



City of Quincy, Massachusetts

OFFICE OF THE COUNCIL

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**TO: ALL MEMBERS OF THE ORDINANCE COMMITTEE
OF THE QUINCY CITY COUNCIL**

FROM: COUNCILLOR KEVIN F. COUGHLIN, CHAIRMAN

The Ordinance Committee of the Quincy City Council will meet on MONDAY, APRIL 23, 2012 at 6:30 PM in the New City Hall Council Chambers relative to my proposal to amend Title 17 Zoning in accordance with Chap. 43, Sec. 23, to include 6.9 Small Scale Solar Energy. *Please attend this very important meeting.*

TO ALL COUNCILLORS

PATRIOT LEDGER

QUINCY ACCESS TV, QUINCY SUN

MAYOR KOCH, MESSRS. FATSEAS, WALKER, McGRATH

SHEA, TIMMINS, HARRINGTON, DUCA, MS. D. HALL, MS. J. PETKUN

COMMISSIONER RAYMONDI, CHIEF KEENAN & CHIEF BARRON

Introduced by: Kevin F. Coughlin, Ward Three Councillor

Order No

Ordered

February 27, 2012

Be It Hereby Ordained by The Quincy City Council that Title 17 of the Quincy Municipal Code be hereby amended to include the following section:

6.9 SMALL SCALE SOLAR ENERGY

6.9.1.Purpose & Intent

A. Solar energy is a renewable and non-polluting energy resource that can prevent fossil fuel emissions and reduce a municipality's energy load. Energy generated from solar energy systems can be used to offset energy demand on the grid where excess solar power is generated.

B. The use of solar energy equipment for the purpose of providing electricity and energy for heating and/or cooling is a priority and is a necessary component of the City of Quincy's current and long-term sustainability agenda.

C. The purpose of this section is to provide standards for solar energy equipment as an accessory use. It is an objective of the city and the zoning ordinance to regulate uses and structures so as to protect properties from incompatible uses and to conserve and enhance property values. Regional and local interests include promoting opportunities for alternative sources of energy production and conservation. This chapter provides for a balance of these interests, providing a process to facilitate use of solar power in a manner that minimizes visual impacts of solar energy equipment, the potential for nuisance and the protection of the public health, safety and welfare.

6.9.2.Definitions

ACCESSORY STRUCTURE

A customary building or structure on the same lot with and clearly incidental and subordinate to the principal structure.

BUILDING-INTEGRATED PHOTOVOLTAIC (BIPV) SYSTEMS

A solar energy system that consists of integrating photovoltaic modules into the building structure, such as the roof or the facade replacing or substituting for an architectural or structural component of the building and which does not alter the relief of the roof.

FLUSH-MOUNTED SOLAR PANEL

Photovoltaic panels and tiles that are installed flush to the surface of a roof and which cannot be angled or raised.

FREESTANDING OR GROUND-MOUNTED SOLAR ENERGY SYSTEM

A solar energy system that is directly installed in the ground and is not attached or affixed to an existing structures

NET-METERING

A billing arrangement that allows solar customers to get credit for excess electricity that they generate and deliver back to the grid so that they only pay for their net electricity usage at the end of the month.

PERMIT GRANTING AUTHORITY

The Planning Board shall be the permit granting authority for the purposes established in section 9.4 Special Permits and 9.5 Site Plan Review. Pursuant to 9.5.2 the Planning Board shall consolidate its site plan review and special permit procedures

PHOTOVOLTAIC (PV) SYSTEMS

A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them.

QUALIFIED SOLAR INSTALLER

A person who is duly qualified as a Massachusetts licensed electrician

ROOFTOP OR BUILDING MOUNTED SOLAR SYSTEM

A solar power system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the south at an optimal angle.

SMALL SCALE SOLAR

For purposes of this ordinance, the term “small-scale solar” refers to solar photovoltaic systems that produce up to ten kilowatts (kW) per hour of energy or solar-thermal systems which serve the building to which they are attached, and do not provide energy for any other buildings.

