



City of Providence

Ordinance ORD-2024-3

Read/Passed for the
First Time
Feb 15, 2024 6:00 PM

Article X - Energy Efficiency and Carbon Neutral Goals for Municipal Buildings

Information

Department:

City Council

Sponsors:

Councilor Sue R. AnderBois, Councilwoman Helen D. Anthony, Councilwoman Shelley T. Peterson, Majority Whip Miguel A. Sanchez, Council President Rachel M. Miller, Senior Deputy Majority Leader John Goncalves, Councilwoman Althea A. Graves, Councilor Justin M. Roias, Councilman Oscar Vargas, Deputy Majority Leader Mary Kay Harris, Councilman Pedro J. Espinal

Category:

*Ordinance

Attachments

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Item Discussion

An Ordinance Amending Chapter 5 "Buildings and Structural Appurtenances" of the Code of Ordinances to add Article X "Energy Efficiency and Carbon Neutral Goals for Municipal Buildings".

Document Comments

AN ORDINANCE AMENDING CHAPTER 5 "BUILDINGS AND STRUCTURAL APPURTENANCES" OF THE CODE OF ORDINANCES TO ADD ARTICLE X "ENERGY EFFICIENCY AND CARBON NEUTRAL GOALS FOR MUNICIPAL BUILDINGS"

Body

Chapter 5 “Building and Structural Appurtenances” is hereby amended to add Article X “Energy Efficiency and Carbon Neutral Goals for Municipal Buildings” as follows:

Article X - Energy Efficiency and Carbon Neutral Goals for Municipal Buildings

Sec. 5-126. Purpose and intent.

The purpose and intent of this article is to ensure that the City of Providence is leading by example and ensuring that municipal buildings are carbon neutral by 2040. Specifically, this article is intended to create guidelines to ensure all municipal buildings are no longer fueled by fossil fuel or onsite combustion and are carbon neutral. This article intends to encourage electrification coupled with energy efficiency upgrades including, but not limited to, electric heating and cooling systems, electric hot water heating, 100% renewable energy consumption, maximum on-site renewable energy production, thermal energy networks, and biofuel or battery electric emergency backup facilities, in all municipal buildings, including schools. As well as to:

- (1) Align the city of Providence's municipal capital improvements and maintenance projects with existing state requirements outlined in R.I.G.L 42-6.2-9 (The Act on Climate; Statewide greenhouse gas emission reduction mandate), and R.I.G.L 39-26 (Renewable Energy Standard).
- (2) Provide a path forward to meeting the goals set forth in the Providence Climate Justice Plan of 2019; and
- (3) Provide a guide to prioritizing municipal buildings for energy efficiency, electrification, and carbon reduction improvements.
- (4) Expand equitable access to clean energy careers with family-sustaining wages and benefits as part of the city of Providence plan to decarbonize its building stock

Sec. 5-127. Definitions.

The following words, terms, and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a differing meaning:

Analysis of feasibility means a report created by a qualified professional that estimates the costs, savings, cost-effectiveness, and greenhouse gas reductions for an on-site renewable energy system, electric heating and cooling system, thermal energy network, or energy-efficiency measure, and shall include a financial plan with sources and uses of funding, including but not limited to, federal, state, and utility incentives.

Carbon Neutral Building means a building where the design, construction, and operations do not contribute to emissions of greenhouse gases that cause climate change.

Capital improvements shall mean improvements to the physical infrastructure of a building including building systems such as HVAC and major equipment.

Cost-effective means measures that are projected to generate energy cost savings and avoided social cost of carbon dioxide equal to or greater than overnight capital costs and operations and maintenance costs over the lesser of

- (i) Useful life of the equipment, or
- (ii) 20 years

Covered Project means a construction, capital improvement, renovation or maintenance project on buildings owned by the City of Providence, including buildings owned by the City and managed by other entities, as well as any capital improvements and maintenance of mechanical systems in each building, especially when those systems are upgraded, including but not limited to:

- (i) The building envelope
- (ii) Lighting and controls
- (iii) Heating, Ventilation, and Air Conditioning (HVAC) systems
- (iv) Building management systems

Energy shall mean electricity, natural gas, steam, hot or chilled water, heating oil, or other product for use in a building, or renewable electricity generation, for purposes of providing heating, cooling, lighting, water heating, or for powering or fueling other end-uses in the building and related facilities.

