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| Project Title: | Local Ordinance Applications Exceeding the 2022 Energy Code |
| TN #: | 252623-1 |
| Document Title: | San Luis Obispo September 19 Council Report and Presentation |
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FROM: Greg Hermann, Deputy City Manager

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SUBJECT: INTRODUCTION OF AN ORDINANCE APPROVING LOCAL

AMENDMENTS TO THE CALIFORNIA ENERGY CODE

RECOMMENDATION

Introduce an Ordinance entitled, "An Ordinance of the City Council of the City of San Luis Obispo, California, adopting Local Amendments to Part 6 of the Building Construction and Fire Prevention Code, 2023," to be codified under San Luis Obispo Municipal Code Chapter 15.04.060 – "Amendments – Energy Standards".

POLICY CONTEXT

- Resolution 11159 (2020 Series) adopts a communitywide goal of carbon neutrality
 and a building sector goal of no net new increase of building GHG emissions as the
 result of new buildings starting in 2020.
- Ordinance 1717 (2022 Series) adds Chapter 8.11 (All-Electric Buildings) to the Municipal Code requiring that all new buildings be all-electric, with certain limited exceptions.
- <u>Administrative Order 01 (2023 Series)</u> pauses enforcement of Municipal Code Chapter 8.11 (All-Electric Buildings).
- 2023-25 Financial Plan Climate Action Major City Goal 4.1.h directs staff to continue to monitor impacts to Municipal Code 8.11 (All-Electric New Buildings), and if necessary, return to Council with an alternative approach to achieving the City's climate action goals as they relate to new buildings.

REPORT-IN-BRIEF

In 2020, Council adopted a program to encourage all-electric new buildings. In 2022, Council updated that program to require new buildings to be all-electric via <u>San Luis Obispo Municipal Code Chapter 8.11</u>. On April 17, 2023, a three-judge panel of the Ninth Circuit Court of Appeals ruled in <u>California Restaurant Association v. City of Berkeley</u>, that a Berkeley ordinance requiring all-electric new buildings was pre-empted by the federal Energy Policy and Conservation Act of 1975 (EPCA) and was therefore invalid.

On April 18, 2023, Council voted to direct the City Manager and Community Development Director to temporarily suspend enforcement of the all-electric building requirement for new buildings. Based on Council feedback from the April 18, 2023 Council meeting, staff added Task 4.1h to the 2023-25 Climate Action Major City Goal, which states: "Continue to monitor impacts to Municipal Code 8.11 (All-Electric New Buildings), and if necessary, return to Council with an alternative approach to achieving the City's climate action goals as they relate to new buildings."

Staff have continued to monitor the situation and have observed a lack of timely resolution in the Berkeley case, a lack of imminent statewide resolution for the problem, and the local receipt of mixed-fuel building permit applications.¹ Based on these observations, staff recommends adopting an interim solution.

The California Restaurant Association v. City of Berkeley ruling limits how the City can reduce emissions from new buildings. Staff have identified local amendments to the California Energy Code (also known as a "reach code") to reduce greenhouse gas emissions in new buildings as the preferred alternative approach. Since the California Energy Code only regulates certain energy uses, this approach limits the City's scope and therefore the reach code does not apply to cooking equipment (e.g., stoves), laundry dryers, or other unregulated energy uses.

The proposed reach code, provided as Attachment A, includes requirements for new buildings that would result in lower operational greenhouse gas emissions. To be consistent with state law, the City must make findings that the proposed building code amendments related to building energy performance are cost effective and use less energy than the standard State Code. The California Energy Commission (CEC) must agree with the City's analysis before the local amendments to the California Energy Code can go into effect. This report finds that the proposed amendments that affect building energy use are cost effective; the studies that illustrate cost effectiveness are provided as Attachments B, C, and D.

While the proposed approach is less effective at reducing greenhouse gas emissions than the all-electric new building requirements codified in Municipal Code Chapter 8.11, the proposed reach codes provide the best and most timely opportunity to continue pursuing Council's adopted climate action goals within the existing legal framework.

Should Council move forward with staff's recommendation, the second reading of the Ordinance would occur on October 3, 2023. Pending California Energy Commission approval of the local amendments to the California Energy Code, the reach code would go into effect on January 1, 2024.

¹ "Mixed-fuel" refers to buildings that are served by natural gas and electricity utilities.

DISCUSSION

Background

Policy Background

On August 19, 2020, Council adopted the Climate Action Plan for Community Recovery via Resolution 11159 (2020 Series), which approved a communitywide goal of carbon neutrality and a building sector goal of no additional greenhouse gas (GHG) emissions as the result of new buildings. To achieve the building sector goal, Council adopted a program to encourage all-electric new buildings in 2020, and in 2022 adopted an ordinance requiring new buildings to be all-electric (San Luis Obispo Municipal Code Chapter "SLOMC" 8.11).

Ninth Circuit Ruling and Subsequent SLOMC Ch. 8.11 Enforcement Suspension
On April 17, 2023, a three-judge panel of the Ninth Circuit Court of Appeals ruled in California Restaurant Association v. City of Berkeley that a Berkeley ordinance requiring all-electric new buildings was pre-empted by the federal Energy Policy and Conservation Act of 1975 (EPCA) and was therefore invalid.

On April 18, 2023, as a result of the panel's decision, the San Luis Obispo City Council directed the City Manager and Community Development Director to temporarily suspend enforcement of the all-electric building requirement for new buildings (SLOMC Chapter 8.11)². The City of Berkeley is currently petitioning for additional review by the full Ninth Circuit Court of Appeals. Should a subsequent ruling be issued that overturns or otherwise vacates the Ninth Circuit Court of Appeals decision, the Administrative Order would be rescinded and enforcement of Chapter 8.11 will resume.

Justification for Developing an Interim Alternative Approach

Based on Council feedback from the April 18, 2023, Council meeting, staff added Task 4.1h to the 2023-25 Climate Action Major City Goal, which states: "Continue to monitor impacts to Municipal Code 8.11 (All- Electric New Buildings), and if necessary, return to Council with an alternative approach to achieving the City's climate action goals as they relate to new buildings." Council approved the Major City Goal work task via adoption of the 2023-25 Financial Plan in June of 2023. Staff have continued to monitor the situation and have observed the following:

- The ruling isn't likely to be resolved in a timely manner;
- There are no imminent statewide fixes for the problem (e.g., the California Energy Commission updates the California Energy Code on a triennial basis and any future updates made by the California Energy Commission to the statewide code that might be more favorable for low-emissions buildings would have to wait until the effective date of the 2025 California Energy Code, which wouldn't be enforceable until January 1, 2026); and

² The <u>Administrative Order</u> adopted under this direction outlining the conditions of the suspended enforcement is available on the City's website

 The City has already started to receive mixed-fuel building permit applications since the Administrative Order went into effect, which may "lock in" fossil fuel infrastructure in these buildings for their operational life.

Based on these observations, staff recommends adopting an interim energy reach code to reduce greenhouse gas emissions from new buildings.

PROPOSED APPROACH

The California Restaurant Association v. City of Berkeley ruling limits how the City can reduce emissions from new buildings. Staff have identified increased building energy performance requirements via local amendments to the California Energy Code (also known as a "reach code") as the preferred alternative approach. The California Energy Code establishes whole-building efficiency requirements, which account for a building's water heater, HVAC (heating, ventilation, and air conditioning) system, solar generating system, and insulation, among other things. However, it does not account for cooking equipment, laundry dryers, or other unregulated energy uses. As such, the proposed reach code does not regulate cooking equipment, laundry dryers, or other energy uses not addressed by the California Energy Code.

