REPORT TO CITY COUNCIL

DATE: JANUARY 11, 2023

TO: HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL

FROM: NATHAN HAMBURGER, CITY MANAGER

BY: DENICE THOMAS, COMMUNITY DEVELOPMENT DIRECTOR
LUKAS QUACH, BUILDING OFFICIAL

SUBJECT: INTRODUCTION OF AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AGOURA HILLS, CALIFORNIA, AMENDING THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE TO ESTABLISH THE CITY OF AGOURA HILLS REACH CODE AND ADOPT ALL-ELECTRIC BUILDING REQUIREMENTS

The City of Agoura Hills (the City) is committed to providing a more livable, equitable, and economically vibrant community through the reduction of greenhouse gas (GHG) emissions. On April 27, 2022, the City Council adopted the Climate Action and Adaptation Plan (CAAP) to strengthen the City's commitment to climate action and sustainability. The goal of the City's CAAP is to develop policies and programs to reduce reliance on fossil fuels with the co-benefits of cleaning up the air, providing a cost savings to residents, and building resiliency during climate change.

As a part of the CAAP, the City performed a baseline analysis of the community-wide GHG emissions inventory. Figure 1 represents the year for which the most recent community-wide sectors data was available. The analysis shows that the largest portion of the City's 2018 emissions were from transportation (73%), followed by emissions from electricity (12.67%) and natural gas use in buildings (9.99%)[1].

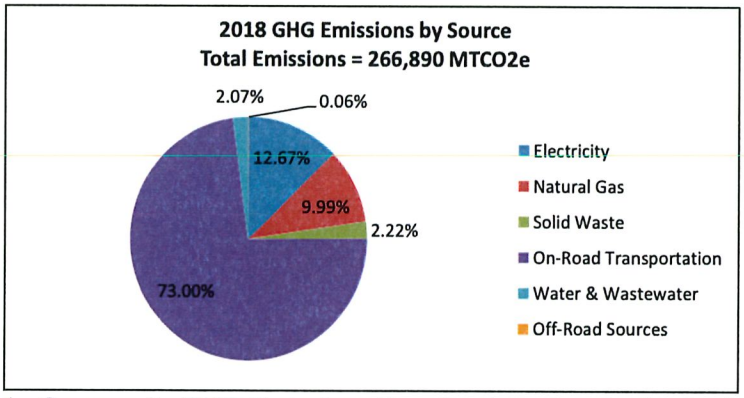

Figure 1 - Community GHG Emissions Baseline Inventory by Sector for Year 2018

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[1] City of Agoura Hills. (2021, March). City of Agoura Hills CAAP. https://www.agourahillscity.org/CAAP

The CAAP also looks at estimated future emissions and considers business-as-usual and adjusted business-as-usual scenarios that assume reduction measures implemented through legislation at the State level and local level. The Global Warming Solutions Act of 2006 (AB 32) set the goal to reduce statewide GHG emissions to 1990 levels by 2030. California Executive Order B-30-15 raised the statewide GHG reduction target to 40% below 1990 level by 2030. The California Global Warming Solutions Act of 2016 (SB 32), by lead author State Senator Fran Pavley, expanded on AB 32 to reduce GHG emissions, sets into law the mandated reduction target in GHG emissions, as written into California Executive Order B-30-15.

Consistent with the State's AB 32 and SB 32 GHG reduction target, the City reached the goal of reducing emissions to 1990 levels by the year 2020 (or 15% decrease from 1990 levels). The City has also set a 2030 reduction target to reduce emissions to 49% below 2008 levels. Electricity and natural gas usage in buildings are the second and third largest contributors, after transportation within Agoura Hills. The City acknowledges that steps can be made to reduce GHG emissions in these sectors by increasing building electrification and de-carbonization efforts.

Agoura Hills has developed the following climate action priorities related to local reach codes, as found in Chapter 3 of the CAAP: 1) requiring that all new residential developments achieve 100% electrification with exceptions, 2) considering mandates or incentives for developers that provide 100% electrification for new commercial development, and 3) decreasing GHG Emissions through increasing clean energy use. The City already participates in the local Community Choice Aggregation, Clean Power Alliance, and opted into the default option of 100% renewable energy. Residential customers made the switch to CPA in February 2019 and non-residential customers followed in May 2019. As of June 2022, Agoura Hills had a 94% participation rate. Buildings powered by electricity that are also fueled by renewable or carbon-free energy sources (i.e., solar or wind) have a positive impact in de-carbonization and GHG reduction efforts.

The proposed Ordinance is intended to improve community health, safety, and resilience by reducing the emissions of greenhouse gases and improving indoor air quality of new buildings. These goals are achieved by requiring all-electric building construction for both new residential and new commercial buildings, as defined in Article VIII Chapter 2 of the Agoura Hills Municipal Code.