Greenhouse gas means climate pollution released by burning fossil fuels that alter the atmosphere, including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Maintenance means amounts spent for repairs or replacements for the purpose of keeping a municipal building open and safe for use, including repairs, maintenance, and replacements to a municipal building's heating, lighting, ventilation, security, building management system, and other fixtures to keep the facility or fixtures in effective working condition. Maintenance shall not include contracted or direct custodial or janitorial services, expenditures for the cleaning of a municipal building or its fixtures, the care and upkeep of grounds, recreational facilities, or parking lots, or the cleaning of or repairs and replacements to movable furnishings or equipment.

Measurement and Verification (M&V) is the process of planning, measuring, collecting, and analyzing data for the purpose of verifying and reporting energy and carbon savings within an individual facility resulting from capital improvements specific to and in alignment with this ordinance.

Renewable energy shall mean renewable energy resources as described in R.I.G.L 39-26 (Renewable Energy Standard).

Thermal energy means piped non-combustible fluids used for transferring heat into and out of buildings for the purpose of eliminating any resultant on-site greenhouse gas emissions of all types of heating and cooling processes, including, but not limited to, comfort heating and cooling, domestic hot water, and refrigeration.

Thermal energy network means all real estate, fixtures and personal property operated, owned, used or to be used for or in connection with or to facilitate a utility-scale distribution infrastructure project that supplies thermal energy.

Sec. 5-128. Scope and applicability.

This article is applicable to all buildings owned by the City of Providence, including buildings owned by the City and managed by other entities. This article is applicable to all capital improvements and maintenance of mechanical systems in every municipal building, especially when those systems are upgraded, including but not limited to:

- (i) The building envelope
- (ii) Lighting and controls
- (iii) Heating, Ventilation, and Air Conditioning (HVAC) systems
- (iv) Building management systems

Sec. 5. 129. Priorities and Timeline.

All municipal buildings are to be carbon neutral buildings by 2040. School facilities shall meet the latest definition of Zero Energy Capable as defined by the Northeast Collaborative for High Performance schools (NE-CHPS) by 2040. The priorities for reaching carbon neutrality for each building include, but are not limited to the following:

- (i) Completing a comprehensive accounting and analysis of all energy uses in all municipal buildings.
- (ii) Identification and analysis of energy efficiency measures and energy saving opportunities, as well as applicable local, state, federal, and other sources of capital to defray costs of these measures. Investing in all cost-effective energy efficiency and energy savings opportunities.
- (iii) Analysis of the feasibility of using thermal energy and thermal energy networks at the facility, including any anticipated limitations on the use of thermal energy networks, along with a characterization of any such limitations, including whether they are permanent, temporary, or resolvable in a cost-effective basis.
- (iv) Determination of the feasibility and advisability of gathering, combining, or expanding any clean energy sources or central thermal energy networks with neighboring or nearby related municipal facilities.
- (v) An analysis of the feasibility of installing electrically powered space and water heating and cooling systems, and associated structural and electrical upgrades, with a goal of all electric buildings.
 - a. Where and when electrically powered space and water heating and cooling systems are determined to be cost-effective, the City will prioritize these recommended systems and place the system in service, except in cases where thermal energy and thermal energy networks are installed as suitable cost-effective alternatives.
- (vi) Preference for the installation of on-site renewable energy generation where feasible based on location and building characteristics (orientation, sunshade, etc.), as well as battery storage systems.
- (vii) Require all public buildings to have an energy use intensity (EUI) assessment within a year of passage in order to prioritize the need for an investment grade energy audit.
- (viii) Schedule investment grade energy audits based on the above prioritization for buildings with the worse EUI ratings, or with the most favorable renewable energy potential within three years of passage (unless one has been performed in the prior two years), to assess energy savings opportunities, electrification potential, and renewal and battery energy storage system capabilities, and updated based on funding

potential and required levels of performance. Buildings scheduled to receive capital improvements based on the City's CIP or other schedules must undergo an investment grade energy audit prior to the issuing of formal construction documents.

