



City Council

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www.eugene-or.gov

EUGENE CITY COUNCIL AGENDA

July 17, 2024

12:00 p.m. CITY COUNCIL WORK SESSION

City Council Wednesday work sessions are held using virtual meeting technology. Information about online or other options for access and participation will be available at <https://www.eugene-or.gov/3360/Webcasts-and-Meeting-Materials>

Meeting of July 17, 2024; Her Honor Mayor Lucy Vinis Presiding

Councilors

Matt Keating, President

Jennifer Yeh

Mike Clark

Lyndsie Leech

Randy Groves, Vice President

Alan Zelenka

Greg Evans

Emily Semple

12:00 p.m. CITY COUNCIL WORK SESSION

1. WORK SESSION: Overview of New Construction Decarbonization and Fossil Fuel Reduction Strategies

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El consejo de la Ciudad de Eugene agradece su interés en estos asuntos de la agenda. El lugar de la reunión tiene acceso para sillas de ruedas. Se puede proveer a un intérprete para las personas con discapacidad auditiva si avisa con 48 horas de anticipación. También se puede proveer interpretación para español si avisa con 48 horas de anticipación. Para reservar estos servicios llame al 541-682-5010. Las reuniones del consejo de la ciudad se transmiten en vivo por Metro Television, Canal 21 de Comcast y son retransmitidas durante la semana.

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EUGENE CITY COUNCIL AGENDA ITEM SUMMARY



Work Session: Overview of New Construction Decarbonization and Fossil Fuel Reduction Strategies

Meeting Date: July 17, 2024
Department: Public Works
www.eugene-or.gov

Agenda Item Number 1
Staff Contact: Ian Penn
Contact Telephone Number: 541-682-5513

ISSUE STATEMENT

The purpose of this work session is to provide City Council with an overview of the types of policy and program options being considered, developed and implemented by municipalities nationwide to reduce the use of fossil fuels, promote electrification and decarbonize new buildings.

BACKGROUND

In 2019, the City of Berkley, California adopted an ordinance amending its code to prohibit (with a few exceptions) the installation of methane gas piping within newly constructed buildings. The City of Eugene adopted a similar prohibition in February 2023. The California Restaurant Association filed a lawsuit to challenge Berkeley's ordinance and, in 2023, the U.S. Court of Appeals for the Ninth Circuit issued its opinion, holding that Berkely's ordinance was inconsistent with the federal Energy Policy and Conservation Act (EPCA). Eugene, because it is in the Ninth Circuit, is bound by the Court's decision and therefore chose to repeal its Ordinance.

In January 2024, the Ninth Circuit Court issued an amended opinion, the final opinion for the matter, which clarified that an ordinance like Berkely's, which bans the installation of the piping that transports methane gas *from a utility's meter on premises where gas is otherwise available to gas appliances* is preempted, but that the EPCA's preemption of State and local regulation of methane gas distribution is not "unlimited." The Court explained that its opinion does not address whether a State or local government "has any obligation to maintain or expand the availability of a utility's delivery of gas to meters." The City of Berkely has halted enforcement of its ordinance and is taking steps to repeal it.

The legal implications of the Ninth Circuit Court decision are still being untangled, but amidst some of that uncertainty, the decision has created both opportunities and challenges for cities. In part in response to the Ninth Circuit decision but also in ongoing work to accelerate the transition to clean energy and to meet local climate goals, cities

across the United States are considering and implementing a range of program and policy options in new residential buildings as part of broader efforts to advance building electrification and decarbonization goals.

Efforts by cities can be categorized into several key thematic areas summarized below. Attachment A provides additional detail and information on each theme. Information contained in this document and in the staff presentation are intended to provide a survey of policy and program options being developed and implemented, not a complete accounting of every related city policy or program that is being considered or in place nationwide.

Incentivize Electrification

Cities and city-operated utilities are introducing financial incentives such as rebates and tax credits to encourage the transition to electric systems in buildings. Electrification pilot programs for new construction are also being created. Cities are using process and permitting incentives to simplify the approval process for new building projects that do not use fossil fuels. Some cities are also offering additional voluntary incentives that go beyond minimum building code requirements to promote and encourage higher standards of energy efficiency and encourage electrification in new buildings.