National and Regional Legislative Context

Local governments play a key role in addressing the ongoing climate crisis. The actions taken on a local level directly support the climate action efforts happening at the state and federal levels. Recent national and state legislation have shifted the role of governments in climate change mitigation. By way of Federal Executive Order 14008, signed January 27, 2021, President Biden called for a "government-wide approach to climate change". This call to action requires active coordination efforts between all facets of government and strong collaboration with community-based organizations, the private sector, and the City's local workforce.

On August 16, 2022, President Biden signed the Inflation Reduction Act dedicating significant funding to combat the climate crisis. Examples of the criteria within the Inflation Reduction Act include rebates and tax credits for efficient appliances and home upgrades, tax credits for rooftop solar systems, and tax credits for electric vehicles. It also invests in technologies like solar, wind, and clean hydrogen, with provisions that encourage domestic sourcing of materials. The law is projected to yield significant reductions to GHG emissions, with independent and official government projections agreeing it will reduce about one billion metric tons of annual emissions in 2030, with total annual emissions reaching about a 40% drop below 2005 levels in the year 2030.

Furthermore, California Executive Order B-55-18, issued by former Governor Brown in 2018, set a statewide goal to achieve carbon neutrality as soon as possible, no later than 2045. The expectation is to achieve and maintain net negative emissions thereafter. In 2021, Governor Newsom announced that the California Public Utilities Commission must establish a more ambitious electricity procurement target by 2030, and that the California Air Resources Board (CARB) will accelerate progress and evaluate different pathways for achieving carbon neutrality by 2035. CARB is also directed through AB 32 to develop a scoping plan that details how the State of California will achieve the established GHG reduction goals.

Also, in January 2021, in the State of California, Governor Newsom issued California Executive Order N-79-20. The order called for the phasing out of new internal combustion passenger vehicles by 2035 and established that 100% of in-state sales of new passenger cars and trucks to be zero-emission by 2035.

The evolving regulatory efforts are long-term goals and require local governments to actively participate in the mitigation of the climate crisis. To support climate action goals, California jurisdictions are adopting local building electrification and electric vehicle charging infrastructure reach codes.

Reach Code Amendment Process

Every three years, the State of California adopts new building standards that are organized in Title 24 of the California Code of Regulations, referred to as the California Building Standards Code. This regular update is referred to as a "code cycle". The latest code cycle was adopted by the City Council on November 9, 2022, and became effective on January 1, 2023. Cities can also adopt the Green Building Standards Code (Title 24, Part 11) or the Energy Code (Title 24, Part 6) requirements that require items that are above and beyond what is included in the State codes.

For a jurisdiction to adopt additional Green Building Standards Code or Energy Code requirements, the code amendments must be filed with the State. In addition, the California Energy Commission (CEC) requires that a cost-effectiveness study be conducted and filed in the case of local amendments to the California Energy Code. It is required that the City demonstrate to the CEC, using a cost-effectiveness study, that the amendments to the Code are financially responsible and do not represent an unreasonable burden to the non-residential and residential applicants.

Alternatively, the City may also adopt electrification ordinances that amend different parts of the California Building Standards Code or may amend other state or municipal codes. The type of amendment will depend on the specific requirements that must be followed for the ordinance to be legally enforceable. Ordinances that determine the fuel-type (all-electric construction) may be amended through Title 24, Part 11 (CALGreen) or as a municipal code amendment (Health and Safety Code) and only require the review and approval by the Building Standards Commission (BSC).[2] Requirements solely based on fuel type (all-electric) do not require supporting cost-effectiveness analyses and bypass the review and approval process with the CEC.

Statewide Cost-Effectiveness Study for Energy Code Reach Codes

Funded by the California investor-owned utilities (IOUs), the California Statewide Codes and Standards Program (Statewide Program) led the development of a cost-effectiveness study for Energy Code reach codes that examined different performance-based approaches for new construction of specific building types. There are two kinds of reach code approaches: performance-based ordinances and prescriptive ordinances.

Performance-based ordinances mandate an increase in the overall energy efficiency required, but leave flexibility for the builder on how to achieve this goal. In contrast, prescriptive ordinances mandate the implementation of a specific measure (such as solar panels or cool roofs). The Statewide Program's analysis focused on performance-based ordinances, but some conclusions about prescriptive measures can be made from the results.

Building Prototypes and City Permit Data Analysis

The Statewide Program's analysis estimated the cost-effectiveness of several new construction building prototypes including one-story and two-story single-family homes, a two-story and five-story multifamily building, a three-story office building, a one-story retail building, and a four-story hotel.

City staff performed an analysis of the most recent permit data to explore specific building types and sizes that would be appropriate for a possible energy reach code. Over the past two years, the city has averaged three (3) new residential construction permits, seven (7) new accessory dwelling unit (ADU) permits, and three (3) new commercial construction permits. At the time of the permit analysis, five new construction projects were currently undergoing planning entitlement. This included one (1) 60-unit Multi-family Residential Building, one (1) 60-unit Townhouse, one (1) 76-unit Senior Care Facility, one (1) 78-unit Residential Mixed-use Building, and two (2) Commercial Buildings (~35,000 sq ft). The single-family homes, multi-family homes, and office building prototypes are directly applicable to the City of Agoura Hills development. The single-family homes, multi-family homes, and office building prototypes are directly applicable to the City of Agoura Hills development.