- (ix) Within a year of the investment grade audit, the city will assess the audit findings and create a priorities plan for capital improvements to advance the decarbonization goals of the city/described in this article.
- (x) All school buildings must be not powered by metered and delivered fossil fuel by 2040 for all primary building systems. Starting immediately, no new connections to the fossil fuel system from a municipal building will be permitted, provided that the replacement thermal system for heating, cooling, hot water, and appliances in the building provides the same or greater safety, reliability, and cost-effectiveness as defined in Sec. 5-127.
- (xi) All other municipal buildings must have completed the relevant evaluations as described above and invest in all cost-effective energy efficiency and clean energy systems to move toward full electrification as soon as it is cost-effective, leveraging all available local, state, federal, and other available funding. All other municipal buildings must be powered by 100% carbon pollution-free electricity by 2033, at least half of which will be locally supplied clean energy, as required in the Climate Justice Plan.

Sec. 5-129. Annual Reporting Guidelines.

The Departments of Public Property, Sustainability, and/or Providence Public School Department shall submit an annual report on progress towards achieving carbon neutrality by 2040 to the City Council and the Mayor. The annual report shall include, but is not limited to, the following information:

- i) Energy and carbon neutral benchmarks.
- ii) Overall energy use and carbon emissions trends.
- iii) A plan for the upcoming year in action steps to reduce energy use and carbon emissions in municipal buildings.
- iv) Operation goals.
- v) A maintenance plan for upgraded buildings.
- vi) Any associated annual budgetary needs for meeting the goals set forth in this article.
- vii) Jobs created or sustained by these projects.

Sec. 5-130. Labor Standards.

The City shall support equitable access to family-sustaining jobs with good wages and benefits by:

- (i) For all projects subject to the provisions of this ordinance, the city will comply with the requirements of property owners in Article XVIII Section 21-306(h) Providence Tax Stabilization Investment Act.
- (ii) Conducting an independent, objective, reasoned study, using reviewable criteria, to determine whether adoption of a project labor agreement on the proposed project or projects will help achieve the goals of the state purchases act, for all covered projects over twenty-five million dollars (\$25,000,000).

Sec. 5-140. Severability.

If any provision of this ordinance shall be held to be invalid by a court of competent jurisdiction, then such provision shall be considered separately and apart from the remaining provisions, which shall remain in full force and effect.

SECTION 2. This Ordinance shall take effect upon passage.

Meeting History

Nov 16, 2023 6:00 PM Audio/Video	City Council	Regular Council Meeting	 Draft
RESULT:	REFERRED		
Feb 7, 2024 6:00 PM Audio/Video	Special Committee on Environment and Resiliency	Public Hearing	 Draft
Feb 7, 2024 6:30 PM Audio/Video	Special Committee on Environment and Resiliency	Regular Meeting	 Draft
RESULT:	APPROVED, AS AMENDED [UNANIMOUS]		
MOVER:	Helen D. Anthony, Councilwoman Ward 2		
SECONDER:	Justin M. Roias, Councilor Ward 4		
AYES:	Sue R. AnderBois, Miguel A. Sanchez, Helen D. Anthony, Justin M. Roias		
ABSENT:	Pedro J. Espinal		
Feb 15, 2024 6:00 PM Audio/Video	City Council	Regular Council Meeting	 Draft
RESULT:	READ/PASSED FOR THE FIRST TIME [UNANIMOUS]		
MOVER:	James E. Taylor, Majority Leader		
SECONDER:	John Goncalves, Senior Deputy Majority Leader		
AYES:	Rachel M. Miller, Sue R. AnderBois, Helen D. Anthony, John Goncalves, Althea A. Graves, Mary Kay Harris, Shelley T. Peterson, Juan M. Pichardo, Justin M. Roias, Jo-Ann Ryan, Miguel A. Sanchez, James E. Taylor, Ana S. Vargas, Oscar Vargas		
ABSENT:	Pedro J. Espinal		