California Energy Code Energy Evaluation Metrics

The 2022 California Energy Code provides baseline efficiency and building performance standards that a project must meet before receiving a building permit. The California Energy Code provides different metrics for different types of buildings and is organized into three categories:

- Single-Family Residential: A new single-family residential building must meet or exceed "Energy Design Rating" (EDR) scores.³ There are three EDR score categories:
 - EDR1 (Source Energy) EDR1 is a score representing a building's energy efficiency expressed in terms that serve as a proxy for greenhouse gas emissions.
 - <u>EDR2 (Efficiency)</u> EDR2 is a score representing a building's energy efficiency expressed in terms of the value and cost of energy consumed at different times of the day and year.
 - <u>EDR Total</u> (Total Energy Design Rating) is a score representing the building's total energy expressed in terms of the value and cost of energy consumed at different times of the day and year while also factoring in solar and energy demand flexibility.

³ The definitions in this section are simplified for brevity, for more information, see: https://energycodeace.com/download/66973/file_path/fieldList/FS.SF%20Bldgs.2022

- Multi-Family Residential: A new multi-family residential building must meet or exceed a standard that combines the value and cost of energy consumed at different times of the day and year (referred to as Time Dependent Valuation of energy, or TDV), and the emissions from the building's energy source. The 2022 Source Energy metric is new for all multifamily buildings, and it was added to support decarbonization and electrification policy goals.⁴
- Non-Residential: A new non-residential building must also meet or exceed a standard that uses TDV energy and Source Energy emissions scores.

Proposed Energy Performance Enhancements

Public Resources Code Section 25402.1(h)(2) and Section 10-106 of the Building Energy Efficiency Standards establish a process that allows local adoption of energy standards that are more stringent than the statewide standards.^{5,6} Under this process, the CEC requires any local amendments to the California Energy Code that affect energy use in regulated buildings to be cost effective and use less energy than the standard requirements.

Staff recommends that Council adopt cost effective local amendments (referred to as a "reach code") to the California Energy Code that would increase the required EDR1 score for single family residential buildings and the required Source Energy scores for all other buildings. As noted in Table 1, single-family residential new buildings would be required to exceed the standard design Total Source Energy Design Rating (EDR1) score by at least 6 points. Table 1 also identifies Source Energy performance requirement for new multi-family residential buildings (9% better than code for low-rise (three stories or fewer), 3% better for high-rise (four stories or more)), and 7% better for new non-residential buildings.

Because of how the EDR1 and Source Energy scores are calculated in the 2022 California Energy Code, the higher standards proposed in the reach code would incentivize new buildings to include additional electric appliances/mechanical systems, while also allowing mixed-fuel buildings that include additional energy efficiency measures. The enhanced performance requirements would apply equally to mixed-fuel and all-electric buildings and are cost-effectively achievable through the energy code's performance pathway without requiring appliances that exceed federal efficiency standards.

⁴ The definitions provided in this section are simplified for brevity, for more information, visit: https://energycodeace.com/resources/?itemId=66025

⁵ Public Resources Code Section 25402.1:

https://leginfo.legislature.ca.gov/faces/codes displaySection.xhtml?lawCode=PRC§ionNum=25402.1

⁶ Building Energy Efficiency Standards: https://www.energy.ca.gov/sites/default/files/2022-12/CEC-400-2022-010 CMF.pdf

⁷ As noted in Section 150.1(c)14 of the 2022 California Energy Code, some small single-family residential buildings in the City's Climate Zone (CZ5) are exempt from the mandatory solar requirement. Staff's recommendation exempts these buildings from the reach code.

⁸ Section 140.4(a)2 of the 2022 California Energy Code prescriptively requires electric heat-pump space-conditioning in several small-to-medium nonresidential building types including retail, grocery, schools, offices, financial institutions, and libraries. As such, staff's recommendation exempts these buildings from the reach code.

Table 1. Proposed Improved Energy Performance Standards

| Building Type | Performance Requirement | | | | |
|-------------------------------------|--------------------------------------|--|--|--|--|
| Single Family Residential buildings | Exceed the standard EDR1 requirement | | | | |
| | by at least 6 points | | | | |
| Multi-Family Residential (Low) | Exceed the standard Source Energy | | | | |
| | requirement by 9% | | | | |
| Multi-Family Residential (High) | Exceed the standard Source Energy | | | | |
| | requirement by 3% | | | | |
| Non-Residential | Exceed the standard Source Energy | | | | |
| | requirement by 7% | | | | |

Electric Ready Requirements

The 2022 California Energy Code requires certain mixed-fuel buildings to include "electric ready" components including electric outlets near natural gas appliances, appropriate ventilation for future heat pump appliances, and reserved and labelled breakers in the electrical panel for future electric appliances as follows:^{9,10}

- Single-Family Residential heat pump hot water heaters are prescriptively required, and "electric ready" infrastructure is required for any building that includes a gas fueled furnace, clothes dryer, and/or cooktop.
- Multi-Family Residential "electric ready" infrastructure is required in a newly constructed multi-family residential unit that includes a gas fueled space heater, water heater, clothes dryer, and/or cooktop. Centralized water-heating systems for multifamily buildings in which dwelling units do not have separate water heaters are exempt from these requirements.

During the drafting of this report, staff considered developing requirements for "electric ready" infrastructure for centralized water-heating systems in new multi-family residential buildings and for water heating systems in new non-residential buildings. Due to the complexity of these systems, uncertainty around the size and energy needs of future electric centralized water-heating systems, and uncertainty about the cost effectiveness standards required for such measures, staff is not recommending these requirements at this time. Instead, staff recommends that building permit applications identify a pathway for electrical conduit on construction drawings for fuel-fired central hot water heating systems in newly constructed buildings that aren't currently subject to electric-ready requirements.

Practical Effect of the Reach Code

Because the City is working within the confines of the California Energy Code, the description of the proposed approach above is inherently technical. This section illustrates the practical effect of the proposed approach by providing a simplified example of how a single-family home designer would comply with the reach code.

⁹ For additional information about residential electric readiness requirements, see: https://energycodeace.com/resources/?itemId=91861

¹⁰ Note that the California Energy Code's electric ready requirements extend to cooking equipment and clothes dryers even though these uses are not otherwise regulated by the code.

A building designer working on a single-family home built to the code minimum would likely include high efficiency LED lighting, rooftop solar, an electric heat pump hot water heater, a natural gas furnace, insulated walls, an insulated attic, and efficient windows, among other things. The designer would load the building design into a computer model and estimate its energy performance. The energy modeling software would provide standard reporting metrics, including an EDR1 score. The designer would then compare the EDR1 score to a standard design building. In this case, the designed building's EDR1 score would be equal to the standard design building's EDR1 score and would comply with that part of the California Energy Code.

With the reach code in place, the designer would now need to achieve an EDR1 score that is 6 points better than the standard design building. If this building designer replaced the gas furnace with a commonly available heat pump HVAC system, the building would achieve a score that is 6 EDR1 points better than the code minimum and would be consistent with the proposed reach code requirements. Alternately, the building designer could keep the gas furnace and install a battery storage system, which would also result in an increase of more than 6 EDR1 points. The building designer also has the option to develop a package of efficiency and solar measures; so long as the measures lead to an increase of 6 or more EDR1 points better than the code minimum, it is consistent with the reach code.

This example is similar for the other building types where the compliance margins could be achieved by either installing electric heat pump HVAC equipment or installing some package of additional solar capacity and efficiency measures.

Cost Effectiveness

The California Energy Commission requires any local amendments to the California Energy Code that affect energy use in regulated buildings to be cost effective and to use less energy than the standard requirements. The CEC requires the local agency to adopt a determination that the energy standards are cost effective at a public meeting. The determination must subsequently be filed with the Energy Commission.

One way to illustrate cost effectiveness is through the "Time Dependent Valuation" or "TDV" metric. The TDV metric is what the California Energy Commission uses in evaluating cost effectiveness for efficiency measures in the California Energy Code and includes the onsite costs and savings of the proposed energy measures, as well as the energy system costs and benefits of the energy measures. The metric is "time dependent" because energy use has different costs and impacts depending on the time of day and season. For example, electricity saved during peak periods has a much higher value than electricity saved during off-peak periods.

