 3C-REN's training calendar is available at <https://www.3c-ren.org/calendar-of-events-and-trainings/>.

Continued Technical Assistance Help Desk

As mentioned above, the current on-call help desk has provided technical assistance to nearly 100 community members. In response to the request for ongoing technical assistance, staff has extended its contract with id360, the current provider of on-call help desk. The City will provide access to the service at no charge to applicants through the duration of the contract, which extends through June of 2023. Should the community identify additional technical assistance as critical, it could be requested and approved through the 2023-25 Financial Plan process.<sup>12</sup>

**2022 Program Component #3: Definition Amendment**

The final component of the proposed Program is an amendment to the current definition of “All-Electric-Building” as currently codified in Municipal Code Section 17.158.006. The current definition “All-Electric Building” includes a sentence exempting commercial kitchens from all-electric requirements. While the 2022 Program retains these exemptions, staff recommends striking this from the definition since the definition does not refer to the other exemptions. As identified in Attachment B, staff recommends removing this sentence from the definition in Title 17 to provide clarity by allowing all the exemptions to live together in the new relevant code section (Chapter 8.10). The Planning Commission reviewed this proposal at its June 22, 2022 meeting and recommended that the City Council adopt the ordinance.

**Public Health and Safety**

This section describes the three primary public health and safety impacts of natural gas infrastructure (increasing climate impacts, seismic activity, and indoor air quality), all of which would be avoided or mitigated by the proposed Program.

Increasing Climate Impacts

According to the 2022 Intergovernmental Panel on Climate Change Summary for Policymakers Report,<sup>13</sup> human-induced climate change has caused concurrent and repeated climate hazards.<sup>14</sup> The City of San Luis Obispo is vulnerable to climate change impacts, including increases in extreme weather, storms, precipitation, and floods, as well as drought, extreme heat, and wildfires. These impacts have secondary effects include loss of critical ecosystem services, species extinction, infrastructure damage, economic disruptions, agricultural losses, and declines in physical and mental health. These impacts disproportionately affect vulnerable residents of San Luis Obispo including low-income, elderly, disabled, and minority community members.<sup>15</sup>

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<sup>12</sup> The Green Carpet Help Desk is available at <https://www.greencarpetservice.com/slo/>.

<sup>13</sup> The summary report is available at [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf)

<sup>14</sup> Ibid.

<sup>15</sup> The City is currently assessing community vulnerability to the impacts of climate change in support of a pending update to the Safety Element of the General Plan. The draft hazards and vulnerability report is available at [www.slocity.org/resilientslo](http://www.slocity.org/resilientslo).



Drastic reductions in greenhouse gas emissions from all sectors, including buildings, are necessary to prevent increasingly hazardous climate disasters. A rapid reduction in natural gas is particularly important as it is primarily composed of methane. Methane (CH<sub>4</sub>) is a powerful greenhouse gas that warms the atmosphere 86 times as much as carbon dioxide over a twenty-year period. According to an article published in the journal *Science* in 2018, methane emissions from the U.S. oil and natural gas supply chain were 60% greater than the U.S. Environmental Protection Agency estimate.<sup>16</sup> Recent studies from Stanford also identified that leaks in natural gas water heaters and stoves are substantially higher than previously known.<sup>17</sup> Importantly, recent studies also indicate that a rapid reduction in methane emissions can slow the rate of climate change.<sup>18,19,20</sup>

### Seismic Activity

According to the adopted County of San Luis Obispo 2019 Multi-Jurisdictional Hazard Mitigation Plan, earthquake damage in San Luis Obispo could be critically severe; seismic hazards are identified as one of the top natural disaster concerns in the region.<sup>21</sup> The plan includes information about active faults near and in the City of San Luis Obispo and notes that the Los Osos fault, West Huasna fault, Oceanic fault, and Edna fault are all considered to be potentially active and present fault rupture hazard to developments in their vicinity. Additionally, the majority of the City is identified as having moderate potential for liquefaction.

Buried gas pipelines are vulnerable to earthquakes and can leak or break due to strong shaking, ground transformation, or liquefaction.<sup>22,23</sup> When natural-gas mains and lines break, they leak natural gas and can cause fires if ignited. In a city located along fault lines such as San Luis Obispo, there is a risk of an earthquake causing multiple simultaneous fires while emergency response capacity is limited by earthquake-damaged infrastructure.<sup>24,25</sup>

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<sup>16</sup> See: <https://www.science.org/doi/10.1126/science.abj4351>.