Disincentivize Non-Electric Technologies

To discourage the use of fossil fuels in new buildings, some cities are levying carbon fees or adding permitting or other administrative requirements for new construction projects that include fossil fuel infrastructure. These measures aim to make the permitting process more costly and more complex for new buildings that use fossil fuels, encouraging a shift to non-fossil fuel alternatives.

Leading by Example

Many cities are leading by example by restricting or eliminating fossil fuel use in new construction or major renovations of city-owned buildings. Cities are doing this to demonstrate their commitment to decarbonizing their own buildings and set an example for private sector development.

Outreach and Raising Awareness

Many cities are engaging in community-wide outreach campaigns to raise awareness, educate and promote electrification, building decarbonization and energy efficiency practices among residents and businesses. This focus on outreach and education is common in states with “energy choice” laws that preempt municipalities from implementing Berkeley-type ordinances. Some cities have also established technical assistance programs to provide guidance and support to developers throughout the design and construction processes, helping projects meet energy efficiency and greenhouse gas emission reduction goals.

Local Regulation

Several cities not in the Ninth Circuit still have laws restricting fossil fuel infrastructure in new construction. In states allowing reach codes, cities have adopted codes requiring

electric-only new buildings, requiring enhanced energy efficiency standards for new construction or “electric-ready” construction by rewiring for future electric appliances. Cities are considering or have established emissions standards for new construction. Some cities are setting CO₂ emission limits for new buildings. Other cities have implemented or are considering nitrogen oxide (NO_x) emissions standards for appliances used in new buildings.

There are emerging concepts being considered by cities. For example, some cities are considering restricting the extension of new fossil fuel infrastructure within the public rights-of-way in previously undeveloped or unserved areas. Cities are also exploring overlay zones requiring infill development and replacement buildings to be all-electric or meet specific energy performance benchmarks. No municipalities were identified as having implemented either approach yet.

State-level Policy

Many states have enacted policies that complement and support city efforts to reduce or eliminate fossil fuel use in new construction. These include updates to state-wide building codes to comply with EPCA energy performance criteria, state-funded programs providing financial incentives to developers for all-electric new construction, and regulatory pilot programs for innovative local decarbonization strategies.

Several states have passed legislation promoting thermal energy networks, which is a district heating and cooling system that captures, re-uses, and shares thermal energy between buildings using a network of underground pipes. Utility commissions in several states are developing regulatory frameworks incentivizing electrification and disincentivizing methane gas use to reduce greenhouse gas emissions and support state climate goals. These policies include planning tools like integrated energy planning as well as encouraging or requiring utilities to consider electrification and energy efficiency as alternatives to expanding fossil fuel infrastructure.

Focus on Existing Buildings

Cities are also implementing policies to address energy performance and emissions in existing buildings. While centered on existing buildings, many of these approaches would also impact new construction as new buildings would eventually become “existing” structures. Approaches include building performance standards, benchmarking and disclosure requirements, and thermal energy pilot programs for low-carbon heating and cooling. Some energy utilities are decommissioning aging gas systems and replacing them with electric alternatives, including through partnership with cities to decommission outdated or underutilized fossil fuel infrastructure.

RELATED CITY POLICIES

This item supports the Council goal of Advance Climate Action and Community Resilience to Natural and Human-caused Disasters Goal in the [City of Eugene Strategic Plan](#).

[CAP 2.0](#). CAP 2.0 was created through a data-driven process that engaged people and organizations in ways that reflect the urgency of climate change. CAP2.0 captures the actions the Eugene community is prepared to implement to address climate risks, as well as community ideas for what else is needed to create an equitable and livable community for everyone.

[Housing Implementation Pipeline \(HIP\)](#). The HIP is the 5-year internal work plan to coordinate current and future resources, goals, and priorities with a systems-thinking approach to housing across the full spectrum from people experiencing homelessness to overall housing supply.

[Envision Eugene](#). The Envision Eugene Comprehensive Plan is the City's long range land use plan that serves as the guiding policy document for land use planning in Eugene's urban growth boundary and addresses the future of Eugene through goals and regulatory policies regarding land use.

PREVIOUS COUNCIL DIRECTION

[November 17, 2021 Work Session](#)

On November 17, City Council was provided an update to the Climate Action Plan (CAP 2.0), and at that work session, Council passed the following motion:

Direct City Manager to schedule work sessions to discuss changes to City Code that would require all newly constructed commercial and residential and industrial buildings be electric-only beginning January 1, 2023.