In support of reach code development, the California Energy Codes and Standards Statewide Utility Program, which includes the State's Investor-Owned Utilities (PG& E, SDG&E, and SCE, under the auspices of the California Public Utilities Commission) developed and published the:¹¹

¹¹ The California Energy Codes and Standards Statewide Utility Program publishes cost effectiveness reports and accompanying study data at: https://localenergycodes.com/content/resources

- 2022 Cost-Effectiveness Study: Single Family New Construction Study (Attachment B) and the associated cost-effectiveness data;¹²
- 2022 Cost-Effectiveness Study: Multifamily New Construction Study (Attachment C) and the associated cost-effectiveness data;¹³ and
- 2022 Code: Non-residential New Construction Reach Code Cost-effectiveness Study (Attachment D) and the associated cost-effectiveness data.¹⁴

These studies and the associated cost-effectiveness data are highly detailed and are included in the record to support Council's findings and policy decisions. The studies and the associated cost-effectiveness data include a calculated benefit-to-cost ratio for a wide variety of measures, building types, and climate zones. A benefit-cost value of "1" or greater illustrates that the measures save more than they cost and are therefore "cost effective." These studies and the associated cost-effectiveness data are the basis for staff's cost effectiveness findings and are sufficient to illustrate compliance with the requirements set forth under California Administrative Code Chapter 10-106.

Based on these studies, staff finds the proposed local amendments to the 2022 California Energy Code to be cost-effective and consume less energy than otherwise permitted by Title 24, Part 6. In short, using the California Energy Commission's TDV metric, the proposed amendments save more than they cost to implement. The following additional detail is included for transparency and to facilitate the California Energy Commission's review of the City's cost effectiveness findings:

1. Requiring new single-family residential buildings to achieve an EDR1 margin over the standard building by 6 or more points. As illustrated in the study data, an all-electric single-family home with additional efficiency measures would save energy relative to the base code and would achieve an EDR1 margin of 7.1 and a benefit to cost ratio of 12.6 on a TDV basis. The study data also shows that a mixed-fuel building with additional efficiency measures, additional rooftop solar, and a battery storage system would save energy relative to the base code and would achieve and EDR1 margin of 18.6 and a benefit to cost ratio of 1.2 on a TDV basis. It should be noted that an all-electric building built to minimum code standards using typically available appliances would achieve an EDR margin of 6.

¹² The cost-effectiveness data from the Single-Family Residential study is available at: https://localenergycodes.com/download/1286/file_path/fieldList/2022%20Single%20Family%20NewCon%20Study%20Data.xlsx

¹³The cost-effectiveness data from the Multifamily Residential study is available at: https://localenergycodes.com/download/1564/file_path/fieldList/2022%20Multifamily%20New%20Construction%20Study%20Data.xlsx

¹⁴ The cost-effectiveness data from the Nonresidential study data is available at: https://localenergycodes.com/download/1373/file path/fieldList/2022%20Nonresidential%20New%20Construction%2 OStudy%20Data.xlsx

¹⁵ For more detail, see section 2.1.3 of https://localenergycodes.com/download/1266/file_path/fieldList/2022%20Nonres%20New%20Construction%20Costeff%20Report.pdf

- 2. Requiring low rise multi-family buildings to achieve a Source Energy savings 9% or more. As illustrated in the study data, an all-electric low rise multi-family building built to minimum code standards would achieve a Source Energy margin of 9% and a benefit to cost ratio of 9.2 on a TDV basis. The study data also shows that a mixed-fuel building with additional efficiency measures, additional rooftop solar, and a battery storage system would save energy relative to the base code, would achieve a Source Energy margin of 18% and would achieve a benefit to cost ratio of 1.6 on a TDV basis.
- 3. Requiring high-rise multi-family buildings to achieve a Source Energy savings of 3% or more. As illustrated in the study data, an all-electric high rise multi-family building built to minimum code standards would achieve a Source Energy margin of 6% and a benefit to cost ratio of 2.2 on a TDV basis. The study data also shows that a mixed-fuel building with additional efficiency measures, additional rooftop solar, and a battery storage system would save energy relative to the base code, would achieve a Source Energy margin of 3%, and would achieve a benefit to cost score of 3.3 on a TDV basis.
- 4. Requiring non-residential buildings to achieve a Source Energy budget savings of 7%. The Non-Residential New Construction Reach Code Cost-effectiveness Study provides analysis for several non-residential building prototypes. One of the prototypes is a retail building, which prescriptively requires electric heat pump space conditioning and along with other similar small-to-medium non-residential buildings that prescriptively require electric space conditioning, would be exempt from the reach code (see footnote 8, above). As illustrated in the study data for the remaining non-residential building prototypes, all-electric new non-residential buildings built to minimum code standards meet or exceed the 7% compliance margin. Mixed-fuel non-residential buildings with various additional energy efficiency measures and rooftop solar, would meet or exceed the 7% compliance margin, save energy relative to the base code, and are cost effective on a TDV basis. 16

Available Resources for Lower Cost All-Electric Buildings

For projects that chose to go all-electric, the state of California and regional entities are providing technical assistance, substantial rebates, and incentives for all-electric new buildings. Current programs include:

<u>California Electric Homes</u> is provided by the California Energy Commission and provides base incentives for all-electric new market rate residential buildings including \$3,000 for single-family homes, \$1,750 per multi-family residential unit, \$1,750 per accessory dwelling unit, and \$6,000 per modular or manufactured home. Program participation is capped at \$1.5 million per builder and includes additional incentives for items like induction cooktop and beyond code efficiency measures.

¹⁶ In addition to the study data posted on the California Energy Codes and Standards Statewide Program website, staff requested that TRC (the technical consultants that produced the Non-Residential New Construction Reach Code Cost-Effectiveness study) conduct additional model runs to identify cost effective measure packages for the "Quick Service Restaurant" building prototype. TRC found that a mixed-fuel Quick Service Restaurant with additional efficiency measures and a 4kW solar array would save energy relative to the base code, achieve a Source Energy compliance margin of 8.9%, and would be cost effective on a TDV basis with a benefit to cost ratio of 1.7.

- <u>Central Coast Community Energy</u> provides additional incentives for all-electric accessory dwelling units that stack on top of the *California Electric Homes* program.
- <u>The Building Initiative for Low-Emissions Development (BUILD) Program</u> is provided by the California Energy Commission and includes technical support and incentives for all-electric new affordable housing including approximately \$3,399 per multifamily unit and \$5,500 per single-family home.
- <u>The Energy Code Coach</u> program offered by 3C-REN provides no-cost personalized support to help building professionals navigate the Energy Code.

Relationship to SLOMC 8.11 (All-Electric Buildings)

Section 6 of Administrative Order 01 (2023 Series), which paused enforcement of the City's all-electric new building requirements, notes that the Order "is automatically rescinded upon any judicial decision which overturns or otherwise vacates the Ruling." As described in the draft ordinance (attachment A), should this occur, Chapter 8.11 of the Municipal Code would supersede the reach code and enforcement of the reach code would be suspended so long as Chapter 8.11 is being enforced.

Previous Council or Advisory Body Action

- September 18, 2018 City Council identified its carbon neutrality goal and directed staff to research the 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.
- 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.

- 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.
- July 5, 2022 Council adopted the Clean Energy Program for New Buildings, which required new buildings to be all-electric.
- December 13, 2022 Council adopted the Climate Action Plan Update, which reaffirms community and new building sector specific goals and includes the 2023-27 Climate Action Work Program focused on reducing emissions from buildings.
- April 18, 2023 Council directed the City Manager and Community Development Director to temporarily suspend enforcement of the all-electric building requirement for new buildings (SLOMC Chapter 8.11.). Enforcement was formally paused via <u>Administrative Order 01 (2023 Series)</u>.
- June 6, 2023 Council adopted the 2023-25 Financial Plan, which includes Climate Action Major City Goal 4.1.h that directs staff to continue to monitor impacts to Municipal Code 8.11 (All-Electric New Buildings), and if necessary return to Council with an alternative approach to achieving the City's climate action goals as they relate to new buildings.