2022 California Energy Code New Construction Highlights

[2] Frontier Energy, Inc. Misti Bruceri & Associates, LLC. *2022 Single Family New Construction Cost-effectiveness Study*. (September 12, 2022).

There are numerous ways the new 2022 California Energy Code differs from the 2019 California Energy Code, particularly as it pertains to new residential and non-residential buildings. The main areas of focus for new construction in the 2022 Energy Code encourages electric heat pump technology, establishes electric-ready requirements when natural gas end uses are installed, expands the previous solar photovoltaic (PV) system requirements and battery storage standards, and strengthens ventilation standards to support improved indoor air quality.

In the 2022 Energy Code, the CEC established heat pumps as the prescriptive baseline for new construction. This change sets energy budgets based on efficient heat pumps for space or water heating with the goal of encouraging builders to install heat pumps over gas-fueled heating, ventilation, and air-conditioning units. Additionally, a performance credit is available for buildings that are designed as all-electric. The 2022 Energy Code is considered "electric preferred" because of this performance credit.

New residential buildings require "electric-readiness" under the 2022 Energy Code. A dedicated 240-volt outlet and space (with plumbing for water heaters) is required for each installed gas-fueled appliance so electric appliances can eventually replace the installed gas appliances. Additionally, new residential development will be required to comply with increased minimum kitchen ventilation requirements to better exhaust pollution from gas cooking and improve indoor air quality. In addition to PV requirements, new residential buildings will be subject to battery-ready requirements or "Energy Storage System" readiness.

The 2022 Energy Code also includes updated requirements for new nonresidential buildings. A substantial change establishes combined solar PV and battery standards for specific commercial occupancy types. Select nonresidential buildings, such as, hotels/motels, retail, offices, including high-rise multifamily buildings, are required to install systems that are sized to maximize onsite use of solar energy and avoid electricity demand during times when the grid must use gas-powered plants. The 2022 Energy Code also includes improved building envelope efficiency standards and grid integration equipment standards like demand-responsive controls.

2022 CALGreen Electric Vehicle Charging Highlights

The California BSC approved the new version of CALGreen in December 2022. CALGreen is the State's mandatory green building code that contains additional voluntary provisions that local jurisdictions can adopt. Many of the updates impact electric vehicle (EV) infrastructure to advance the state's strategic goals of electrification as a path towards decarbonization. The changes also support California Executive Order N-79-20, which mandates 100% of in-state sales of new zero-emission passenger vehicles by 2035. Code provision changes around EV charging extend to residential single-family, multi-family, hotels/motels, and nonresidential new construction.

2022 CALGreen also contains new provisions that allow installation of an automatic load management system to reduce the maximum required electrical capacity to each EV charging space when low power Level 2 EV charging receptables or Level 2 Electric Vehicle Supply Equipment (EVSE) are installed beyond the minimum code requirements. The following tables outline the mandatory 2022 CALGreen EV charging requirements.

Occupancy Type	2022 CALGreen Mandatory Provision
One- and Two-Family Homes, Townhomes with Private Garages	**New Construction:** • All EV Capable • Raceway • Service Panel and/or Subpanel Capacity and Space(s)
Multi-Family Dwellings, Hotels and Motels	**New Construction:** • 10% of Parking Spaces to be EV Capable • 25% of Parking Spaces Require EV Ready w/ Low Power Level 2 Receptacles • 5% of Parking Spaces in Buildings with 20+ Units Require Level 2 EV Supply Equipment (EVSE) • Spaces Identified on Plans
	Existing Buildings: • 10% of New Added Parking Spaces for Existing Buildings to be EV Capable Spaces • 10% of Altered Spaces to be EV Capable

Table I - Mandatory 2022 CALGreen Requirements for Residential Construction

Total Number of Parking Spaces	Number of Required EV Capable Spaces	Number of EVCS (EV Capable provided with EVSE)
0–9	0	0
10–25	4	0
26–50	8	2
51–75	13	3
76–100	17	4
101–150	25	6
151–200	35	9
201+	20% of total parking spaces	25% of EV Capable Spaces

Table II - Mandatory 2022 CALGreen Requirements for Nonresidential New Construction

EV requirements for nonresidential new construction depend on the total number of parking spaces and require a combination of EV Capable Spaces and/or EV Capable Spaces with EVSE. 2022 CALGreen also consists of mandatory requirements for future installation of medium- and heavy-duty EVSE. The building types impacted by this requirement extend to grocery stores, retail, and warehouse buildings with planned off-street loading spaces. Depending on the building size and number of off-street loading spaces, these building types must include additional capacity for raceway, busway, transformer, and the main service panel or subpanel to accommodate dedicated circuits for future EVSE installations.

Building Electrification Reach Codes

Building electrification reach codes focus on: 1) prioritizing electricity end uses over natural gas end uses; and/or, 2) requiring enhanced efficiency above statewide energy code standards.