Passed 8:0

[July 25, 2022 Work Session](#)

Starting on July 25, 2022 and continuing into the July 27, 2022 work session, the Council discussed details of prohibiting methane gas and other fossil fuel infrastructure.

[July 27, 2022 Work Session](#)

Starting on July 25, 2022 and continuing into the July 27, 2022 work session, the Council discussed details of prohibiting methane gas and other fossil fuel infrastructure. This discussion was held over two full work sessions and included the following motions related to building electrification and decarbonization:

Moved to direct the City Manager to draft an ordinance prohibiting natural gas and other fossil fuel infrastructure in all low-rise residential buildings for which permits are submitted after June 30, 2023 and schedule a public hearing on the ordinance in the fall.

Passed 5:3 (Opposed by Councilors Clark, Evans, and Groves)

Moved to direct the City Manager to schedule a work session in the fall to discuss prohibiting natural gas and other fossil fuel infrastructure in all new commercial buildings including as part of that work session a potential waiver process for

buildings or uses that may not have feasible access to electric-only options, including a discussion of applicability to certain building types.

Passed 7:1 (Opposed by Councilor Clark)

July 10, 2023 Work Session

On July 10, 2023, City Council held a work session to discuss Referendum Petition 2023-1 and the fossil fuel infrastructure ordinance that was passed on February 6, 2023. After Council repealed the fossil fuel infrastructure ordinance, Council approved the following motion:

Moved to direct the City Manager to return to Council before July 2024, for a discussion regarding ways in which the City can reduce the use of fossil fuels in new construction, including the feasibility of fossil fuel reduction strategies that have been adopted in other jurisdictions.

Passed 7:1 (Opposed by Councilor Clark)

September 20, 2023 Work Session

On September 20, 2023, City Council held a work session to discuss ongoing work by staff on climate action planning and implementation. The work session focused on staff efforts in tracking and pursuit of grants and other financial incentive opportunities at the state and federal level staff involvement in community and regional partnership opportunities to leverage potential funding opportunities; and an overview of two state climate-related bills passed in 2023 designed to help Oregon leverage federal climate investments.

COUNCIL OPTIONS

Informational only.

CITY MANAGER'S RECOMMENDATION

None.

SUGGESTED MOTION

None.

ATTACHMENTS

A. Overview of Local Government Approaches to Reduce Fossil Fuel Use in New Construction

FOR MORE INFORMATION

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Attachment A: Overview of Local Government Approaches to Reduce Fossil Fuel Use in New Construction

The legal implications of the Ninth Circuit Court decision on the City of Berkeley's fossil fuel infrastructure restrictions are still being untangled. However, cities nationwide continue to explore and implement approaches to encourage and support electrification and decarbonization in new buildings.

Attachment A provides a survey of the programs and policies cities are considering and adopting to reduce fossil fuel use in new construction, accelerate the transition to sustainable energy and help meet local climate goals. The policies and programs summarized below are not intended as a menu of options, but rather a high-level summation of a range of strategies and approaches other jurisdictions are considering or have implemented.

Policies and approaches being pursued and considered by local governments have been categorized under seven broad themes.

Incentivize Electrification	Dis-Incentivize Non-Electric Technologies	Outreach and Education	City-owned Buildings and Facilities	Local Regulations	State Level Policy	Existing Buildings
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Incentivize Electrification

To accelerate the transition to sustainable energy and help meet local climate goals, cities are developing or providing incentives intended to make adopting electric technologies more appealing. These incentives aim to reduce the financial burden and streamline the process of adopting electric technologies, making them a more attractive option for developers, homeowners, and businesses.

Permitting/Process Incentives: Some cities are using permitting and process incentives to incentivize all electric or reduce fossil fuel use in new construction. Some cities are revising their permitting procedures to prioritize and expedite applications for all-electric new construction projects. This includes dedicated review pathways for projects that meet specific energy efficiency or electrification criteria, reduced or waived permit fees for new building projects that meet specific energy criteria, and using expedited review processes, prioritizing projects that meet certain sustainability or energy requirements in the permit review queue. These process incentives focus on speeding up approval timelines and reducing some administrative requirements associated with city permitting processes.

Voluntary Programs: Cities are also encouraging developers to exceed baseline code requirements. Approaches are often voluntary and focus on incentives for new building projects where developers choose to exceed required building and energy requirements or that incorporate high performance building design elements. Incentives can include tax credits, technical assistance, density bonuses and recognition programs for developers who implement beyond code requirements or meet nationally recognized buildings standards (e.g., LEED Gold, National Green Building Standard). While voluntary programs offer incentives for exceeding code, participation and uptake varies significantly from city

to city. These voluntary programs can serve as a testing ground for new building practices and electrification strategies.

