

**General Bylaws: Section xx-xxx**  
**Emission-Free New Construction Standards**  
**(Belmont Energy Committee: 02-17-20)**  
**February 17, 2020**

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- A. Purpose.** This By-Law is adopted by the Town of Belmont, under its home rule powers and its police powers under Massachusetts General Laws, Chapter 40, Sections 21 (clauses 1, 18) and 21D, and Chapter 43B, Section 13, to protect the health, safety and welfare of the inhabitants of the town from fuel leaks and explosions and from air pollution, including that which is causing climate change and thereby threatening the Town and its inhabitants.
- B. Definitions.** For the purposes of this bylaw, the following definitions shall apply. When the definitions below differ from those contained elsewhere in the Belmont General Bylaws or the Belmont Zoning By-laws, the provisions of this Section shall apply.

**BUILDING ENVELOPE**

The ensemble of exterior and demising partitions of a building and roof structure that enclose conditioned space.

**CONDITIONED SPACE**

Any area within a building or structure that is heated or cooled by any equipment.

**COVERED PROJECT**

A new residential building or new non-residential building proposed to be located in whole or in part within the Town for which a building permit is required.

**LEVEL 2 CHARGING STATION**

Electric Vehicle Supply Equipment that supplies 240V.

## **NEW RESIDENTIAL BUILDING**

The construction of a new or replacement residential building, or new accessory building (a building devoted exclusively to a use accessory to the principal use of the lot), associated with a valid building permit application on or after the effective date of this Section. A new or replacement building includes any renovation in which the work area, not including any added space, is more than 50% of the building floor area prior to the project, and that is associated with a valid building permit application on or after the effective date of this section.

## **NEW NON-RESIDENTIAL BUILDING**

The construction, after the effective date of this Section, of a new or replacement non-residential building 5,000 square feet or more in floor area, or new accessory building (a building devoted exclusively to a use accessory to the principal use of the lot) that is associated with a valid building permit application on or after the effective date of this article. A new or replacement building includes any renovation in which the work area, not including any added space, is more than 50% of the building floor area prior to the project, and that is associated with a valid building permit application on or after the effective date of this article.

## **ON-SITE FOSSIL FUEL INFRASTRUCTURE.**

Fuel gas or fuel oil piping that is in a building, in connection with a building, or otherwise within the property lines of premises, extending from a supply tank or from the point of delivery behind a gas meter.

- C. Emission-Free New Construction Standards. No building permit shall be issued for a Covered Project unless the requirements of this section are incorporated into the approved building plans. All (a) new residential buildings and (b) new non-residential buildings shall:
1. Include a minimum of 200 amp electric service.
  2. Include electrical conduit specifically designed to allow the installation of a photovoltaic system which utilizes solar energy as a means to provide electricity.
  3. Provide solar-ready roof to facilitate the installation of solar energy equipment. A roof is defined to be solar-ready if it is otherwise in compliance with the solar ready requirements of the Massachusetts state building code; and

- a. The minimum solar-ready roof area required shall be:
    - i. One- or two-family dwellings: 250 square feet.
    - ii. All buildings other than a one- or two-family dwelling: thirty percent (30%) of the total roof area.
  - b. The requirements of this Section shall be waived if:
    - i. The building is designed and constructed with a solar energy system that is tied to the electrical grid and is capable of generating electricity; or
    - ii. The roof of the building is designed and approved to be used for vehicular traffic or parking.
4. Include electric vehicle charging infrastructure able to accommodate the hardwire installation of Electric Vehicle Supply Equipment in or near parking areas. Electric vehicle charging infrastructure means space, electrical conduit or cable raceway, electrical banks, and access points.
- a. For residential buildings, including the residential portion of mixed-use buildings, the electric vehicle charging infrastructure shall extend to no fewer than one off-street parking space for each one residential unit.
    - i. The electrical room, or space if not provided in a room, in a multi-family building, or in the residential component of a mixed-use building, must include sufficient space for the installation of electric equipment necessary to provide a receptacle to accommodate use by Electric Vehicle Supply Equipment for no fewer than one parking space for each one residential unit.
    - ii. All new residential buildings providing off-street parking shall provide a minimum 240 volt/50 amp outlet on a dedicated branch circuit in close proximity to no fewer than one off-street vehicle parking space for each one residential unit sufficient to accommodate the hardwire installation of Electric Vehicle Supply Equipment.
  - b. For non-residential buildings, including the non-residential portion of mixed-use buildings, and common parking areas for residential buildings, the electric vehicle charging infrastructure shall extend to no fewer than 10 percent of the total off-street parking spaces, rounded to the closest whole number if application of the 10 percent figure yields a fraction greater than a whole number.