<sup>17</sup> See: <https://pubs.acs.org/doi/10.1021/acs.est.9b07189> and <https://pubs.acs.org/doi/10.1021/acs.est.1c04707>.

<sup>18</sup> See: <https://iopscience.iop.org/article/10.1088/1748-9326/abf9c8>.

<sup>19</sup> See: <https://www.nature.com/articles/d41586-021-02287-y>.

<sup>20</sup> See: <https://www.weforum.org/agenda/2021/08/tackling-methane-levels-is-the-quickest-way-to-slow-climate-change-say-scientists/>.

<sup>21</sup> The 2019 Multi-Jurisdiction Hazard Mitigation Plan is available at <https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Plans-and-Elements/Elements/Local-Hazard-Mitigation-Plan/San-Luis-Obispo-County-Multi-Jurisdictional-Hazard.pdf>.

<sup>22</sup> See: <https://ascelibrary.org/doi/full/10.1061/AJRU6.0001202>.

<sup>23</sup> See: <https://www.sciencedirect.com/science/article/abs/pii/S0013795204001073?via%3Dihub>.

<sup>24</sup> The City has a history of public health and safety regulation as it relates to seismic issues. For example, a 2004 program required that approximately 100 reinforced masonry buildings be retrofit structurally retrofit to be able to withstand shaking from seismic events.

<sup>25</sup> The 2018 State Hazard Mitigation Plan also confirms that natural gas leaks after seismic events are a major source of post-disaster fires. See Table 9.R:

[https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP\\_FINAL\\_ENTIRE%20PLAN.pdf](https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP_FINAL_ENTIRE%20PLAN.pdf)

### Indoor Air Quality

Natural gas combustion in buildings has been linked to an increase in respiratory diseases, including increased instances of wheezing and asthma, particularly in children.<sup>26,27</sup> A 2013 Lawrence Berkeley National Laboratory study found that “60 percent of homes in the state that cook at least once a week with a gas stove” produce toxic levels of nitrogen dioxide, formaldehyde, and carbon monoxide exceeding federal standards for ambient air quality. Although electric stoves generate some toxins from cooking, researchers found that gas stoves are more detrimental to indoor air quality because they produce fossil fuel combustion byproducts that are not produced by electric stoves.<sup>28</sup> These findings were reviewed, tested, and expanded upon in a 2020 report from the UCLA Fielding School of Public Health titled, “Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California.”<sup>29</sup> Additionally, in June of 2022, the American Medical Association’s (AMA) policy board adopted Resolution 439, which recognizes the association between the use of gas stoves, indoor nitrogen dioxide levels, and asthma.<sup>30</sup>

### **Community Resilience**

With increasingly severe climate hazards becoming the new normal, energy system resilience and reliability is a critical issue. A common misconception is that natural gas appliances are more resilient than electrical appliances during electrical grid outages. However, nearly all contemporary natural gas appliances require electricity to ignite and operate safely. Even cooktops, which can be lit with a match, require electricity for the hood to properly vent indoor air pollution outside. Regardless of the policy decision made by Council regarding the Clean Energy Program for New Buildings, most systems in new buildings, including transportation, will increasingly be electric and require a resilient electric system. Fortunately, organizations are working at the building, neighborhood, and grid scale to ensure a resilient electric grid. These activities are described in detail below:

### Building Level Resilience

The following efforts are related to building level resilience:

1. The 2022 California Energy Code includes energy resilience requirements including solar energy systems on all buildings, “Battery Storage Ready” requirements for single-family homes, and onsite storage requirements for most other buildings.

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<sup>26</sup> Andee Krasner, MPH & T. Stephen Jones, MD, MPH. *Cooking with Gas Can Harm Children: Cooking with Gas is Associated with Increased Risk of Childhood Respiratory Illnesses, Including Asthma.*

<sup>27</sup> See: <https://pubmed.ncbi.nlm.nih.gov/23962958/>

<sup>28</sup> See: <https://newscenter.lbl.gov/2013/07/23/kitchens-can-produce-hazardous-levels-of-indoor-pollutants/>

<sup>29</sup> See: <https://ucla.app.box.com/s/xyzt8jc1ixnetiv0269qe704wu0ihif7>

<sup>30</sup> Resolution 439 and the action to adopt it is described in the AMA House of Delegates Committee Report: <https://www.ama-assn.org/system/files/a22-refcmte-d-report-annotated.pdf>.