Building appliance electrification options in California can generally be broken into five categories:

- APPROACH 1 - Efficiency: All new construction exceeds minimum energy code (via Energy Code, Title 24, Part 6).
- APPROACH 2 - All-Electric Preferred: Allows mixed-fuel buildings with high energy performance, requiring additional energy efficiency measures, battery storage, and/or pre-wiring for buildings to be electric-ready (via Energy Code, Title 24 Part 6).
- APPROACH 3 - All-Electric Required: Appliances must be electric (via Green Building Code, Title 24 Part 11).
- APPROACH 4 - All-Electric Municipal Ordinance: No gas hookup allowed (via municipal ordinance).
- APPROACH 5- Electric Only Plus Efficiency: All new construction is electric only and exceeds minimum energy code (via Green Building Code, Title 24 Part 11 and Energy Code, Title 24 Part 6).

Each option for building electrification has benefits and challenges. Considerations for each of the reach code approaches listed above is described further below.

APPROACH 1 - Efficiency: The Efficiency reach code amends the California Energy Code (Title 24, Part 6) and requires all new construction of any kind (mixed-fuel and all-electric) exceed minimum energy code standards. This approach achieves results higher than the base energy code while requiring enhanced efficiency for buildings constructed with either fuel type. A benefit of this option is that it preserves the choice of fuel type for the applicant, while requiring enhanced efficiency requirements. This approach also allows for specific measures, such as cool roof or additional PV, to be incorporated into the requirements. This type of ordinance must be approved by the CEC and re-adopted with every code cycle.

APPROACH 2 - All-Electric Preferred

The all-electric preferred approach encourages electrification by giving builders two options: 1) achieve a higher energy efficiency level than the California Energy Code using mixed fuels (fuel gas and electricity); or 2) build an all-electric building at the minimum efficiency as required in the California Energy Code. The all-electric preferred model is NOT recommended because the California Energy Code is already an electric-preferred model. There are limited incremental greenhouse gas emissions reduction that can be attained by pursuing this model, compared to the All-Electric Required Municipal Ordinance or All-Electric Required Building Code Amendment. This type of ordinance must be approved by the CEC and re-adopted with every code cycle.

APPROACH 3 - All-Electric Required

The all-electric required model requires specific end-uses to install electric appliances, including space heating, water heating, clothes-drying, and cooking, with limited exceptions. This approach does not require the City to gain approval from the CEC or submit supporting cost-effectiveness analyses. The requirements would be locally amended under the California Green Building Standards Code (Title 24, Part 11) and would be required to be renewed every three years, along with the typical building code cycle.

APPROACH 4 - All-Electric Municipal Ordinance

The all-electric municipal option, also referred to as gas prohibitions, are more aggressive than the all-electric and electric-preferred model reach codes. These ordinances eliminate the installation of gas infrastructure at the property with limited exceptions, and thus guarantee significant decreases in greenhouse gas emissions. This approach is the longest lasting, as it is not tied to the three-year building code cycle and instead uses jurisdictional authority to amend the Health and Safety Code.

APPROACH 5- Electric Only Plus Efficiency

The Electric Only Plus Efficiency approach requires appliances to be electric and includes a package of efficiency and solar (PV), with some exceptions. This type of ordinance must be approved by the CEC and re-adopted with every code cycle. The Statewide Reach Code Team has characterized this approach as the pathway that will have the biggest impact in reducing GHG emissions.

The City has the authority to adopt specific exemptions for the proposed building electrification reach code requirements. The exemptions considered for adoption are detailed in the discussion section below.

Proposed Policy Components

The proposed Reach Code Ordinance requires all-electric new buildings with exceptions via local amendment to the 2022 California Green Building Standards Code. The proposed Reach Code is based on APPROACH 3. City staff recommends this approach based on previous City Council direction for staff to explore an all-electric reach code, feedback from the community and industry stakeholders, and recommendations from the City's Environmental Responsibility Subcommittee (City's ERS). The proposed Ordinance would be triggered on permit applications for the following project types: 1) new one-and two-family residential, 2) new detached Accessory Dwelling Units (ADUs), 3) new low-rise and high-rise multi-family residential, 4) new commercial "non-residential" office, retail, restaurants, and 5) new hotel/motel construction.

Furthermore, the Reach Code Ordinance also includes increased electric vehicle (EV) charging infrastructure requirements beyond California Green Building Code standards. Staff recommends that the building electrification reach code requirements and the EV charging requirements be housed in the same ordinance to streamline the administrative element of the adoption process and so all green building "reach" measures can be found in the same place within the municipal code.

Community and Stakeholder Engagement

On June 7, 2022, the City of Agoura Hills hosted the "Energy Reach Code Policy Community Meeting" in the Council Chambers. The objective of the two-hour public engagement meeting was to: 1) provide educational background on Energy Reach Codes; 2) review the Energy Reach Code Adoption Process; 3) respond to questions and comments regarding the local reach Code pathways; and, 4) share next steps related to policy development and adoption. Participants were given the opportunity to ask questions about the potential pathways and offer recommendations on exemptions to the potential adopted reach code.