- i. All new and expanded non-residential development parking facilities shall provide the electric capacity sufficient to accommodate the hardwire installation of charging stations, including a receptacle to accommodate use by Electric Vehicle Supply Equipment. Site design and plans must include the location(s) and type of conduit or raceway method(s), wiring schematics (if any), and electrical calculations to verify that the electrical system has sufficient capacity to simultaneously charge all future electric vehicle charging stations at a minimum of Level 2 charging levels.
  - ii. All new non-residential buildings providing off-street parking shall provide a minimum 240 volt/50 amp outlet on a dedicated branch circuit in close proximity to no fewer than 10 percent of the designated vehicle parking spaces sufficient to accommodate the hardwire installation of Electric Vehicle Supply Equipment.
  - c. Electric conduit or cable raceways installed shall be of sufficient size to hold electrical wiring as necessary depending on the size of parking area, but should be no less than trade size 1. Any electrical conduit shall be securely fastened at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging equipment in a listed cabinet, box, or enclosure. All cable raceways are required to be continuous at enclosed or concealed areas and spaces. For residential projects, a cable raceway may terminate in an attic or other approved location when it can be demonstrated that the area is accessible and no removal of materials is necessary to complete the final installation.
5. Effective June 1, 2020, no permits shall be issued by the Town for the construction of New Residential Buildings or New Non-Residential Buildings that include the installation of On-Site Fossil Fuel Infrastructure, except as otherwise provided in sub-sections (C)(6) and (C)(7)..
6. The requirements of this article shall not apply to the use of portable propane appliances for outdoor cooking and heating, or to fuel pipes whose exclusive purpose is to fuel backup electrical generators, or to fuel pipes whose exclusive purpose is to fuel the preparation of food for human consumption.
7. The requirements of this article shall not apply to utility service pipe connecting the grid to a meter, or to a gas meter itself.

D. Phased construction. All new construction on a single parcel or set of contiguous parcels of land held in common ownership for which one or more building permits will be sought within a 24 month period of time will be considered a single Covered Project.

E. Administrative procedures. The procedures for compliance with the provisions of this Section shall include, but not necessarily be limited to, the following:

1. Upon submittal of an application for a building permit, building plans for any Covered Project shall include a completed checklist designating the measures included in the Covered Project to achieve compliance with the Emission-Free New Construction Standards set forth in Sub-section (C). The checklist shall be incorporated onto a separate full-sized plan sheet included with the building plans.
2. Prior to final building inspection and occupancy for any Covered Project, the applicant shall provide evidence that project construction complies with the Emission-Free New Construction Standards outlined in Sub-section (C). The Belmont Inspector of Buildings shall review the documentation submitted by the applicant, and determine whether the Covered Project has achieved compliance with the Emission-Free New Construction Standards set forth in Sub-section (C). The final building inspection may proceed if the Belmont Inspector of Buildings determines that the applicant has met these requirements.
3. The remedies set forth in this subsection are not intended to be exclusive of any other remedies available under applicable federal, state, or local law.
4. The provisions of this Section are intended to be in addition to and not in conflict with other statutes and regulations relating to building construction and site development. If any provision of this Section conflicts with any duly adopted and valid statute or regulation of the federal government or the Commonwealth of Massachusetts, including but not limited to the National Electric Safety Code, the federal or state statute or regulation shall take precedence.