SOLAR ACCESS

Space open to the sun and clear of overhangs or shade including the orientation of streets and lots to the sun so as to permit the use of active and/or passive solar energy systems on individual properties.”

SOLAR COLLECTOR

A solar photovoltaic cell, panel, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for the generation of electricity or transfer of stored heat.

SOLAR ENERGY EQUIPMENT/ SYSTEM

Solar collectors, controls, energy storage devices, heat pumps, heat exchangers, and other materials, hardware or equipment necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar systems include solar thermal, photovoltaic and concentrated solar.

SOLAR PANEL

A device for the direct conversion of solar energy into electricity.

SOLAR STORAGE BATTERY

A device that stores energy from the sun and makes it available in an electrical form.

SOLAR THERMAL SYSTEMS

Solar thermal systems directly heat water or other liquid using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water, and heating pool water.

6.9.3. Applicability

- A. The requirements of this ordinance shall apply to all Small Scale Solar energy systems modified or installed after the effective date of this ordinance as further delineated herein.
- B. All solar energy systems shall be designed, erected and installed in accordance with all applicable codes, regulations and standards.
- C. Solar energy collectors shall be permitted only to provide power for use by owners, lessees, tenants, residents, or other occupants of the premises on which they are erected, but nothing contained in this provision shall be construed to prohibit the sale of excess power through a “net billing” or “net-metering” arrangement in accordance with state or federal statute.

6.9.4. Authority.

Roof mounted solar equipment shall be permitted as of right with the required building and electrical permits subject to any applicable requirements of this ordinance.

The Planning Board may grant approval of ground mounted or free standing solar energy equipment in accordance with the criteria herein set forth approved individually as to location, size, design, and aesthetic characteristics, including visibility and screening. In granting approval for free standing solar energy equipment, the Planning Board may impose conditions to safeguard and protect the public health, safety and promote the general welfare.

6.9.5. Criteria.

Free Standing Solar equipment shall be permitted if the Planning Board makes the findings that the proposed solar energy equipment complies with the following criteria, meets the balance of the requirements of this ordinance and all applicable requirements of the Quincy Zoning code of which this is a section thereof.

1. The placement of solar energy equipment on roofs of principal buildings is preferred and encouraged.
2. The placement of ground mounted solar energy equipment may be permitted if the solar energy equipment is unable to be located on the roof of the principal structure and as such all ground mounted solar energy equipment is considered to be an accessory structure. Solar energy equipment shall be located in the least visibly obtrusive location where panels would be functional but not in any front or side yard or in any utility, water, sewer or other type of public easement.
3. Rooftop solar panels shall be installed on the plane of the roof material (flush mounted) or made a part of the roof design but shall in no instance be placed more than 12 inches (measure to the top of the panel) above the adjacent roof pitch if flush mounting is not practical. In no instance shall any part of the solar energy panels extend beyond the edge of the roof or ridge line of the roof.
4. For free standing or ground mounted solar panels, all exterior electrical lines must be in conduit and conduit and plumbing lines must be buried.
5. Solar energy equipment shall meet setback and height requirements for the zone except as further defined and limited by this ordinance
6. Solar energy equipment shall not block required parking.
7. The proposed solar energy project must be designed and be operated to prevent the misdirection of concentrated solar radiation onto nearby property, public roads or other areas accessible to the public.
8. The proposed solar energy project must be designed and be operated to protect public safety, including development and implementation of a plan of operating procedures to prevent public access to hazardous areas. All installations shall have an automatic and manual means of shutdown with clear instructional signage.
9. For roof mounted solar panels, firefighter access and ventilation must be factored into placement. In the instance where the entire roof structure is to be utilized for solar installation, a minimum 24" wide pathway is required along one side of the solar roof, located over structurally supported area. In the instance of any roof with a greater than 2:12 pitch the bottom edge cannot be used as a pathway. Pathways and solar panels shall be located outside 12" of the low point of a valley.