2. Emerging innovations such as vehicle to building technologies, wherein electric vehicle batteries serve a secondary purpose as building energy source. This solution enables electric vehicles to operate as an energy load management resource during normal grid operations, as well as provide energy resilience benefits during outages.<sup>31</sup>
3. The enhanced energy efficiency of new buildings and the storage capacity of tank storage water heaters means that heat pump space conditioning and water heating systems act like thermal batteries during power outages. In practice, buildings developed with all-electric heat pump technology can provide hot water and conditioned air for hours after an outage.
4. The City is “leading by example” with a 770 kW battery for backup generation at the Water Treatment Plant and a Microgrid Pilot study underway at Fire Station #1.

### Neighborhood Level Resilience

The PG&E Community Microgrid Enablement Program is a pilot program facilitated by the California Public Utilities Commission that allows community members, businesses, or public agencies to create a community microgrid so long as they pay for the infrastructure upgrades through a special tariff. Community microgrids typically pair renewable energy generation with localized battery storage that can provide the electricity needs for a subset of users during power outages. Central Coast Community Energy (3CE) is also pursuing an innovative “front of meter” storage project wherein regional agencies are siting large battery storage systems on their property for the benefit of the local distribution grid.

### Grid Level Resilience

Staff reached out to PG&E to learn more about local grid resilience issues. In response to these inquiries, PG&E replied that they are constantly engaging in asset and service planning analysis to understand performance and grid enhancement needs. Their planning engineers are aware of the impacts to the grid posed by the growth of both building and transportation electrification. They re-evaluate this load forecast each year, incorporating into their models local policy changes, technology advancements, market data, new load applications, EV charging stations, and a variety of other expectations. These load forecasts inform rate setting, resource adequacy, integration, and procurement.

PG&E is also addressing Public Safety Power Shutoff issues through risk mapping, grid hardening, and vegetation management. Regarding risk mapping, Figure 1, below, shows PG&E’s risk map. Note that San Luis Obispo is not mapped here as a potential PSPS area. Figure 2 provides PG&E’s “Sectionalizing Devices” map, which identifies where improvements to the local distribution grid have been made to allow for a smaller impact if the grid does go down for a planned or unplanned reason. Figure 3 provides a map of planned and completed vegetation management projects, which reduce potential wildfire fuels around power lines.

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<sup>31</sup> More information about the California Public Utility Commission’s CPUC supports for transportation electrification via the PG&E Vehicle-Grid Integration Pilot Program is available at <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-supports-transportation-electrification-with-approval-of-pge-vgi-pilots>.

Figure 1. Potential PSPS Area (Source: PG&E)