Financial Incentives: Some cities offer financial incentives, such as rebates, tax credits or low interest loans to help offset the upfront costs of installing electric appliances and infrastructure in new buildings.

Rebates and incentives directly funded by cities are typically seen from jurisdictions with dedicated sources of climate funding. For example, the City of Denver has a pilot program that offers rebates to architectural firms, engineering firms, and builders to design all-electric new buildings and homes. Rebates provided through Denver's pilot program are funded through a voter-approved, sales tax-fed climate protection fund run by the City.

For cities lacking a dedicated source of climate funding, a few have tried to fund rebates and incentives for new buildings at a small scale, e.g., pilot projects that cover a handful of new buildings. These have all been short-term efforts, funded with external sources, such as grants or philanthropic sources.

For cities with city-owned and operated electric utilities, rebates and incentives are typically provided through the utility. Incentives are funded primarily through revenue generated from ratepayers, which is supplemented by state and federal grants. For example, Austin Energy, operated by the City of Austin, provides rebates and other financial incentives for electric water heaters, heat pumps, and other electrification technologies for new and existing buildings.

Some municipalities use tax credits to promote energy-efficient practices and green building standards for new construction. These credits are designed to offer developers the opportunity to reduce their tax burden in exchange for voluntarily implementing sustainable design features or achieving specific energy performance targets than would be achieved under current building code. For some programs, the higher the energy performance above code, the more lucrative the credit.

Disincentivize Non-Electric Technologies

As an alternative approach to incentivizing all electric new construction, some cities are implementing measures to discourage the use of fossil fuels in new construction. These measures aim to disincentive fossil fuel-based systems in new buildings through increasing the cost and administrative complexity of incorporating fossil fuel infrastructure in new construction.

Carbon Fees/Climate Impact Fees: Carbon fees have emerged as a way for cities to incentivize low-carbon energy systems and disincentivize higher-carbon systems in new construction. These fees are typically calculated based on the projected greenhouse gas emissions of a new building, using the anticipated energy use over a building's lifespan. Carbon fees are intended to internalize the external costs of greenhouse gas emissions and pollution, so cost of new construction accounts for the environmental and societal costs associated with fossil fuel use in new building projects, whether direct combustion or

though fossil-fuel generated electricity. Cities levying a carbon fee on new buildings typically direct revenue collected towards local climate projects and investment.

Additional Permit Requirements: Some cities are implementing policies that impose additional permit requirements for new buildings that use fossil fuels. These policies often require additional permits and/or documentation to ensure compliance with specific environmental standards and energy requirements, adding time, cost and administrative requirements to permit approval processes. Cities are also eliminating expedited permit processes for new buildings that would use fossil fuels to encourage developers to consider lower carbon energy alternatives for proposed projects.

City-Owned Buildings and Facilities

Cities are also taking a proactive approach by leading by example and adopting policies that eliminate the use of fossil fuels in new city-owned and operated buildings. Many cities have passed ordinances and resolutions committing themselves to no fossil fuel infrastructure in new city-owned buildings or major renovations of existing city buildings. Major renovations can include changes to major mechanical or electrical systems, structural changes and additions that increase a building's floor area by a substantial percentage. These measures not only reduce the carbon footprint of public buildings but also serve to identify best practices, address technical challenges, and provide practical, real-world examples for private developers.

Outreach, Education and Raise Awareness

Effective communication and education are crucial components of any successful strategy to adopt sustainable practices in new construction. They help foster public understanding, build stakeholder support, and equip local residents and business owners with the knowledge and tools necessary to make informed decisions.

Raise Awareness and Educate: Cities are focusing on outreach and education programs to raise awareness about incentives, highlight the benefits of reducing fossil fuel use and greenhouse gas emissions and provide resources to community members to encourage electrification and reduce fossil fuel use in new and existing buildings. Educational efforts include websites, workshops, webinars, technology demonstrations and one-on-one consultations for residents, contractors, developers, and property managers interested in building electrification and decarbonization topics.