A community member commented that the City should consider exemptions from the electric requirements for businesses, including exceptions for commercial cooking. Induction appliances minimize indoor air pollution and burn risk as induction technology coveys less heat and directly heats the cookware (stainless steel or cast iron).[3] However, many individuals are hesitant to use induction technology due to the preference of cooking with a flame. Southern California Edison (SCE) also maintains a Table-Top Induction Lending Program and Tool Lending Library. The program gives customers the opportunity to borrow a table-top induction range, and energy and building measurement tools, for free for up to two weeks.[4]

Staff also received comments in favor of exemptions for fuel-gas in laboratory spaces within a new building. An exception for laboratory spaces allows the City to still require electric end uses for other components of the building while giving the applicant flexibility for laboratory settings. Laboratories pose specific challenges to all-electric construction since these buildings often contain specialized equipment that require gas.

Other exceptions discussed with the City's ERS included new swimming pools and spas, due to the limited technology currently available. Staff and the ERC acknowledged that the Statewide Reach Code Program plans to provide an electric pool heating and spa analysis and prefers to wait until the studies are published to support mandating all-electric requirements for pools and spas.

Multiple community members expressed concern over power outages and the reliability of the electric grid. A representative from SCE addressed comments raised by the community during the engagement meeting. According to SCE, the grid can handle the increased load from electric vehicles and all-electric buildings.[5] SCE's vision is to provide an electric grid that enables the efficient integration of clean resources while also adapting to other needs driven by customers and climate change. Additionally, SCE is proposing to invest more than $5 billion annually in the grid, including improvements to build resiliency. During the meeting, the SCE representative also clarified that the main concern for SCE is working with the City and the developer of any new construction (all-electric or mixed-fuel) to ensure the utility has enough lead time to guarantee there is enough capacity on the respective circuit to serve the new building regardless of the fuel-type in the building.

Many community members also commented in favor of providing incentives to encourage development and businesses in the area. One community member shared they would also like to see additional outreach and education on the health and environmental benefits of electrification and energy efficiency. In response, the City published an energy reach code and building electrification webpage that includes basics on the benefits of electrification, financing mechanisms, including rebates and incentives for electrification

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[3] Rocky Mountain Institute (RMI). Gas Stoves: Health and Air Quality Impacts and Solutions. https://rmi.org/insight/gas-stoves-pollution-health/

[4] Southern California Edison. Table-Top Induction Lending Program and Tool Lending Library. https://sce.myturn.com/library/

[5] Southern California Edison. Reliability Frequently Asked Questions. https://download.newsroom.edison.com/create_memory_file/?f_id=604f9199b3aed31a1a90ac3a&content_verified=True

and information on various electric appliances, such as heat pump water heaters and induction cooktops/ranges.[6]

One community member asked if the City would consider electrification or efficiency reach codes for existing buildings and if there are analyses on the impact of electrifying existing buildings. Staff clarified that the City is currently considering reach codes for new construction only. All-electric buildings avoid the need for gas infrastructure going to and within buildings, which lowers overall construction costs of a project. The 2019 Statewide Cost Effectiveness analyses found that costs for all-electric new construction were similar or less than those for mixed-fuel construction.[7] Existing buildings pose unique challenges and require a well-developed strategic framework when considering enhanced efficiency or electrification requirements.

Despite concerns over restricting natural gas in new buildings due to power outages, increasing electricity demand, and the reality that the electric grid is not currently 100% renewable, the overall feedback from the community was in favor of an all-electric reach code, with exceptions for specific end uses. As a result of the feedback received from the community, staff learned of the following preferences for potential all-electric reach codes:

- All-electric codes to apply to new construction only
- Provide a "grace period" after effective date for entitled projects
- Natural gas exemptions for specific end uses (i.e., commercial kitchen)
- Align with the building code cycle (effective January 1, 2023)
- Provide education on electrification and incentivize when possible

Proposed Reach Code Exceptions

The following are proposed limited exceptions that are included in the reach code ordinance. These exceptions reflect feedback received by the community and discussions held in two separate meetings with the City's ERS.

1. Attached Accessory Dwelling Unit (ADU) and/or Junior ADU.
2. Multi-family residential building projects that have been granted planning entitlements before the effective date of the ordinance may use fuel gas for water heating systems.[8]
3. Swimming pools and spas.
4. Rebuilding of existing residential units after a natural disaster such as wildfires, floods, earthquakes, etc.
5. Commercial food heat-processing equipment.
6. Specialized equipment for laboratories uses.
7. If the applicant demonstrates that it is physically or technically infeasible to build without fuel gas infrastructure the local enforcing agency may grant an exception.

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[6] City of Agoura Hills. Energy Reach Code webpage. https://www.agourahillscity.org/energyreachcode

[7] Frontier Energy Inc. and Misti Bruceri & Associates, LLC. 2019 Cost-Effectiveness Study: Low-Rise Residential Construction and 2019 Nonresidential New Construction Reach Code Cost Effectiveness Study prepared by TRC and Energy Soft.