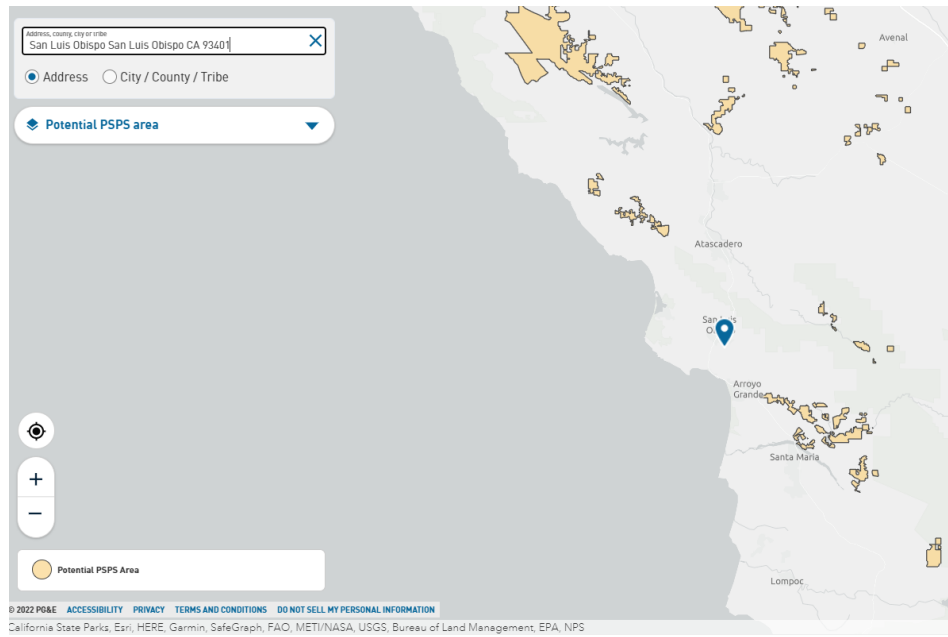
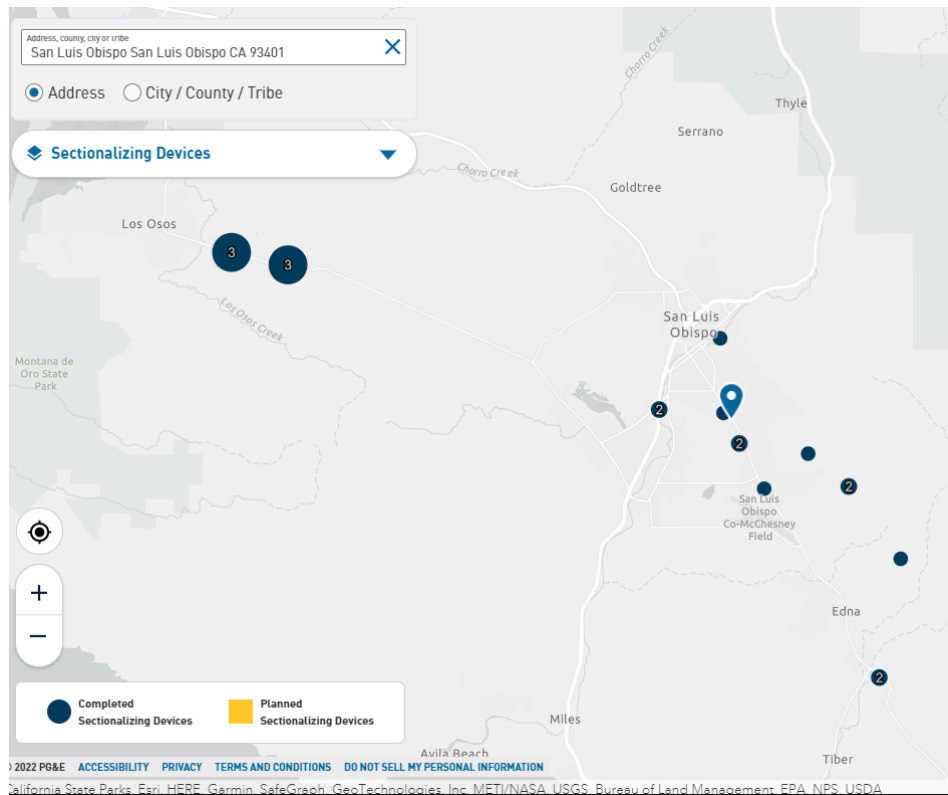
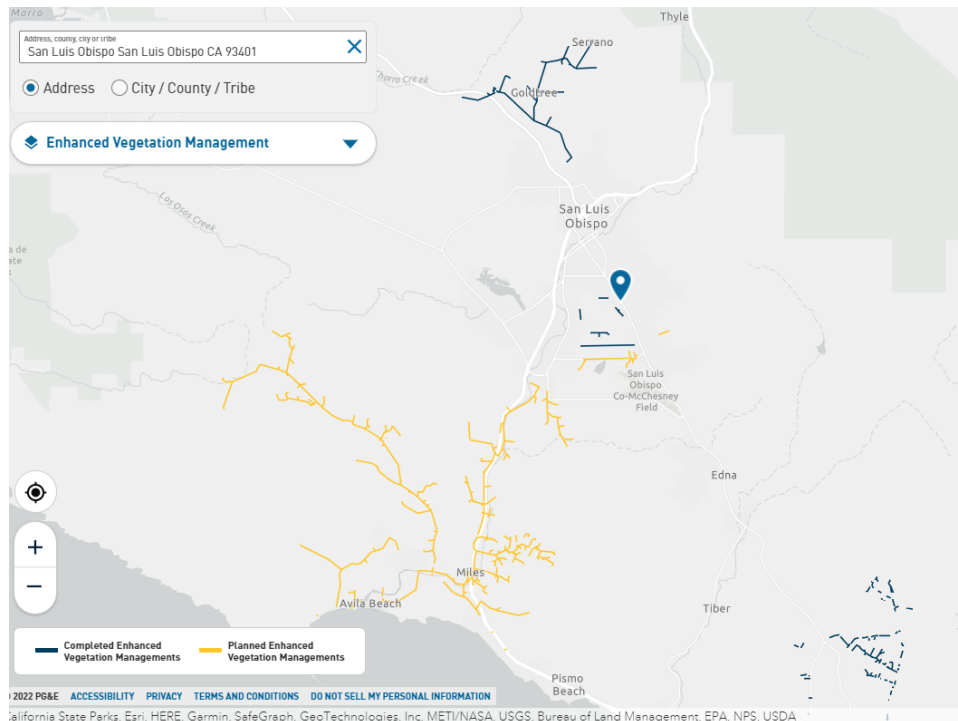