Public Engagement

As described in the 2019, 2020, and 2022 Council Agenda Reports, extensive outreach was conducted in various community forums and settings affirming that all-electric new buildings are feasible, cost-effective, and supportive of the City's climate action goals.

Prior to the Ninth Circuit ruling that led to the City's suspending enforcement of Municipal Code Chapter 8.11's all-electric new building requirement, the Council's policy had been seeing successful implementation. The work conducted in support of the proposed reach code is a continuation of existing Council policy related to low-emissions new buildings.

During development of the reach code, staff conducted community outreach in accordance with the Public Engagement and Noticing Manual. Specifically, the City presented the update to the Developer's Roundtable (e.g., developers, architects, engineers, design professionals, and property owners) and to the Green and Healthy Homes Roundtable (e.g., community-based organizations, technical experts, and key non-profit housing providers), notified appliance retail stakeholders about the proposed reach code, and highlighted the item in the City's Council Meeting Preview social media posts. Should Council adopt the reach code, staff would initiate general awareness outreach via the Council Meeting Recap and a news release; and would share information about the reach code directly with project applicants via Community Development Department staff.

Schedule and Next Steps

Should Council approve staff's recommendations, work would proceed on the timeline provided in Table 2. It is important to note that the California Building Code, which includes the California Energy Code, is updated every three years. Should Council adopt staff's recommendation, the local reach code would expire with the current Building Code on December 31, 2025.

Table 2. Schedule and Next Steps

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|---|---------------------|--|--|--|--|
| Task | Timeframe | | | | |
| Second reading of the draft Ordinance (Attachment A) and submittal to the California Energy Commission. | October 3, 2023 | | | | |
| Receive approval from the California Energy Commission | November - December | | | | |
| Reach code goes into effect | January 1, 2024 | | | | |

CONCURRENCE

Staff from Administration, Community Development, and the City Attorney's Office concur with 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 Section 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: 2023-24

Funding Identified: Yes

Fiscal Analysis:

| Funding Sources | Total Budget Available | Current Funding Request | Remaining Balance | Annual Ongoing Cost |
|--------------------|---------------------------|-------------------------------|----------------------|---------------------------|
| General Fund | \$ | \$ | \$ | \$ |
| State | | | | |
| Federal | | | | |
| Fees | | | | |
| Other: | | | | |
| Total | \$ | \$ | \$ | \$ |

The reach code 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. This work can be directly supported by the 3C-REN Energy Code Coach Program, which provides technical support for code interpretation. Funded under the auspices of the California Public Utilities Commission, Energy Code Coach is free to the user and can be accessed by project applicants and City staff.

ALTERNATIVES

- 1. Council could request more information, suggest changes, or request that the proposed local amendments to the California Energy Code be presented for adoption at a later date. Should Council pursue this alternative, staff requests specific direction and feedback.
- 2. Council could take no action and direct staff to pursue other initiatives. This action is not recommended by staff because it is inconsistent the City's climate action goals and prior Council direction and adopted policy.

ATTACHMENTS

- A Draft Ordinance Adopting Local Amendments to the California Energy Code
- B 2022 Cost-Effectiveness Study: Single Family New Construction Study
- C 2022 Cost-Effectiveness Study: Multifamily New Construction Study
- D 2022 Code: Non-Residential New Construction Reach Code Cost-Effectiveness Study

ORDINANCE NO. ____ (2023 SERIES)

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN LUIS OBISPO, CALIFORNIA, ADOPTING LOCAL AMENDMENTS TO PART 6 OF THE BUILDING CONSTRUCTION AND FIRE PREVENTION CODE, 2023.

- **WHEREAS**, greenhouse gas accumulation in the atmosphere as the result of human activity is the primary cause of the global climate crisis; and
- **WHEREAS,** in California alone, the initial impacts of climate change have resulted in unprecedented disasters with tremendous human, economic, and environmental costs and;
- **WHEREAS,** the Intergovernmental Panel on Climate Change estimates that global emissions need to be reduced by 45 percent from 2010 levels by 2030, and 100 percent by 2050 to prevent global catastrophe; and
- **WHEREAS**, the State of California enacted Assembly Bill (AB) 1279 to require statewide carbon neutrality "as soon as possible," but no later than 2045; and
- **WHEREAS**, City of San Luis Obispo residents and businesses have repeatedly identified climate action as a top community priority; and
- **WHEREAS**, Resolution 11159 (2020 Series) adopts the City of San Luis Obispo Climate Action Plan for Community Recovery, which includes a communitywide goal of carbon neutrality by 2035 and sector specific goal of no net new building emissions from onsite energy use by 2020; and
- **WHEREAS**, Resolution 11381 (2022 Series) reaffirmed the communitywide goal of carbon neutrality by 2035 and sector specific goal of no net new building emissions from onsite energy use by 2020; and
- WHEREAS, the inventoried greenhouse gas emissions in the City of San Luis Obispo come from a variety of sources, primarily transportation and energy use in buildings and facilities; and
- **WHEREAS,** in order to achieve carbon neutrality, new sources of greenhouse gas emissions need to be substantially reduced or eliminated; and
- WHEREAS, Public Resources Code Section 25402.1 (h)(2) allows local agencies to adopt more stringent local amendments to the energy conservation provisions in the California Energy Code; and

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- **WHEREAS**, the California Energy Codes and Standards Statewide Utility Program, has determined specific modifications to the 2022 State Energy Code for each climate zone that are cost-effective; and that such modifications will result in designs that consume less energy than they would under the 2022 State Energy Code; and
- WHEREAS, staff has reviewed the "2022 Cost-Effectiveness Study: Single Family New Construction Study" and associated study data, the "2022 Cost-Effectiveness Study: Multifamily New Construction Study" and associated study data, and the "2022 Code: Non-Residential New Construction Reach Code Cost-Effectiveness Study" and associated data developed for the California Energy Codes and Standards Statewide Utility Program, and find them sufficient to illustrate compliance with the requirements set forth under California Administrative Code Chapter 10-106; and
- **WHEREAS,** based on these studies, the City finds the proposed local amendments to the 2022 California Energy Code to be cost-effective and consume less energy than permitted by Title 24, Part 6; and
- **WHEREAS**, the 2022 California Energy Code offers compliance options that were established through the public rulemaking process of the code update; and
- **WHEREAS**, the Council expressly declares that the proposed amendments to the Energy Code are reasonably necessary because of local climatic, topological, and geological conditions; and
- **WHEREAS**, the requirements specified in this Ordinance were reviewed via public comment and through a publicly noticed public hearing process.
- **NOW, THEREFORE, BE IT ORDAINED** by the Council of the City of San Luis Obispo as follows:
- **SECTION 1.** <u>Purpose</u>. It is the purpose and intent of this Ordinance to establish standards for new buildings to exceed minimum 2022 Title 24 Part 6 requirements.
- **SECTION 2.** Adoption. The local amendments to Part 6 of the City of San Luis Obispo Building Construction and Fire Prevention Code, 2023 (SLOMC Section 15.02.060) as specified in Exhibit A, are hereby adopted by the City of San Luis Obispo to be codified under Chapter 15.04.060. The Council hereby adopts the recitals herein as separate and additional findings of fact in support of adoption of the ordinance.
- SECTION 3. Relationship to Administrative Order 01 (2023 Series) and Supersedure by Municipal Code Chapter 8.11. By its terms, Administrative Order 01 (2023 Series), which paused enforcement of the City's all-electric new building requirement (SLOMC Chapter 8.11), is rescinded upon any judicial decision which overturns or otherwise vacates the Ninth Circuit panel ruling issued in *California Restaurant Association v. City of Berkeley.* Should this occur, enforcement of Chapter 8.11 will resume, and enforcement of Section 15.04.060 as adopted herein will be suspended.