[8] Staff seeks Council direction whether to include or exclude this exception in the proposed Ordinance.

8. Back-up power for critical facilities necessary to protect public health or safety in the event of an electric grid outage.

Where buildings utilize these exceptions, it is customary to require the location of fuel gas appliances to be prepared for future electrification to reduce future retrofit costs.

The intent of Exception 2 described above, is to avoid costly design changes or time burden on the applicant if the new multi-family construction project has already received planning entitlement approval. This exception can be relevant for cities that have not previously adopted an electrification reach code and may have entitled projects that are not subject to the reach code. There was not an agreement between the two Councilmembers on the City's ERS regarding including or excluding this exception. Staff asks for City Council direction on including or omitting this exception for new residential multi-family projects.

Proposed Electric Vehicle (EV) Charging Infrastructure Requirements

2022 CALGreen's most impactful provisions focus on EV infrastructure to advance the state's strategic goals of electrification as a main driver towards decarbonization. At the recommendation of the City's CAAP consultant, staff is proposing that the City Council adopt enhanced EV charging infrastructure requirements for new residential and new commercial buildings using the 2022 CALGreen Tier 1 reach provisions.

Table 3 outlines the proposed residential EV reach code requirements as provided by the 2022 CALGreen Tier 1 voluntary appendix, A4.

Occupancy Type	2022 CALGreen Tier 1 Provisions
One-and Two-Family Homes, Townhomes with Private Garages	**New Construction:** • All EV Ready • Raceway and Branch Circuit installed • Service Panel and/or Subpanel Capacity and Space(s)
Multi-Family Dwellings, Hotels and Motels	**New Construction:** • 10% of parking spaces to be EV Capable • 35% of parking spaces require EV Ready w/Low Power Level 2 Receptacles • 10% of parking spaces in buildings with 20 + units require Level 2 EV Supply Equipment (EVSE) • Spaces identified on plans

Table III - 2022 CALGreen Residential Tier 1 Requirements

Table 4 outlines the proposed nonresidential EV reach code requirements as provided by the 2022 CALGreen Tier 1 voluntary appendix, A5.

Total Number of Parking Spaces	Number of Required EV Capable Spaces (EVCS)	Number of EVCS (EV Capable provided with EVSE)
0–9	2	0
10–25	5	2
26–50	11	4
51–75	19	5

Total Number of Parking Spaces	Number of Required EV Capable Spaces (EVCS)	Number of EVCS (EV Capable provided with EVSE)
76–100	26	9
101–150	38	13
151–200	53	18
201+	30% of total parking spaces	33% of EV Capable Spaces

Table IV - 2022 CALGreen Nonresidential Tier 1 Requirements

Rebates and Incentives to Support Building Electrification

Due to Statewide goals aimed at decreasing GHG emissions and an increase in local California jurisdictions committing to the prioritization of building decarbonization and electrification, there are numerous rebate and incentive programs available to homeowners and building owners as outlined below. The State IOUs are also actively working on providing additional programs to support building decarbonization throughout the State. The following highlights some of the programs available today or that are expected to become available soon.

- **Building Initiative for Low-Emissions Development Program (BUILD):** The BUILD Program is a residential building decarbonization program. BUILD provides incentives and technical assistance to support the adoption of advanced building design and all-electric technologies in new, low-income all-electric homes.
- **TECH Initiative:** TECH Clean California is a $120 million initiative designed to help advance the state's mission to achieve carbon neutrality by 2045. TECH provides comprehensive guidance on product incentives, pilots, workforce development and training opportunities, and local and state policies that impact the market.
- **Go Green Financing**: An official State of California initiative, GoGreen Financing provides easy access to private financing with exceptional terms and qualified professional contractor services.
- **California Electric Homes Program (CalEHP):** The CalEHP Program is currently under development, and not yet accepting applications. The program will provide incentives for the construction of all-electric market-rate residential buildings. The program will provide incentives for the installation of energy storage systems to encourage the deployment of near-zero-emission building technologies.

Resource Impacts

Resource impacts from the adoption of the proposed Ordinance will be the additional staff time in plan checking and inspection requirements. The green building amendments parallel the structure and terms of the State code and, as such, any incremental plan check and inspection time should be minimal. The electric readiness exceptions will require plan checkers and inspectors to apply additional checklists to buildings with approved natural gas end-use exceptions. These items are relatively simple and are not expected to require significant additional staff time. Any incremental costs of administering these requirements will be covered through existing permit fees.

California Environmental Quality Act (CEQA)

Adoption of the ordinance requires CEQA compliance. The proposed Ordinance is exempt from the California Environmental Quality Act (CEQA) on the grounds that its

regulatory standards are more stringent than those in the State Building Standards Code (Building Code) and is a regulatory action for the protection of the environment. As a result, there are no reasonably foreseeable adverse impacts associated with these higher standards and is therefore exempt from CEQA under Sections 15308 and 15061(b)(3).