Education and outreach-focused efforts are particularly prominent for cities located in states that have passed "energy choice" laws that prevent local governments from implementing restrictions on the use of fossil fuels in new construction. In response, cities in "energy choice" states have developed comprehensive outreach and education programs to inform and engage their communities

These public awareness efforts often extend beyond providing information. Cities have also created demonstration projects or "living labs" where residents can experience innovative technologies and all-electric buildings firsthand. This allows community members to learn from fellow residents who have actively reduced fossil fuel use and decarbonized their buildings.

Business Support: A number of cities offer education or support programs to assist businesses in identifying opportunities for energy efficiency and electrification for new and existing buildings. These support programs come in a number of flavors, but in general provide building evaluations and recommendations, helping businesses identify and transition to more carbon friendly and energy efficiency practices. For example, a number of cities as part of their licensing processes for new businesses, require all businesses with a storefront to participate in a program that encourages and assists local businesses in improving their energy and water efficiency through periodic audits. Based on audits, cities provide free energy and water evaluations to identify energy efficiency and water efficiency opportunities in a building and businesses receive information on how to take advantage of rebate, incentive, and financing programs for their businesses.

Technical Assistance: Some cities offer technical assistance on building electrification and decarbonization to make the process easier for developers and builders engaged in new construction projects. Support includes guidance on design, construction techniques, and compliance with recognized green building standards. This technical assistance often includes project-specific consultations with subject matter experts and hands-on training for contractors on electric system installation and maintenance. Some cities also provide financial analysis support, helping developers understand the cost-benefits and available incentives for electrification projects. This assistance aims to overcome knowledge barriers and build capacity within the local building design and construction industry.

Local Regulations

While incentives, voluntary measures and raising awareness of benefits and incentives are being pursued by cities, they are also exploring and implementing regulatory approaches to reduce fossil fuel use in new construction. The details of these restrictions also vary by local governments, reflecting differences in community priorities and differences in state and local regulatory authorities.

One common regulatory tool is the implementation of 'reach codes.' Reach codes are local building energy codes that go beyond state minimum requirements for energy use in building design and construction.

Fossil Fuel Infrastructure Restrictions: A number of cities not subject to the Ninth Circuit Berkeley decision have implemented restrictions on fossil fuel infrastructure in new buildings, often focused on new residential construction.

Electric Only New Construction: Electric-only codes are advanced local building standards that require new building construction to be fully electric. These codes, implemented by cities located in states that allow reach codes, go beyond standard building regulations to require new buildings only include electric infrastructure. By mandating electricity use for functions like heating, cooking, and water heating, these codes aim to reduce greenhouse gas emissions and eliminate fossil fuel use in new buildings.

Electric Ready New Construction: Also considered reach codes, requirements for "electric ready" new construction are intended to ensure that buildings can more easily switch to full electrification in the future. These codes mandate sufficient electrical capacity, pre-

wiring for electric appliances, dedicated circuits, etc., ensuring buildings can more readily switch to full electrification. Cities view electric-ready requirements as a stepping-stone approach, paving the way for an easier shift to all-electric buildings over time. Many municipalities emphasize that incorporating these features during initial construction is significantly more cost-effective and less disruptive than retrofitting existing buildings, making it a forward-thinking approach to future-proofing new structures for eventual full electrification.

Energy Efficiency Standards for New Construction: Also considered a reach code, a number of cities are adopting enhanced energy efficiency standards for new construction. These standards require buildings to be significantly more energy efficient than state code requirements, encouraging less use of fossil fuels in order to meet efficiency requirements and indirectly supporting a shift to electric technologies. Such an approach is designed to allow for flexibility in complying with efficiency standards while still pushing the market towards more efficient and less carbon intensive solutions. Builders can choose any technology or appliance, provided they meet the overall efficiency standards.

Mitigation Measures: Some cities are incorporating mitigation measures for new buildings that use methane gas. Mitigation measures typically encourage or mandate the integration of renewable energy sources in buildings that use fossil fuels or restricting the use of fossil fuels in new constructions unless specific building energy performance or sustainability criteria are met, for example, meeting energy efficiency or energy use intensity that is a mandatory percentage better than existing code.

Building/Appliance Emissions Standards: Emissions standards for buildings or appliances are another regulatory approach several are pursuing. Some cities are setting CO₂ emissions limits for new buildings. For example, New York City now has CO₂ emission limits for new buildings and major renovations over a certain size. New York's law prohibits the combustion of a substance that emits more than a specified amount of CO₂ per million British Thermal Units (the measure of the energy content of a fuel).