Figure 2. Sectionalizing Devices (Source PG&E)



**Figure 3. Enhanced Vegetation Managed Areas (Source: PG&E)**



### Ongoing Commitment to Equity

The Climate Action Plan for Community Recovery includes a commitment to implement actions through an equity lens.<sup>32</sup> The relationship between energy and equity is a key focus area for the City and its sustainability work. The following are examples of how staff integrated equity considerations into the update:

1. Met with local affordable housing providers and developers to learn from their experience building and managing all-electric projects.
2. Closely evaluated existing cost-effectiveness studies and initial findings related to future cost effectiveness studies to confirm that all-electric buildings are expected to be cheaper to build than mixed-fuel buildings.
3. Continued to advocate for and facilitate access to Central Coast Community Energy's all-electric affordable housing unit incentive program.

### Cost Effectiveness

The California Energy Codes and Standards Team, composed of staff at the Investor-Owned Utilities operating in California (PG&E and SoCal Gas, respectively, in San Luis Obispo's service territory) drafts and publishes statewide cost effectiveness studies.<sup>33</sup>

<sup>32</sup> See Administrative Action 1.1 of the Climate Action Plan:

<https://www.slocity.org/home/showpublisheddocument/27891/637339848339500000>. The action directs staff to integrate multiple equity considerations into implementation action project plans.

<sup>33</sup> For more information about the California Energy Codes and Standards Team, see: <https://localenergycodes.com/>

The City used the 2019 Cost Effectiveness Studies to make findings related to cost effectiveness of the current program and the 2019 findings are still the most current and best available resources.<sup>34</sup> Updates to the studies to reflect changes in the 2022 Energy Code are underway. The initial 2022 cost effectiveness study results for single family homes are posted and they confirm previous expectations that all-electric buildings are even more cost effective under the 2022 code given the code's use of heat pump equipment as baseline and its requirements for mixed-fuel buildings to be pre-wired for all-electric appliances.<sup>35</sup> It is important to note that these results *would* allow the City to make cost effectiveness findings consistent with the California Energy Commission approval process. However, these findings are not necessary since the City is not amending California Energy Code requirements under California Code of Regulations, Title 24, Part 6, nor is the City requiring the use or installation of any specific appliance or system as a condition of approval.

### **Previous Council or Advisory Body Action**

The topic of all-electric new buildings has been considered by Planning Commission and City Council on numerous occasions including:

#### *Planning Commission:*

- May 22, 2019 – Staff provided an informational presentation to Planning Commission about all-electric new buildings.
- February 26, 2020 – Planning Commission approved amendments to Title 17 providing regulatory flexibility for all-electric new buildings and adding a definition for “all-electric building.”
- June 8, 2022 – Staff provided an informational presentation to Planning Commission about the 2022 update to the Clean Energy Program for New Buildings.
- June 22, 2022 – Planning Commission approved amendments to Title 17 extending regulatory flexibility until December 31, 2025, adding parking as eligible for the flexibility provisions, and amending the definition an “all-electric buildings” to better reflect the 2022 update.

#### *City Council:*

- October 3, 2017, and August 21, 2018 – Avila Ranch and San Luis Ranch Development Agreements consider all-electric new units.
- September 18, 2018 – City Council identified its carbon neutrality goal and directed staff to research possibility of requiring carbon neutral buildings as part of the City's building codes.
- February 2019 – City Council provided unanimous direction to develop an approach to carbon neutral new development.

