

CITY OF NORTHAMPTON

MASSACHUSETTS

In the Year Two Thousand and ~~Nineteen~~Eighteen

Upon the Recommendation of the Mayor and Public Shade Tree Committee

18.231 An Ordinance Relative to Large-Scale Ground-Mounted Solar Arrays

An Ordinance of the City of Northampton, Massachusetts, providing that Chapter 350 Code of Ordinances, ~~City of Northampton, Massachusetts~~, be amended by modifying allowances under special permit for ground mounted solar photovoltaic arrays.

ORDINANCE

An Ordinance of the City of Northampton, Massachusetts. Be it ordained by the City Council of the City of Northampton, in City Council assembled, as follows:

USES ALLOWED

Uses Allowed By-Right [for ~~all~~RR, SR, URA, URB, URC, WSP zoning districts FOR WSP, delete from uses allowed by Special Permits]:

- Rooftop solar hot water and photovoltaic
- Accessory solar photovoltaic (PV) ground-mounted on a parcel with any building/use, provided that the PV is sized to generate no more than 200% of the annual projected electric use of the non-PV building/use or 12 KW, whichever is greater. The setbacks for such a PV shall be the same as for detached accessory structures as set forth in the table above.

Move from Uses Allowed by Special Permit to Uses Allowed by Right in the OI, GI, CB Districts

Accessory solar photovoltaic ground-mounted on a parcel with any building or use, provided that the PV is sized to generate no more than 200% of the annual projected electric use of the non-PV building or use

Delete the following from all districts:

~~**Administrative Site Plan Approval Required for the Following [for all zoning districts]:**~~

- ~~• Solar photovoltaic of any size, ground-mounted, shall be permitted with administrative site plan from the Office of Planning & Sustainability if one of the following is met:~~
 - ~~1. The PV array is constructed over any legal parking lot or driveway; or~~
 - ~~2. The PV array is constructed at any assigned landfill site not separated from the site-assigned property by any road; or~~
 - ~~3. The PV array is constructed at an airport not separated from the runways by any road; and~~
 - ~~4. The power and telecommunications extensions are not visible from the public way.~~

[for RR, SR, URA, URB, WSP,]Site Plan Approval required for the following uses by Planning Board unless otherwise noted:

- ~~Solar photovoltaic (PV), large-scale ground-mounted not requiring the removal of more than 25,000 board feet of timber~~ Any other Solar photovoltaic (PV), large-scale ground-mounted not listed above, where less than two acres of tree removal is planned. ~~The removal of significant trees on the subject parcel(s) must be replaced in accordance with 350-12.3 and includes tree removal that occurs within 12 months immediately prior to an application for installation of such a system.~~

Setbacks:

Front = 50 feet

Side = 50 feet

Rear = 50 feet

Maximum height = 30 feet

Open space = 20%

1. A planted buffer to abutting residential property shall be at least 15 feet in width along the property boundary. It shall contain a screen of plantings of vertical habit in the center of the strip not less than three feet in width and six feet in height at the time of occupancy of such lot. Individual shrubs shall be planted not more than five feet on center, and individual trees thereafter shall be maintained by the owner or occupants so as to maintain a dense screen year-round. At least 50% of the plantings shall be evenly spaced. Whenever possible, existing trees and ground cover should be preserved in this strip, reducing the need to plant additional trees. Trees may not be cut down in this strip without site plan approval.
2. The owner or operator shall remove the installation no more than 150 days after the date of discontinued operations. Removal shall consist of:
 - a. Removal of all structures, equipment, security barriers, transmission lines, conduits, poles.
 - b. Disposal of all waste in accordance with local, state, and federal waste disposal regulations. [
 - c. Stabilization or re-vegetation of the site as necessary to minimize erosion.

If the owner /operator fails to remove the installation in accordance with the requirements of this section, the City shall have the right, exercise or call the bond/performance guarantee in order to cover the cost of removal.
3. Performance Guarantee: Applicants shall submit an itemized cost estimate for complete decommissioning of the array as specified above. Prior to beginning construction the applicant shall post a performance guarantee in the form of a bond or escrow or other guarantee approved by the Planning Board for the amount to cover decommissioning, including a 20% contingency and calculated with 20 year inflation factor.

For RR, WSP, SR, URA, URB, within uses allowed by Special permit, ~~Delete the entire bullet for ground~~ Amend ground mounted PV solar array. As follows:

Projects resulting in more than two acres of canopy removal shall submit the following additional information to that which is required by site plan for large scale ground mounted solar above with their application. The Board must find that the removal of trees will not negatively impact the health safety

and welfare of the residents of Northampton by maintaining a robust and diverse ecosystem for the residents while also creating renewable energy systems. In order for the Board to make such finding, the applicant can show this shall by submitting an analysis of the proposed project's impact relative to the benefit of the solar installation as follows:

1. Analysis showing that tree removal which occurs on more than one acre of slopes greater than 20% will not cause erosion of top soil and will not increase siltation of any streams present on the site or within 200' of the property boundary.
2. Analysis of the forest type and relevant habitat that will be lost. This analysis must include the structure and diversity of the canopy, midstory and understory of the forested area to be cleared. Analysis must be performed by an individual with a master's degree in wildlife biology or ecological science from an accredited college/university or other competent professional with at least two years of experience in wildlife habitat evaluation.
 - a. Any forested area within which certifiable vernal pools are found, must be identified and a permit from the Conservation Commission must be granted prior to review by the Planning Board.
 - b. Any forested area containing clusters of five or more healthy trees of 20" Diameter Breast Height or greater that are not in decline shall be preserved in order to continue to provide high value ecological benefit to the community. Connection of these larger trees to surrounding stands of trees shall be maintained.
 - c. As part of the forest type analysis, the report shall contain information regarding the abundance and distribution of habitats within the region and of the specific site and any historical information on the extent and quality of these habitats and impact of clearing on these habitats. The applicant must show through analysis that habitat is not fragmented and that connectivity remains in the proposed conditions.
3. Analysis by a qualified third party showing that the project will be carbon-neutral over the first ten years of operation. The applicant shall provide the following calculations:
 - a. The total volume of trees to be removed (provided by an independent certified forester) and the projected volume of trees over a 10 year period of additional growth.
 - b. Subtracting the estimated live-wood in replacement trees provided under the Significant Tree section of this zoning ordinance ten years after planting
 - c. Conversion of the net live-wood to be removed to short tons of carbon (using research from the Northern Institute of Applied Climate Science or other methodology after approval by the permit granting authority)
 - d. Subtraction of the carbon offsets (short tons of carbon) provided by the solar photovoltaic project over ten years of operation, including the calculation of potential carbon stored had the trees continued to thrive in that same 10 year window.
 - e. If there is any net release of carbon with the above calculations, the applicant shall assign Renewable Energy Credits (REC) to the City to match or exceed said release of carbon. However, RECs may not be used to fund biomass projects.
4. At least 50% of the property, shall be protected from tree clearing and future development for the duration of the operation of the solar array installation and until such time as the system is decommissioned and removed.

5. Within the area beyond the first two acres of canopy removed, stumps for removed trees must remain in place and no excavation/soil disturbance is allowed other than what would be required to bore support posts for the PV panels.
6. Electrical transformers for utility interconnections may be above ground only if required by the utility provider. Power and telecommunications poles and equipment shall not be visible from the public way.