F. Exemptions / Exceptions.

1. The provisions of this Section shall not apply to the following exemptions. However, none of the exemptions listed shall provide the applicant with relief from compliance with otherwise applicable requirements of the Belmont General Bylaws, Article 3, Sections 60-310 et seq.
  - a. Buildings which are temporary (such as construction trailers).
  - b. Building area which is not or is not intended to be conditioned space.

2. If an applicant for a building permit for a Covered Project believes that circumstances exist that make it an undue hardship or infeasible to meet the requirements of this Section, the applicant may request an exception as set forth below. In applying for an exception, the burden is on the applicant to show undue hardship or infeasibility, and to demonstrate the applicant's continued compliance with all requirements of the Belmont General Bylaws, Article 3, Sections 60-310 et seq.
  - a. The applicant shall identify in writing the specific requirements of the Emission-Free New Construction Standards that the Covered Project is unable to achieve and the circumstances that make it an undue hardship or infeasible for the Covered Project to comply with one or more of the Emission-Free New Construction Standards set forth in Sub-section (C). Circumstances that constitute undue hardship or infeasibility shall include, but not be limited to, the following:
    - i. That there is an irreconcilable conflict between the provisions of Sub-section (C) and the Massachusetts Building Code, other State code provisions, other requirements of this Section, or conditions imposed on the Covered Project through a planning application granted final approval prior to the effective date of this Section;
    - ii. That the cost of achieving compliance exceeds 15% of the overall cost of the Covered Project;
    - iii. That physical conditions of the site of the Covered Project make it infeasible to incorporate the necessary measures to achieve the Emission-Free New Construction Standards set forth in Sub-section (C).
3. To the extent that an application for an exception may require the Belmont Inspector of Buildings to secure the services of a person or entity with expertise in sustainable building design to assist with the administration of this bylaw, these services shall be paid for by the applicant prior to the issuance of a building permit.
4. If the Belmont Inspector of Buildings determines that it is an undue hardship or infeasible for the applicant to fully meet one or more of the Emission-Free New Construction Standards set forth in Sub-section (C), the Belmont Inspector of Buildings shall determine the maximum feasible compliance reasonably achievable for the Covered Project. In making this determination, the Belmont Inspector of Buildings shall consider whether alternate, practical means of achieving the objectives

of this Section can be satisfied, such as reducing comparable carbon emissions at an offsite location within Belmont. If an exception is granted, the applicant shall be required to comply with this Section in all other respects and shall be required to achieve the threshold of compliance determined to be achievable by the Belmont Inspector of Buildings.

5. If the Belmont Inspector of Buildings determines that it is reasonably possible for the applicant to fully meet the Emission-Free New Construction Standards set forth in Sub-section (C), the request for an exception shall be denied and the applicant shall be notified of the decision in writing. The project and compliance documentation shall be modified to comply with the Emission-Free New Construction Standards set forth in Sub-section (C).
6. This Section shall not be applicable to any Covered Project for which all building permits have been given final approval, as determined by the Belmont Inspector of Buildings, prior to the effective date of this Section.

DRAFT

**Separate Warrant Article  
(included as part of traditional Article 6?)**

To see if the Town will vote, pursuant to Chapter 44, Section 53E½, of the General Laws, to establish new revolving funds; to reauthorize revolving funds established under various previous votes of the Town by various Town Departments, to hear or receive a report concerning the receipts and expenditures of same, to establish new revolving funds or to amend the votes under any preciously adopted revolving funds, to appropriate a sum of money to fund same, to determine how the money shall be raised or expended; or in any way act thereon.

*This article seeks authorization to establish new revolving funds, and to reauthorize existing revolving funds, for certain operations of the Town. A revolving fund allows the expenditure of user fees for program expenses without further Town Meeting appropriation. However, the Town Meeting must annually renew the funds. The Board of Selectmen and Warrant Committee are considering the use of revolving funds for the following programs:*

Revolving account	Spending Authority	Revenue Source	Allowed Expenses	Expenditure Limit
Emission free building consulting	Community Development	Consultant fees collected from permit applicants	Consultant fees	\$25,000
Emission reduction improvements and measures	Community Development	Consultant fees and contributions collected from permit applicants	Consulting, design, construction, maintenance or purchase of emission reduction measures and/or facilities	\$250,000