SECTION 4. Severability. If any word, phrase sentence part, section, subsection or other portion of this amendment or any application thereof to any person or circumstance is declared void, unconstitutional, or invalid for any reason, then such word, phrase, sentence, part, section, subsection, or other portion, or the prescribed application thereof, shall be severable, and the remaining provisions of this amendment, and all applications thereof, not having been declared void, unconstitutional or invalid, shall remain in full force and effect. The City of San Luis Obispo hereby declares that it would have passed this amendment and each section, subsection sentence, clause and phrase of this amendment, irrespective of the fact that any one or more sections, subsection, sentences, clauses or phrases is declared invalid or unconstitutional.

SECTION 5. Findings. The City Council finds that each of the changes or modifications to measures referred to therein are reasonably necessary because of local climatic, geological, or topographical conditions in the area encompassed by the boundaries of the City of San Luis Obispo, and the City Council adopts the following findings in support of local necessity for the changes or modifications:

- 1. San Luis Obispo is situated along a wildland-urban interface and has been identified as a Community at Risk from wildfire and is extremely vulnerable to wildfires and firestorms, and human activities releasing greenhouse gases into the atmosphere cause increases in worldwide average temperature, drought conditions, vegetative fuel, and length of fire seasons- contributing to the likelihood and consequences of fire.
- The City of San Luis Obispo is situated at the base of a watershed of the Santa Lucia Mountains and flooding of San Luis, Chorro, Stenner, Old Garden, and Brizzolara Creeks results in conditions rendering fire department vehicular traffic unduly burdensome or impossible, as witnessed in major floods that occurred in 1952, 1961, 1969, 1973, 1978, 1982, 1995, and 2023. Furthermore, flood conditions described above create the potential for overcoming the ability of the fire department to aid or assist in fire control, evacuations, rescues and other emergency task demands inherent in such situations. The resulting overburdening of fire department personnel may cause a substantial or total lack of protection against fire for the buildings and structures located in the City of San Luis Obispo. The afore-described conditions support the imposition of fire protection requirements greater than those set forth in the California State Building Standards Code and support the imposition of more restrictive requirements than set forth in the California Energy Code for the purpose of reducing the City's contributions to Greenhouse Gas Emissions resulting in a warming climate and related severe weather events.
- 3. The aforementioned flood and rain events result in conditions wherein stormwater can inundate the wastewater treatment system as witnessed in major floods that occurred in 1952, 1961, 1969, 1973, 1978, 1982, and 1995. Furthermore, rain events and flood conditions described above create a condition referred to as Inflow and Infiltration (I/I) that allow rain and flood waters to flow and/or seep into the wastewater system and overcome the ability

of the wastewater collection system and Water Reclamation Facility (WRF) to convey and treat sewage. The resulting overburdening of the wastewater system can result in threats to public health, public and private property and water quality and violations and fines from the State of California, the Environmental Protection Agency (EPA) or others. To the extent that climate change has the potential to make these conditions worse, more restrictive Energy Code requirements to achieve reduced greenhouse gas emissions are necessary.

4. Seasonal climatic conditions during the late summer and fall create numerous serious difficulties in the control and protection against fire situations in the City of San Luis Obispo. The hot, dry weather in combination with Santa Lucia (offshore) winds frequently results in wildland fires in the brush-covered slopes on the Santa Lucia Mountains, San Luis Mountain, and the Irish Hills areas of the City of San Luis Obispo. The aforementioned areas surround the City. When a fire occurs in said areas, such as occurred in 1985 when the Los Pilitas fire burned six days and entered the City and damaged many structures, the entirety of local fire department personnel is required to control, monitor, fight and protect against such fire situations in an effort to protect life and preserve property and watershed land. The same climatic conditions may result in the concurrent occurrence of one or more fires in the more populated areas of the City without adequate fire department personnel to protect against and control such a situation. Therefore, the above-described findings support the imposition of measures to increase the efficiency of new buildings in the City to reduce greenhouse gas emissions.

SECTION 6. <u>CEQA</u>. This ordinance is categorically exempt from CEQA because it is an action taken by a regulatory agency for the purpose of protecting the environment (CEQA Guidelines Section 15308). In addition, this ordinance is exempt from CEQA under the general rule, 15061(b)(3), on the grounds that these standards are more stringent than the State energy standards, there are no reasonably foreseeable adverse impacts, and there is no possibility that the activity in question may have a significant effect on the environment. The following findings are made in support of these determinations:

- 1. The purpose of the implementation of a Reach Code is to reduce the amount of greenhouse gas emissions in the City of San Luis Obispo that are produced from buildings.
- 2. The Reach Code approval process requires that the City determines that the local standards will require buildings to use no more energy than current statewide requirements. Furthermore, the California Energy Commission approval process requires that the City make the findings as part of its approval process. Therefore, the Reach Code standards can only go into effect if they protect the environment by making buildings more efficient.

| Ordinance No | _ (2023 Series) | | | Page 5 |
|--|--|---|--|----------------------------|
| considered, at the C | ity's election, an ing y all sanctions pr | fraction of the Cit escribed in Char | nents of this Ordinance by of San Luis Obispo Noter 1.12, or an admi | Municipal |
| SECTION 8. 2024. | Effective Date. Th | is Ordinance sha | II be effective as of Ja | anuary 1, |
| names of Council me prior to its final passa | embers voting for ar age, in The New Tir | nd against, shall b mes, a newspape | this ordinance, togethe e published at least five r published and circulat of thirty (30) days afte | e (5) days ed in this |
| INTRODUCE by the Council of th following vote: | D on the da e City of San Luis | y of2 Obispo on the _ | 023, AND FINALLY AI day of, 2023 | DOPTED 3, on the |
| AYES: NOES: ABSENT: | | | | |
| | | Ma | ayor Erica A. Stewart | |
| ATTEST: | | | | |
| Teresa Purrington City Clerk | | | | |
| APPROVED AS TO | FORM: | | | |
| J. Christine Dietrick City Attorney | | | | |
| IN WITNESS WHER | RFOF I have hereu | nto set my hand a | and affixed the official so | eal of the |

City of San Luis Obispo, California, on _____

Teresa Purrington, City Clerk

0____

Exhibit A Section 15.04.060 AMENDMENTS - ENERGY STANDARDS

A. Adoption of Codes and Applicability

The effective date of this ordinance shall be January 1, 2024 and is applicable to newly constructed buildings and facilities, and those that are built after a demolition. The minimum energy compliance margin standards established in this code shall apply to all applicable buildings accordingly. The amendments contained in 15.04.060 do not apply to additions, alterations, or repairs to buildings or facilities constructed prior to the effective date of this ordinance.

B. Add Item D to Subchapter 1, Section 100.0(e)3, to read as follows:

D. Prohibited reduction in source energy performance. No repair, addition, or alteration shall reduce the efficiency of any building or facility, as determined by the source energy compliance margin.

C. Add the following definition to Subchapter 1, Section 100.1(b):

DEMOLITION is the act of reconstructing, removing, taking down or destroying all or portions of an existing building or structure, or making extensive repairs or modifications to an existing building or structure, if such changes involve removal or replacement of fifty percent or more of both the structural framing and cladding or of the exterior walls within a twenty-four-month period. When determining whether a building or structure is demolished, the following applies:

- 1. The nonconforming portions of any wall are counted as removed or taken down, even when retention of these portions is proposed.
- 2. Any continuous run of remaining exterior wall surfaces measuring ten feet or less in length are counted as removed or replaced.