Some cities have implemented or are considering nitrogen oxide (NOx) emissions standards for appliances in new buildings, particularly those that vent to the outside like furnaces and hot water heaters. Such standards are aimed at improving air quality through reduce combustion and venting of fossil fuels, but also indirectly encourage the adoption of electric appliances, which typically lower or zero NOx emissions.

Emerging local regulatory strategies

While not yet implemented in any local jurisdiction, some municipalities are exploring other regulatory strategies to reduce fossil fuel use in new construction.

Rights-of-Way Restrictions: Some cities are considering restricting the expansion of new fossil fuel infrastructure laid within the public rights-of-way in previously undeveloped or unserved areas. Any such restrictions would not apply to existing fossil fuel infrastructure or already developed neighborhoods.

Overlay Zones: Using overlay zones over existing zoning districts or the use of a floating overlay zone are another emerging strategy being explored by cities. These zones superimpose existing zoning districts with additional requirements or incentives for future development. As example, a city might adopt an overlay that requires new infill development and replacement buildings within these zones must be designed and constructed to be all-electric or meet specific energy performance requirements.

State-Level Policy

While cities are pursuing strategies to reduce fossil fuel use in new buildings, state-level policies also play an important role in creating the conditions for and supporting local efforts to reduce fossil fuel use new buildings and meet local climate goals. State policies often provide a framework that guides and facilitates local initiatives, while also ensuring state-wide goals are met.

State Code Updates: States continue to update their building code to set rigorous energy efficiency and performance standards for new buildings. Many of these standards encourage the use of electric technologies and reduce reliance on fossil fuels. Others include specific requirements for energy use intensity and building envelope performance. For example, Washington state, as part of its most recent code update, adopted building code that is compliant with the Energy Policy and Conservation Act (EPCA), emphasizing overall higher total energy performance of buildings that incentivize highly energy efficient appliance – e.g., new homes and buildings need to meet the same total energy performance as buildings using electric heat pumps. If using methane gas appliances in a new building, under Washington’s updated code, developers need to make up for any efficiency losses elsewhere in construction (e.g., by adding more insulation, using higher efficiency windows, or implementing other energy-saving measures).

State Incentives for New Construction: Several states offer incentive programs for all-electric new residential construction. For example, California's Electric Homes Program offers a suite of incentives for builders that construct new market rate all-electric homes. Several other states offer similar programs that cover new and existing buildings, including specific programs and incentives aimed at promoting all-electric new construction. In Oregon, Governor Kotek's housing strategy included a proposal for \$20 million specifically earmarked for electrification incentives for new residential construction. While the final bill includes funding for heat pumps and weatherization of existing buildings, the electrification incentive did not make the final bill that passed in to law earlier this year.

All Electric Requirements: States are also pursuing legislation to reduce greenhouse gas emissions and promoting energy efficiency by requiring new buildings to use electric power exclusively for heating, cooling, cooking, and other energy needs. The New York All Electric Buildings Act, passed in 2023, restricts fossil fuel infrastructure in new houses and buildings beginning January 2026 while including exceptions for uses like manufacturing facilities, commercial kitchens and hospitals.

Other states have introduced municipal opt-in energy code, which includes requirements for "electric readiness" in new buildings using mixed fuels, ensuring that buildings using fossil fuels are also wired to accommodate future electric appliances. In 2024, the

International Code Council, following appeals from gas industry groups like the American Gas Association, considered but ultimately rejected proposals to make new homes "electric ready" as part of the 2024 edition to its International Energy Conservation Code, making the provisions voluntary not mandatory.

Electrification Pilots: Some states are developing pilot programs to experiment with the implementation of city policies to eliminate fossil fuel use in new residential construction. For example, 2022 legislation in Massachusetts enabled a pilot program allowing cities and towns in the state to adopt and amend general or zoning ordinances or by-laws to require new building construction or major renovation projects to eliminate the use fossil fuels. Lessons learned from this demonstration program are expected to inform potential future legislation in the state.

Thermal Energy Networks (TEN): Several states have passed legislation that enables thermal energy networks. These networks function similarly to fossil-gas pipelines, but rather than delivering fossil fuel for combustion in buildings, instead distribute thermal energy to multiple buildings through a network of pipes buried underground. States are promoting the development of TENs as an alternative way to reduce greenhouse gas emissions and provide efficient heating and cooling solutions by connecting buildings to shared thermal energy sources. These systems can utilize various heat sources, including geothermal energy, waste heat from industrial processes, or centralized heat pumps, offering a flexible and potentially more sustainable approach to building heating and cooling. The implementation of thermal energy networks also present potential opportunities for repurposing existing methane gas infrastructure.