RECOMMENDATION

Staff respectfully recommends that the City Council:

1. Waive full reading and introduce Ordinance No. 23-466; amending the 2022 California Green Building Standards Code to establish the City of Agoura Hills Reach Code and adopt all-electric building requirements;
2. Find that the proposed action is exempt from the provisions of the California Environmental Quality Act in accordance with Sections 15308 and 15061(b)(3); and
3. Provide direction to staff to include or exclude Exception 2, which would allow multi-family residential building projects with approved entitlements before the effective date of the reach code ordinance to use natural gas for water heating systems.

Attachment: Ordinance No. 23-466

ORDINANCE NO. 23-466

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AGOURA HILLS, CALIFORNIA, AMENDING THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE TO ESTABLISH THE CITY OF AGOURA HILLS REACH CODE AND ADOPT ALL-ELECTRIC BUILDING REQUIREMENTS

WHEREAS, the City of Agoura Hills City has adopted the 2022 edition of the California Green Building Standards Codes; and

WHEREAS, pursuant to Sections 17922, 17958, 17958.5, 17958.7, and 18941.5 of the California Health and Safety Code, the City may adopt amendments, modifications, changes, additions, and deletions to the provisions of these codes, which are reasonably necessary to protect the health, welfare, and safety of the citizens of Agoura Hills because of local climatic, geological, and topographical conditions; and

WHEREAS, the adoption of these local amendments is consistent with the goals of reducing greenhouse gas emissions as identified in the City's Climate Action Plan.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AGOURA HILLS HEREBY ORDAINS AS FOLLOWS:

SECTION 1. Sections 8215 of Chapter 2 (Construction Codes) of Article VIII (Building Regulations) of the Agoura Hills Municipal Code is hereby amended to read as follows:

"**8215. City of Agoura Hills Reach Code (AH Green). Modifications to the 2022 California Green Building Standards Code (CALGreen).**

a) Section 202 Definitions of CALGreen is hereby amended by adding the following definitions:

ALL-ELECTRIC BUILDING *is a building that contains no combustion equipment or plumbing for combustion equipment serving space heating (including fireplaces), water heating, cooking appliances (including barbeques), and clothes drying, within the building or building property lines, and instead uses electric heating appliances for service. An All-Electric Building may include solar thermal collectors.*

COMMERCIAL FOOD HEAT-PROCESSING EQUIPMENT *is the equipment used in a food establishment for heat-processing food or utensils and that produces grease vapors, steam, fumes, smoke, or odors that are required to be removed through a local exhaust ventilation system, as defined in the California Mechanical Code.*

FUEL GAS. *A gas that is natural, manufactured, liquefied petroleum, or a mixture of these.*

FUEL GAS INFRASTRUCTURE *is Fuel Gas piping in or in connection with a building, structure, or within the property lines of premises, extending from the point of delivery at the gas meter or gas tank as specified in the California Mechanical Code and Plumbing Code."*

SECTION 2. New Subsection 8215.1 is hereby added to Chapter 2 (Construction Codes) of Article VIII (Building Regulations) of the Agoura Hills Municipal Code to read as follows:

"8215.1 Electric Vehicle (EV) Charging for New Residential Construction

a) Section 4.106.4.1 and subsection 4.106.4.1.1 of CALGreen are amended to read as follows:

4.106.4.1 New One- And Two-Family Dwellings and Town-Houses With Attached Private Garages. For each dwelling unit, *a dedicated 208/240-volt branch circuit shall be installed in a listed raceway.* The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box, or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible, or concealed areas and spaces. *The branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum. Other electrical components, including a receptacle or blank cover, related to this section shall be installed in accordance with the California Electrical Code.*

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device designated for future EV charging purposes *as "EV READY" in accordance with the California Electrical Code. The receptacle or blank cover shall be identified as "EV READY."*

b) Section 4.106.4.2.1 of CALGreen is amended to read as follows:

4.106.4.2.1 Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1. **EV Capable.** Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV-capable spaces.

2. When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV-capable spaces, the number of EV-capable spaces required may be reduced by a number equal to the number of EV chargers installed.

3. *Areas of parking facilities served by parking lifts or parking spaces accessible only by automated mechanical car parking systems.*

Notes:

a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2. **EV Ready.** *Thirty-five (35)* percent of the total number of parking spaces shall be equipped with low-power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts *or parking spaces accessible only by automated mechanical car parking systems.*

c) Section 4.106.4.2.2 of CALGreen is amended to read as follows:

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms. The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1. **EV Capable.** Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient

capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1. When EV chargers (Level 2 EVSE) are installed in a number greater than *ten (10)* percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the *ten (10)* percent required.

2. *Areas of parking facilities served by parking lifts or parking spaces accessible only by automated mechanical car parking systems.*

Notes:

a. Construction documents shall show locations of future EV spaces.

b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2. **EV Ready.** *Thirty-five (35)* percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

   Exception: Areas of parking facilities served by parking lifts *or parking spaces accessible only by automated mechanical car parking systems.*

3. **EV Chargers.** *Ten (10)* percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.