D. Add Section 120.11 to Subchapter 3, to read as follows:

120.11 Electric Readiness Requirements for All Systems

Where nonresidential systems using gas or propane are installed, the construction drawings shall indicate a pathway for routing of conduit from the equipment using gas or propane to the point of interconnection with the electrical service.

E. Delete Section 140.1 from Subchapter 5, and replace with new Section 140.1 to read as follows:

A building complies with the performance approach provided that:

1. The TDV energy budget calculated for the Proposed Design Building under Subsection (b) is no greater than the TDV energy budget calculated for the Standard

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Design Building under Subsection (a), and

2. The energy budget calculated for the proposed design building under Subsection (b) has a source energy compliance margin, relative to the energy budget calculated for the standard design building under Subsection (a), of at least 7 percent for all nonresidential occupancies.

Exception to Section 140.1 item 2. A source energy compliance margin of at least 7 percent is not required when nonresidential occupancies are designed with single zone space-conditioning systems complying with Section 140.4(a)2.

(a) Energy budget for the standard design building. The energy budget for the Standard Design Building is determined by applying the mandatory and prescriptive requirements to the proposed design building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation, photovoltaic (PV) and battery storage systems, service water heating and covered process loads.

(b) Energy budget for the proposed design building.

The energy budget for a proposed design building is determined by calculating the TDV energy for the proposed design building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation, photovoltaic (PV) and battery storage systems, and service water heating and covered process loads.

Exception to Section 140.1(b). A community shared solar electric generation system, or other renewable electric generation system, and/or community shared battery storage system, that provides dedicated power, utility energy reduction credits or payments for energy bill reductions to the permitted building and is approved by the Energy Commission as specified in Title 24, Part 1, Section 10-115, may offset part or all of the solar electric generation system or battery storage system TDV energy required to comply with the standards, as calculated according to methods established by the Commission in the Nonresidential ACM Reference Manual.

(c) Calculation of energy budget. The TDV energy for both the standard design building and the proposed design building shall be computed by compliance software certified for this use by the Commission. The processes for compliance software approval by the Commission are documented in the ACM Approval Manual.

Note: Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.5, 25402.8, and 25943, Public Resources Code.

G. Amend Subchapter 8, Section 150.1(b) to read as follows, with items 2 and 3 to remain:

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- (b) Performance Standards. A building complies with the performance standards if the energy consumption calculated for the proposed design building is no greater than the energy budget calculated for the standard design building using Commissioncertified compliance software as specified by the Alternative Calculation Methods Approval Manual, and as specified in items 1, 2 and 3 below.
 - 1. Newly Constructed Buildings. The Energy Budget for newly constructed buildings is expressed in terms of the Energy Design Ratings, which are based on source energy and time-dependent valuation (TDV) energy. The Energy Design Rating 1 (EDR1) is based on source energy. The Energy Design Rating 2 (EDR2) is based on TDV energy and has two components, the Energy Efficiency Design Rating, and the Solar Electric Generation and Demand Flexibility Design Rating. The total Energy Design Rating shall account for both the Energy Efficiency Design Rating and the Solar Electric Generation and Demand Flexibility Design Rating. The proposed building shall separately comply with the Source Energy Design Rating, Energy Efficiency Design Rating and the Total Energy Design Rating. A newly constructed building complies with the performance approach if the TDV energy budget calculated for the proposed design building is no greater than the TDV energy budget calculated for the Standard Design Building AND the Source Energy compliance margin is at least 6, relative to the Source Energy Design Rating 1 calculated for the Standard Design building.

EXCEPTION 1 to Section 150.1(b)1. A community shared solar electric generation system, or other renewable electric generation system, and/or community shared battery storage system, which provides dedicated power, utility energy reduction credits, or payments for energy bill reductions, to the permitted building and is approved by the Energy Commission as specified in Title 24, Part 1, Section 10-115, may offset part or all of the solar electric generation system Energy Design Rating required to comply with the Standards, as calculated according to methods established by the Commission in the Residential ACM Reference Manual.

EXCEPTION 2 to Section 150.1(b)1. A newly constructed building that does not require a PV system in accordance with section 150.1(c)14 does not need a Source Energy compliance margin of at least 6, relative to the Source Energy Design Rating 1 calculated for the Standard Design building.

I. Add Section 160.9(d), to read as follows:

160.9(d) Central Water Heater Readiness

Where a multi-family central water heating system using gas or propane is installed, the construction drawings shall indicate a pathway for routing of conduit from the equipment using gas or propane to the point of interconnection with the electrical service.

J. Amend Subchapter 11, Section 170.1, paragraph 1, to read as follows:

A building complies with the performance approach if the <u>TDV</u> energy budget calculated for the proposed design building under Subsection (b) <u>is no greater than the TDV energy budget calculated for the Standard Design Building under Subsection (a). Additionally:</u>

- 1. The source energy budget of a newly constructed multifamily building (with three or less habitable stories) shall be at least 9% lower than that of the Standard Design Building.
- 2. The source energy budget of newly constructed multifamily buildings (with four or more habitable stories) shall be at least 3% lower than that of the Standard Design Building.







New Buildings Reach Code

City Council Public Hearing – September 19, 2023









Recommendation

Introduce an Ordinance entitled "AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN LUIS OBISPO, CALIFORNIA, ADOPTING LOCAL AMENDMENTS TO PART 6 OF THE BUILDING CONSTRUCTION AND FIRE PREVENTION CODE, 2023," amending San Luis Obispo Municipal Code Chapter 15.04.060 – "Amendments – Energy Standards".



Agenda

- 1. Background
- 2. Proposed Reach Code
- 3. Next Steps

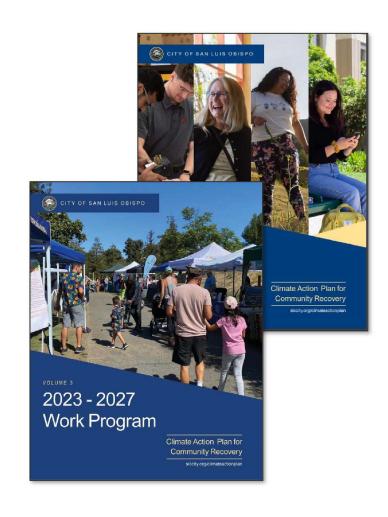




Background

Policy Background

- Resolution 11159 (2020 Series) adopts a communitywide goal of carbon neutrality and a building sector goal of no net new increase of building GHG emissions as the result of new buildings starting in 2020.
- Ordinance 1717 (2022 Series) adds Chapter 8.11 (All-Electric Buildings) to the Municipal Code requiring that all new buildings be all-electric, with certain limited exceptions.





CITY OF SAN LOIS ORISPO

Ninth Circuit Ruling

- California Restaurant Association v. City of Berkeley ruling said that a
 Berkeley ordinance requiring all-electric new buildings was pre-empted by
 the federal Energy Policy and Conservation Act of 1975 (EPCA) and was
 therefore invalid.
- Administrative Order 01 92023 Series) temporarily suspends enforcement of the City's all-electric new building requirements.
- 2023-25 Financial Plan Climate Action Major City Goal 4.1.h directs staff to continue to monitor impacts to Municipal Code 8.11 (All-Electric New Buildings), and if necessary, return to Council with an alternative approach to achieving the City's climate action goals as they relate to new buildings.