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<sup>34</sup> The statewide study includes information for every climate zone and utility; the City is in Climate Zone 5 and received utility services from Pacific Gas & Electric, and SoCal Gas.

<sup>35</sup> For more information about the 2019 Cost Effectiveness Studies and how they informed the City's policy, see June 16, 2020 Clean Energy Choice Program Council Agenda Report: <http://opengov.slocity.org/WebLink/DocView.aspx?id=122344&dbid=0&repo=CityClerk&searchid=dec3cc80-f51d-4826-bc4d-acf9f39433e5>

## Item 6b

- June 4, 2019 – City Council adopts the Climate Action Major City Goal (MCG) with a “reach code” as an item in the work program.
- September 3, 2019 – City Council adopted the Clean Energy Choice Program for New Buildings.
- June 16, 2020 – City Council rescinded portions of the September 3 action and readopted the Clean Energy Choice Program.
- July 7, 2020 – City Council conducted the second reading of Clean Energy Choice Program ordinances.
- August 18, 2020 – The City adopted the Climate Action Plan for Community Recovery, which included building sector goals and explicitly identifies the need to update the Clean Energy Choice Program in 2022.
- May 18, 2021 – Staff provided a Climate Action Plan update to City Council, which included an update on building electrification progress.
- June 1, 2021 – City Council adopted the 2021-23 Financial Plan with the Climate Action Major City Goal that called for updating Clean Energy Choice Program in 2022.
- December 13, 2021 – Staff provided the City Council with a memorandum about the first year of Clean Energy Choice for New Buildings Program implementation.
- February 1, 2022 – Staff provided a presentation on the first phase of the Clean Energy Choice Program and received strategic direction from City Council ahead of the 2022 Program update.

### Public Engagement

Staff conducted public engagement for the Clean Energy Program for New Buildings Program update from December 2021 through June of 2022. As this policy primarily impacts the developers and building community responsible for designing and constructing new buildings, staff conducted targeted outreach to all known local builders and developers. In addition, the City promoted a webinar for the general public and Open City Hall to gather input from broader community.

	<b>Event</b>	<b>Date</b>	<b>Description</b>
1.	<i>Developers' Roundtable</i>	December 2021	City staff provided an update about the forthcoming Program update at the Developers' Roundtable meeting.
2.	<i>Email outreach</i>	December and February 2021	City staff reached out via email about the forthcoming Program update to all known builders and developers practicing in the City, as well as to key community-based organizations and business groups such as the Chamber of Commerce and the SLO Climate Coalition.
3.	<i>Individual Meetings</i>	January – May 2022	City staff met with several builders and developers to identify how the current Program was working for their projects, and to discuss areas of possible improvements.

**Item 6b**

	<b>Event</b>	<b>Date</b>	<b>Description</b>
4.	<i>Targeted presentations to stakeholder groups</i>	January – May 2022	Staff presented about the update to the Program to several stakeholder organizations through the spring of 2022 to raise awareness and gather feedback. Groups that received a presentation include the Chamber of Commerce Legislative Action committee, the Climate Coalition, 3C-REN, the Central Coast Green Building Council, and the Home Builders Association of the Central Coast.
5.	<i>Community Webinar</i>	May 24 <sup>th</sup> 2022	The City hosted a community webinar to present the 2022 update to the City’s Clean Energy Program for New Buildings to the public and collect input. The webinar continues to be viewed by community members via Open City Hall and on the City’s website.
6.	<i>Open City Hall</i>	May 25 <sup>th</sup> 2022 – June 10 <sup>th</sup> 2022	City Staff prepared a survey on Open City Hall for community members and developers to formally provide their feedback on the Program. The survey received 14 total responses. 64 percent of respondents knew about the City’s existing Program supporting all-electric new buildings prior to answering the survey.
7.	<i>Planning Commission</i>	June 8 <sup>th</sup> 2022	City staff provided an informational presentation to Planning Commission about the 2022 update to the Clean Energy Program for New Buildings.