   When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes and installed EVSE shall have a capacity

of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

Exception: *Areas of parking facilities served by parking lifts or parking spaces accessible only by automated mechanical car parking systems.*

SECTION 3. New Subsection 8215.2 is hereby added to Chapter 2 (Construction Codes) of Article VIII (Building Regulations) of the Agoura Hills Municipal Code to read as follows:

"8215.2 All-Electric Buildings – Residential

New Subsection 4.106.5 is hereby added to CALGreen to read as follows:

4.106.5 All-Electric Buildings*. Newly Constructed Buildings shall be designed and constructed as All-Electric Buildings.*

Exceptions:

1. *Attached Accessory Dwelling Unit (ADU) or Junior ADU (JADU).*
2. *Swimming pools and spas.*
3. *Rebuilding of existing residential units after a natural disaster such as wildfires, floods, earthquakes, etc.*
4. *Multifamily residential building projects that have approved entitlements before the effective date may use fuel gas for water heating systems."*

SECTION 4. New Subsection 8215.3 is hereby added to Chapter 2 (Construction Codes) of Article VIII (Building Regulations) of the Agoura Hills Municipal Code to read as follows:

"8215.3 Electric Vehicle (EV) Charging for Nonresidential Construction

Table 5.106.5.3.1 of CALGreen is amended to read as follows:

TABLE 5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES (EVCS)	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)[2]
0—9	*2*	*0*
10—25	*5*	*2*
26—50	*11*	*4*
51—75	*19*	*5*
76—100	*26*	*9*

101—150	*38*	*13*
151—200	*53*	*18*
201 and over	*30 percent of total parking spaces[1]*	*33 percent of EV-capable spaces[1]*

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

SECTION 5. New Subsection 8215.4 is hereby added to Chapter 2 (Construction Codes) of Article VIII (Building Regulations) of the Agoura Hills Municipal Code to read as follows:

"8215.4 All-Electric Buildings – Nonresidential

New Subsection 5.106.13 is hereby added to CALGreen to read as follows:

***5.106.13 All-Electric Buildings**. Newly Constructed Buildings shall be designed and constructed as All-Electric Buildings.*

Any buildings exempted from these requirements shall nonetheless be required at a minimum to have sufficient reserved circuit breakers and electrical conduit to facilitate future full building electrification as certified by affidavit of either a Registered Design Professional or a Licensed Electrical Contractor.

Exceptions:

1. *If the applicant demonstrates that it is physically or technically infeasible to build without Fuel Gas Infrastructure the local enforcing agency may grant a modification.*

2. *Provision of Natural Gas Infrastructure for certain end uses when no all-electric alternative is commercially available or viable. End uses eligible for technical exemptions are:*
   - *Back-up power for Critical Facilities necessary to protect public health or safety in the event of an electric grid outage.*

3. *Inactive Fuel Gas Infrastructure may be extended to spaces that are anticipated to qualify for the exceptions contained in this chapter. The inactive Fuel Gas Infrastructure shall not be activated or otherwise used unless the exemptions specified in this chapter have been confirmed as part of the issuance of a building permit.*

4. *Swimming pools and spas.*

5. *Laboratory.*

6. *Notwithstanding the requirements of this Chapter, minimally necessary and specifically tailored Fuel Gas Infrastructure shall be allowed in a Newly Constructed Building on a revocable basis until the excepted uses below no longer exist in the building. At such time, the Fuel Gas Infrastructure shall be capped, otherwise terminated or removed, and the gas meter shall be removed, by the entity previously entitled to the exemption in a manner pursuant to all applicable Codes. The following uses are subject to this exception:*

    a. *Commercial Food Heat-Processing Equipment*
    b. *A swimming pool that is provided as a public amenity*
    c. *Spas"*

SECTION 6. In accordance with CEQA Guidelines Section 15308, adoption of this Ordinance is categorically exempt from CEQA, because it imposes stricter energy efficiency requirements and is a regulatory action authorized by state law and intended to protect the environment. This adoption of this ordinance is also exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) because it can be seen with certainty that the adoption of this ordinance will not have a significant adverse effect on the environment.

SECTION 7. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it should have adopted the ordinance and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

SECTION 8. The Building Official is hereby authorized and directed to transmit a copy of this ordinance to the California Building Standards Commission as required by California Health and Safety Code Section 17958.7.

SECTION 9. The City Clerk shall certify to the passage of this ordinance and shall cause a summary of the same to be published at least once in the local newspaper of general circulation, circulated within the City of Agoura Hills. A copy of the full text of this ordinance shall be on file in the Office of the City Clerk on and after the date following introduction and passage and shall be available to any member of the public.

This ordinance shall go into effect on the 31st day after its adoption.

PASSED, APPROVED, AND ADOPTED, this ____ day of _____, 2023.

AYES: ( )
NOES: ( )
ABSENT: ( )
ABSTAIN: ( )

Chris Anstead, Mayor

ATTEST:

Kimberly M. Rodrigues, MMC, City Clerk

APPROVED AS TO FORM:

Candice K. Lee, City Attorney