State Utility Commissions: May state utility commissions are using their regulatory authorities to create policies that incentivize electrification and disincentivize the use of methane gas as part of efforts to reduce greenhouse gas emissions and help their respective states meet their climate goals. For example, in Colorado, the Public Utilities Commission (PUC) has taken noteworthy steps to align long-term utility resource plans with state climate goals following the passage of legislation in 2021. The Colorado PUC has directed investor-owned utilities to establish energy savings targets and develop plans that promote energy-efficient electric equipment over fossil-fuel-based systems. While a state-level regulatory action, cities in Colorado view this as part of a more comprehensive approach to help meet their climate goals. Additionally, some state utility commissions are exploring non-pipeline alternatives (NPAs) as a way to meet energy needs without expanding gas infrastructure. In a number of states, utility commissions are requiring investor owned utilities to consider NPAs, including demand-side management and electrification, in their long-term planning processes. State utility commissions are also adopting Integrated Energy Planning (IEP) approaches to consider the interactions between gas, electric, and customer energy systems in utility planning processes. IEP provides a holistic framework for evaluating long-term energy needs, climate goals, and cost-effectiveness.

Existing Buildings

While not focused explicitly on new construction, it's worth noting that many cities have also implemented policies to address electrification and decarbonization in existing buildings. While these policies typically target existing buildings, new buildings would eventually become "existing" structures and be subject to these standards.

Building Performance Standards (BPS): BPS have been adopted by cities to set energy intensity or emissions reduction targets for existing buildings. These policies often cover a range of existing buildings, including commercial and multifamily structures. Requirements often vary depending on building size and building use. In general, requirements focus on outcomes (energy efficiency or energy use intensity) rather than prescribing specific actions. BPS establish specific performance levels that existing buildings must achieve, similar to building energy codes for new construction. Building owners have the flexibility to choose strategies and technologies to meet a performance target. BPS typically require buildings to meet increasingly stringent energy performance levels over time, encouraging energy efficiency upgrades and disincentivizing use of fossil fuels over time.

Energy Disclosure and Benchmarking: Energy benchmarking and disclosure policies require commercial building owners to report their energy usage, creating transparency and accountability. These policies typically apply to buildings over a certain size and mandate regular reporting of energy consumption data. Reported data is frequently made publicly available, allowing potential tenants, buyers, and the general public to access information on building energy performance. Cities implement benchmarking and disclosure policies measure and track the energy performance of applicable buildings over time and compare them to similar structures. Many cities use benchmarking as first step to develop BPS.

Thermal Energy Pilots: Cities are exploring pilots using networked geothermal systems as a way to provide efficient, low-carbon heating and cooling to multiple buildings at once. These district-scale approaches can complement efforts to reduce fossil fuel use in individual buildings. For example, Framingham, MA is piloting a networked geothermal system in partnership with its local energy utility. This pilot project aims to demonstrate the feasibility of using shared ground-source heat pumps to provide heating and cooling to multiple existing buildings in a neighborhood, reducing the need for individual fossil fuel-based systems.

System Decommissioning Pilots: Some energy utilities are also playing a role in helping cities find ways to use less fossil fuel in buildings by piloting system decommissioning projects. For example, Pacific Gas & Electric (PG&E) in California is decommissioning aging methane gas infrastructure and replacing it with electric alternatives, ensuring a managed transition that maintains energy reliability, provides equity benefits, and reduces emissions.

Albany, CA has been developing a pilot project with the goal of electrifying all buildings on an entire city block and decommissioning the corresponding section of fossil fuel infrastructure. PG&E has worked with Albany to identify suitable city blocks based on infrastructure age, system risk, and anticipated repair or replacement costs in areas expected to see declining customer use over time.

These pilots are part of a broader trend among some energy utilities to strategically decommission existing fossil fuel infrastructure. Utilities like PG&E indicate that this approach helps them address multiple challenges simultaneously: reducing greenhouse gas emissions, avoiding costly maintenance or replacement of aging infrastructure, mitigating financial risks of stranded assets, and optimizing resource allocation as customers transition to alternative energy sources.