Justification for Developing an Alternative Approach

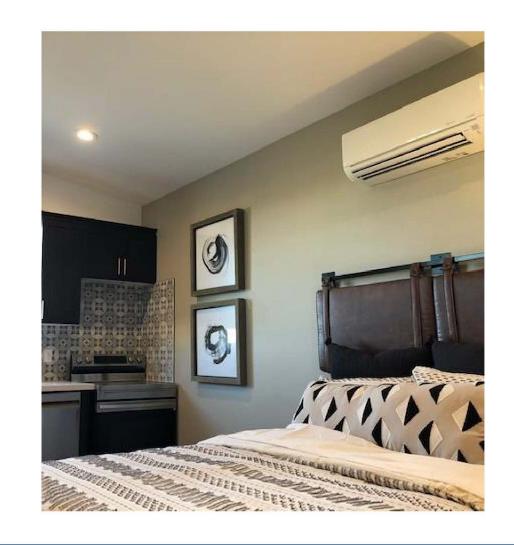
- The California Restaurant Association v. City of Berkeley appeal is not likely to be resolved in a timely manner;
- There are no imminent statewide fixes for the problem
- The City has already started to receive mixed-fuel building permit applications





Proposed Approach

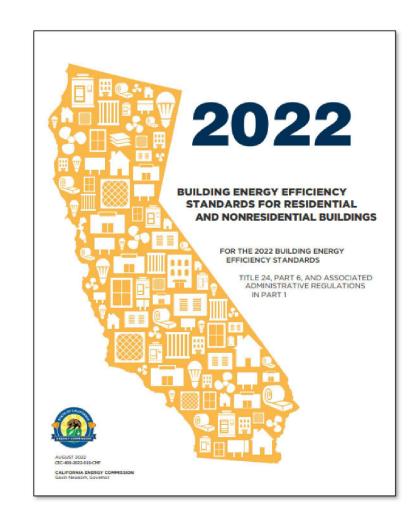
- Adopt increased building energy performance requirements via local amendments to the California Energy Code (also known as a "reach code")
 - The California Restaurant Association v. City of Berkeley decision limits how the City can regulate emissions
 - Local amendments to the California Energy Code are expressly allowed by state law and are consistent with federal law





California Energy Code Basics

- The California Energy Code has the benefit of reducing emissions through regulating energy demand caused by buildings
- "Reach Code" refers to the local amendments to energy standards that cost effectively reduce energy from new buildings in compliance with state and federal law
- "Source energy" represents the underlying fuel sources such as coal, natural gas or solar used to power building systems and equipment.





Approaches to Compliance

| ENERGY DESIGN RATINGS | | | | | | |
|-----------------------|--|------|---|---------------------------------------|-----|-----|
| Energy Design Ratings | | | Compliance Margins | | | |
| | Windows and Window | | Efficiency ¹ EDR (EDR2efficiency) | Total ² EDR (EDR2total) | | |
| Standard Design | 29.7 | 27.2 | 31.8 | | | |
| Proposed Design | 26.7 | 20.5 | 28.2 | 3 | 6.7 | 3.6 |

RESULT³: PASS

- Standard Design PV Capacity: 2.04 kWdc
- PV System resized to 2.04 kWdc (a factor of 2.044) to achieve 'Standard Design PV' PV scaling



¹Efficiency EDR includes improvements like a better building envelope and more efficient equipment

²Total EDR includes efficiency and demand resp<mark>onse</mark> measures such as photovoltaic (PV) system and batteries

³Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

Proposed Reach Code





Proposed Standards

| Building Type | Amended Performance Requirement |
|---|---|
| Single Family Residential buildings | Exceed the standard EDR1 requirement by at least 6 points |
| Multi-Family Residential (Low) | Exceed the standard Source Energy requirement by 9% |
| Multi-Family Residential (High) | Exceed the standard Source Energy requirement by 3% |
| Non-Residential | Exceed the standard Source Energy requirement by 7% |
| Nonresidential and Multi-Family Residential Buildings w/Central Water Heating | Illustrate conduit pathway from fuel fired system to electrical service |



CITY OF Serb Louis Orispo

Example of Compliant Single-Family Home

Exceeds the Standard EDR1 Score by at least 6 points

| ENERGY DESIGN RATINGS | | | | | | |
|-----------------------|-------------------------|---|---------------------------------------|-------------------------|---|---------------------------------------|
| | Energy Design Ratings | | | Compliance Margins | | |
| | Source Energy (EDR1) | Efficiency ¹ EDR (EDR2efficiency) | Total ² EDR (EDR2total) | Source Energy (EDR1) | Efficiency ¹ EDR (EDR2efficiency) | Total ² EDR (EDR2total) |
| Standard Design | 35.6 | 45.8 | 31.3 | | | |
| Proposed Design | 26.5 | 39.6 | 28.4 | 9.1 | 6.2 | 2.9 |

RESULT³: PASS

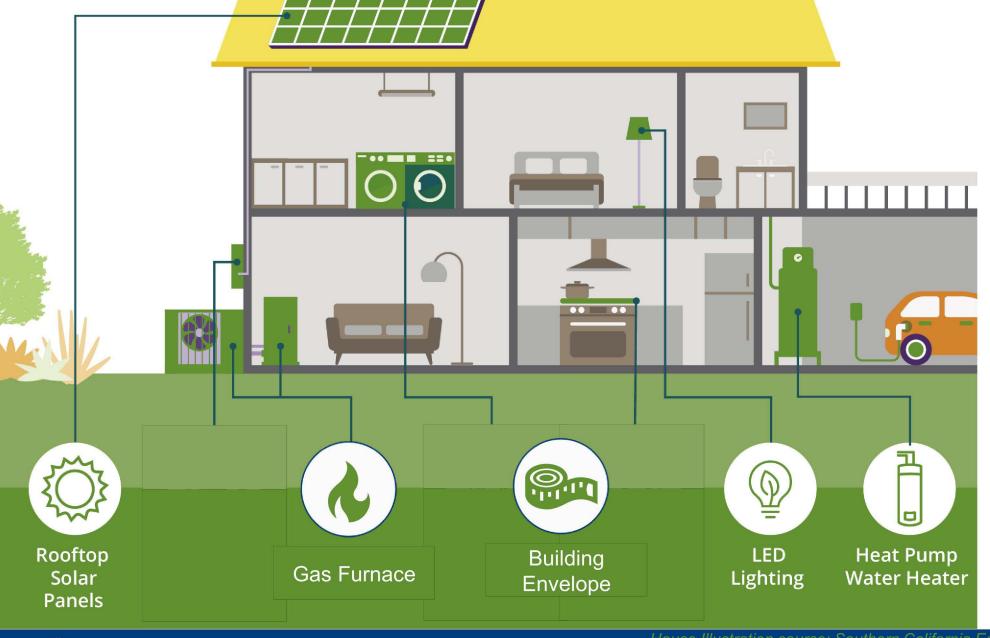
- Standard Design PV Capacity: 3.46 kWdc
- PV System resized to 3.46 kWdc (a factor of 3.459) to achieve 'Standard Design PV' PV scaling



¹Efficiency EDR includes improvements like a better building envelope and more efficient equipment

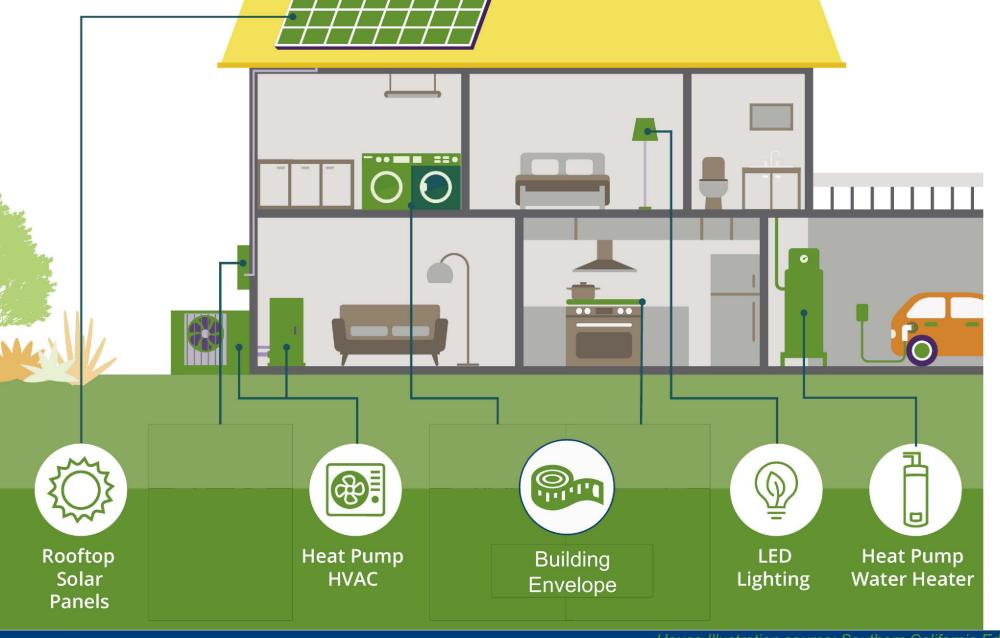
²Total EDR includes efficiency and demand resp<mark>onse</mark> measures such as photovoltaic (PV) system and batteries

³Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded



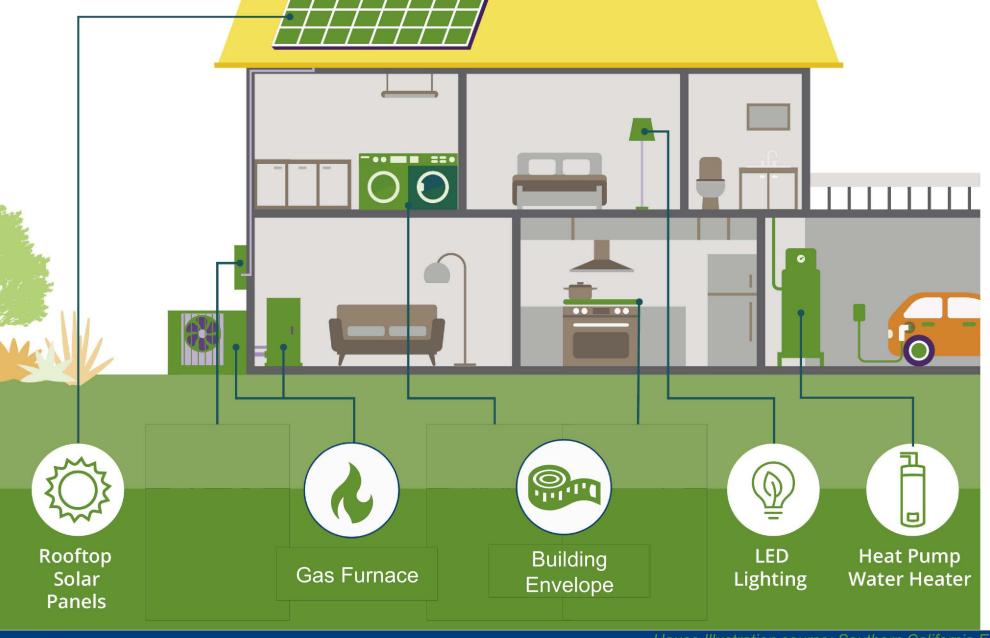
Standard
Design
Building





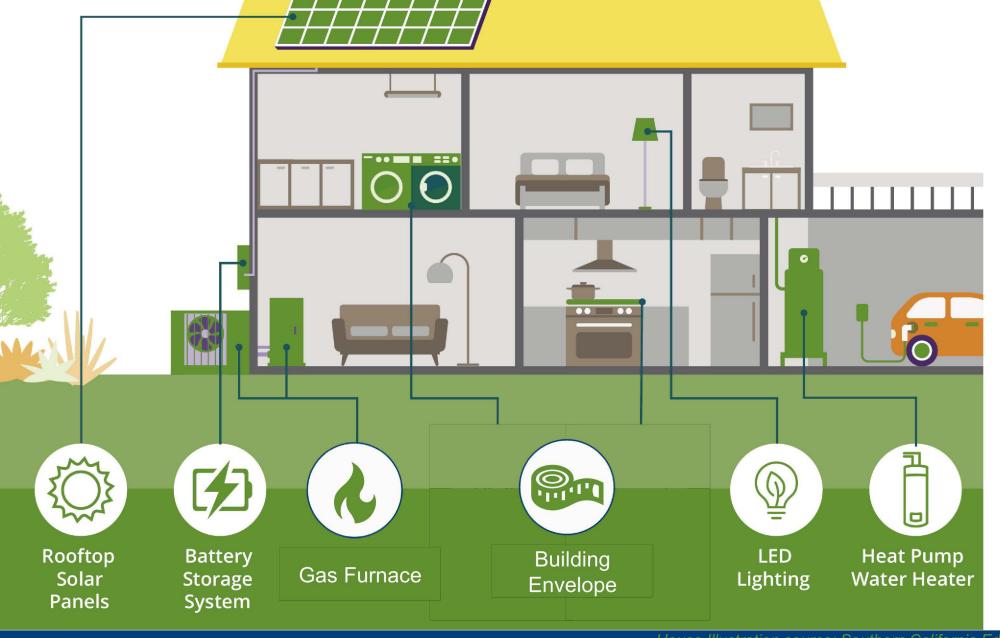
Source Energy (EDR1) +6.0





Standard
Design
Building





Source Energy (EDR1) >6.0



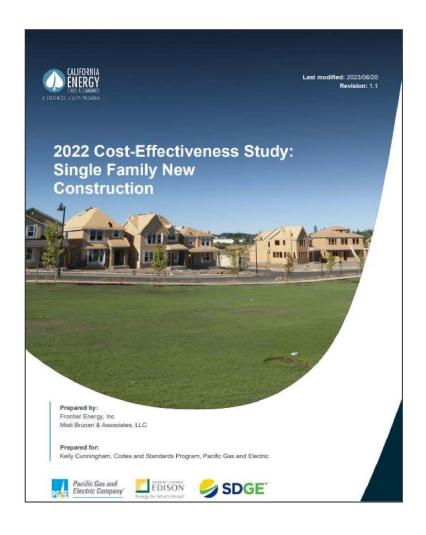


| Standard Design Building | |
|---|-----|
| Add Heat Pump HVAC | +7% |
| Keep gas furnace and add efficiency and additional solar | >7% |



Cost Effectiveness

- The City is required to illustrate cost effectiveness and energy savings
- California Energy Codes and Standards Statewide Utility program develops cost effectiveness studies
- The City finds that all of the proposed local amendments that affect energy use are:
 - More efficient than the base code
 - Cost effective on a TDV basis





City of San Lois Orispo

Resources for Lower Cost All-Electric Buildings

- California Electric Homes
 - Direct rebates for new all-electric market rate residential units (including ADUs and manufactured homes)
- BUILD
 - Direct rebates for deed restricted allelectric affordable housing
- Central Coast Community Energy
 - Direct rebates for all-electric affordable housing and market rate ADUs
- 3C-REN
 - "Code Coach" support















Public Engagement

- Extensive outreach in 2019, 2020, and 2022.
- In support of the proposed reach code, staff conducted community outreach as follows:
 - Developer's Roundtable (e.g., developers, architects, engineers, design professionals, and property owners)
 - Green and Healthy Homes Roundtable (e.g., community-based organizations, technical experts, and key non-profit housing providers)



CITY OF SAID LOIS ORISPO

Next Steps

Next Steps

| Task | Timeframe |
|---|---------------------|
| Second reading of the draft Ordinance (Attachment A) and submittal to the California Energy Commission. | |
| Receive approval from the California Energy Commission | November - December |
| Reach code goes into effect | January 1, 2024 |



Recommendation

Introduce an Ordinance entitled "AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SAN LUIS OBISPO, CALIFORNIA, ADOPTING LOCAL AMENDMENTS TO PART 6 OF THE BUILDING CONSTRUCTION AND FIRE PREVENTION CODE, 2023," amending San Luis Obispo Municipal Code Chapter 15.04.060 – "Amendments – Energy Standards".