**Utility Interaction**

The City of San Luis Obispo has a successful history working closely with energy utility partners. The City has previously partnered with PG&E and SoCal Gas on large scale efficiency projects at numerous facilities and continues to evaluate opportunities for pilot programs moving forward. To ensure orderly development, to maintain infrastructure as it ages and the City becomes denser, and to continue to thrive as a community, it will be critical to maintain and enhance close working relationships between all partners. Over the course of this project, staff has worked with PG&E, SoCal Gas, and CCCE staff. Staff met with PG&E several times to discuss interconnection questions raised during the outreach process. PG&E provided information about Public Safety Power Shutoffs and system planning considerations as described in the community resilience section, above. Staff also met with SoCal Gas in early June to discuss coordination and collaboration on the City’s climate targets. Finally, staff met with CCCE staff to understand their current incentive programs and share suggestions for improvements to those programs.

**CONCURRENCE**

City Administration and Community Development concur on the contents of this report.

**ENVIRONMENTAL REVIEW**

Staff’s recommendations are found to be exempt from CEQA under the general rule, 15061(b)(3), because it can be seen with certainty that the provisions contained herein would not have the potential for causing a significant effect on the environment. Further, this ordinance is also exempt from CEQA under the categorical exemptions in Sections 15307 and 15308 of the CEQA Guidelines in that the proposed ordinance would institute regulatory requirements intended to protect the environment and natural resources.

**FISCAL IMPACT**

Budgeted: Yes

Budget Year: 2022-23

Funding Identified: Yes

**Fiscal Analysis:**

<b>Funding Sources</b>	<b>Total Budget Available</b>	<b>Current Funding Request</b>	<b>Remaining Balance</b>	<b>Annual Ongoing Cost</b>
General Fund	\$59,442	\$0	\$0	\$0
State	--	--	--	--
Federal	--	--	--	--
Fees	--	--	--	--
Other:	--	--	--	--
<b>Total</b>	<b>\$59,442</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Direct costs and staff time to implement the Clean Energy Program for New Buildings occur in two categories:

1. **Code Implementation.** The all-electric requirements will be implemented through the development review and/or building permit review process. The staff time to review projects is already budgeted and is a core work task of the Community Development Department. It is expected that the Program may reduce the amount of staff review time required per project since projects will be streamlined with only one onsite energy system and will no longer need to be evaluated for consistency with the current local amendments to the California Energy Code.
2. **Incentive Implementation.** Proposed incentives include the ongoing “Green Carpet” on-call helpdesk, capacity building trainings and convenings for local and regional builders, and regulatory flexibility. The on-call helpdesk is already funded through the end of Fiscal Year 22-23 with a total available budget of \$59,442. Capacity building trainings and convenings are available through 3C-REN and staff have already initiated requests for these events, which will occur at no direct cost to the City. Office of Sustainability and Community Development staff will continue to engage with builders to identify ongoing technical needs, which is accounted for in existing staff time and operational budgets. Should an applicant request the proposed regulatory flexibility provisions, the work would occur through the existing development review and/or building permit review process described above.

**NEXT STEPS**

Following receipt of approval from Council, work is expected to proceed on the following schedule:

<b>Task</b>	<b>Timeframe</b>
City Council Meeting for Second Reading/Adoption of Ordinances	July 19, 2022
Begin Updated Program Implementation	January 1, 2023

**ALTERNATIVES**

1. Council could direct staff not to pursue an update to the Clean Energy Program for New Buildings, which would cause the Program to expire on December 31, 2022. Under this alternative, the City would allow the Clean Energy Choice Program to terminate at the end of 2022 and would adopt the statewide code for implementation beginning in 2023. Staff does not recommend this alternative as it is inconsistent with adopted Council policy and the City's climate action goals.
2. Council could amend staff’s approach to exemptions or incentives by adding or removing exemption or incentive categories or by providing alternative approaches to the proposed exemptions and incentives.

3. Council could direct staff to return with an all-electric policy implemented through local amendments to the California Energy Code. Under this alternative, staff would return with the local amendments concurrent with the planned Building Code update schedule for September. Staff does not recommend this alternative as it would achieve the same function as staff's current recommendation while also requiring work to update the policy every three years.
4. Council could move forward with staff's recommendation for the all-electric new buildings ordinance and direct staff to amend or not pursue the amendments to Title 17 for purpose of regulatory flexibility.

**ATTACHMENTS**

- A – Draft Ordinance adopting all-electric new building requirements
- B – Draft Ordinance adopting amended regulatory flexibility incentive