6.9.6. Application

An applicant for a free standing Small Scale solar energy installation must submit an application to the Planning Board on forms and in such manner as prescribed by the Board. An application for approval of a free standing small scale solar energy project must include text and plans sufficient to show that the proposed facility would comply with the zoning code and all applicable local and state regulations.

All applicants must demonstrate compliance with the City of Quincy Tree Ordinance which shall in all cases apply. In reaching decisions on tree maintenance and removal with regard to the application for a proposed solar energy project, the City may wish to weigh solar access against other factors such as; the environmental impact of the proposed tree removal, the potential impact on erosion and drainage, the potential alternatives to the proposed action, and the required replanting of replacement trees of a similar or different species, as well as the planting of other vegetative material, fencing or terracing, or undertake other similar measures to offset the negative effects of tree removal.

6.9.7. Permitting

A. No Small Scale solar energy system or device shall be installed or operated in the City of Quincy except in compliance with this ordinance. To the extent practicable, and in accordance with state law, the accommodation of solar energy systems and equipment and the protection of access to sunlight for such equipment shall be encouraged in the application of the various review and approval provisions of the Quincy zoning code

B. Rooftop, Building-Mounted Solar Collectors and Building-Integrated Photovoltaic (BIPV) Systems :

Rooftop, building mounted solar collectors and building integrated photo-voltaic systems shall be permitted by right in all zoning districts subject to the following conditions

1. Building permits and electrical permits shall be required for installation of all rooftop, building-mounted solar collectors and building integrated photovoltaic systems.
2. The installation must meet the criteria established in 6.9.5

C. Ground-Mounted and Free Standing solar Collectors: Ground-mounted and free standing solar collectors require a special permit and site plan review as accessory structures in all zoning districts subject to the following conditions: _

1. Building permits and electrical permits shall be required for the installation of all ground-mounted solar collectors.
2. The installation must meet the criteria established in 6.9.5
3. The location of the solar collector shall meet all applicable setback requirements for accessory structures in the zoning district in which it is located, shall not be located in the front or side yard of any lot and shall not exceed one and one half of one (1.5) percent of the square footage of the lot (upon which the free-standing or ground mounted solar collectors are to be installed) minus the square footage of any improvements to the parcel.
4. The height of the solar collector and any mounts shall not exceed (6) six feet when oriented at maximum tilt as measured from the average grade at the base of the pole to the highest edge of the system.
5. Solar energy equipment shall be located in a manner so as to not result in view blockage for surrounding properties and shading of property to the north, while still providing adequate solar access for collectors
6. Freestanding solar energy collectors shall be screened through the use of architectural features, earth berms, landscaping, fencing or other screening which will harmonize with the character of the property and surrounding area.

D-Free Standing Solar Thermal Systems require a special permit and site plan review in all zoning districts subject to all of the conditions set forth herein governing the installation of free standing small scale solar equipment

E. Safety:

All solar energy installations must be performed by a qualified solar installer.

All solar energy installations must have a plan established for routine maintenance, the replacement of weathered or worn components and the elimination of hazardous conditions.

Prior to operation, electrical connections must be inspected by the city electrical inspector and any connection to the public utility grid must be inspected by the appropriate public utility

Solar energy systems shall be maintained in good working order.

If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the Massachusetts State Building Code when in use and when no longer used shall be disposed of in accordance with state and local laws and regulations.

Upon completion an installation plan showing manual service shutoff of the solar energy system must be filed with the Quincy Fire Department

6.9.8. Termination and Abandonment

If a solar collector ceases to perform its originally intended function for more than 12 consecutive months, the property owner shall remove the collector, mount and associated equipment by no later than 90 days after the end of the twelve-month period.

6.9.9. Violations

Any individual found to be in violation of the provisions of this ordinance shall be subject to sanction as provided within the provisions of the zoning code.

6.9.10. Appeals

See section 9.5.9

6.9.11. Severability

If any section, subsection, sentence, clause, phrase or portion of this chapter is held invalid or unconstitutional for any reason by a court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such judgment shall not affect the validity of the remaining portions hereof.