



CITY OF CONCORD
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Community Development Department

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SUPPLEMENTAL REPORT TO THE MAYOR AND CITY COUNCIL

FROM: Energy and Environment Advisory Committee (EEAC)
Heather Shank, City Planner, and Beth Fenstermacher, Assistant City Planner

DATE: August 8, 2019

SUBJECT: Revisions to the Ordinance Amending the CODE OF ORDINANCES, Title IV, Zoning Code, Chapter 28, Zoning Ordinance, Article 28-2, Zoning Districts and Allowable Uses, Article 28-5, Supplemental Standards, Article 28-9, Administration and Enforcement, and Glossary

Recommendation

Recommend that City Council approve the Ordinance as amended in the Supplemental Ordinance.

Summary

City staff met with the Energy and Environment Advisory Committee (EEAC) to review and discuss testimony received at the public hearing at the June 10, 2019 City Council meeting. Based on the information presented at the hearing, follow up discussions with the EEAC, and review of research compiled during the drafting process, a recommendation is being made that the original Ordinance be amended to allow a 50-acre solar land coverage cap instead of the 25-acre cap previously proposed.

The Conservation Commission discussed the testimony at their July 10, 2019 meeting. Commission members reiterated their original statements that were provided in the written testimony submitted to City Council in June. Due to timing, the Commission was not able to hold a special meeting to review and comment on the proposed revision.

Discussion

The primary feedback received from the June 10, 2019 public hearing involved the 25-acre cap on solar facilities and the percentage of solar land coverage allowed in the RO District.

Maximum Cap

The proposed ordinance considered concepts and definitions presented in the Clean Energy NH (formerly NH Sustainable Energy Association) model solar ordinance. The model ordinance categorizes solar developments based on size. Large Commercial Solar is defined as a 1 MW to 5 MW facility that is between 5 and 25 acres of solar land coverage. Industrial Solar is defined in the model ordinance as a system occupying 25 to 50 acres of solar land coverage.

Feedback from the public, Conservation Commission, and Planning Board during the drafting of the ordinance indicated that Large Commercial Solar would be more in line with the City's existing land uses, master plan goals, and land availability. In particular, the Master Plan recommends that the City allow up to 5 MW facilities. Therefore, based on the convention of 1 MW per 5 acres, a cap of 25 acres was recommended.

In response to the testimony received at the Council public hearing, the following points were considered in developing a recommended revision:

- Any cap on the size of a solar installation does not prevent property owners from subdividing in order to install larger facilities. In that regard, a cap would have limited effectiveness in limiting the size of a facility if a property owner is able to subdivide. However, habitat fragmentation was one of the natural resource concerns of the Master Plan that the 25-acre cap was intended to mitigate. A 25-acre cap would ensure that habitat corridors for wildlife movement are provided through the property boundary buffers that would be required for subdivision.
- Regardless of the acreage chosen for the cap, or of the ability of the owner to subdivide, 60% of the property would still be free for resource protection purposes or other uses permitted in the RO District. In that regard, a 50-acre facility would not be more intense from a land use perspective, except in cases where the property owner is unable to subdivide and the size of their facility would have been limited due to available frontage.

With the above points in mind, staff is recommending that the cap be raised to 50 acres, but that the Site Plan Regulations include a provision that a 50-foot wide habitat corridor be provided to allow for wildlife movement for solar installations greater than 25 acres in area.

This would allow:

- All property owners with sufficient land area to install 50-acre facilities regardless of their ability to subdivide;
- Projects to move forward without the added expense or logistical challenges of subdivision, while still providing the corridors for wildlife movement that would have been required as part of a subdivision;
- Flexibility in determining the size of solar facility segments and the location of corridors based on site conditions and not the location of road frontage;

- The ability to request a waiver from the Board, instead of a variance from the ZBA, if the location or width of a corridor does not make sense based on the size, shape, or location of the solar facility and site conditions.

Solar Land Coverage

The Clean Energy NH model solar ordinance provides a definition of Solar Land Coverage “to be used for the purposes of calculating the footprint of the land area occupied by the components of a solar array.” It further states that Solar Land Coverage not be interpreted as a measurement of impervious surface. The proposed City ordinance utilizes the concept of this definition to create a different method of calculating coverage for regulating solar collection systems, exempting solar collection systems from the Maximum Lot Coverage requirements, as defined by the Zoning Ordinance. The proposed Ordinance does not limit solar development based on impervious surface.

Solar Land Coverage accounts for the total area occupied by the solar collection system, including the panels, equipment, and the open area between panels. The open area between the panels is included in the measurement as it is part of the design and is required for maintenance and to meet coverage (non-shading) requirements. Solar as a commercial use in the RO District is different than what is anticipated in the master plan and will alter the landscape of these districts in an unpredictable way. The solar land coverage method is the most effective strategy to clearly communicate the amount of land utilized by a solar installation. It also provides predictability for residents that live in the RO District as well as residents who enjoy the natural landscapes of Concord. Since impacts from impervious surface are not a major issue with solar facilities, methods of calculation based on impervious surface serve very little purpose. The public feedback that staff received indicates that the main concern with regard to large scale solar facilities is the disturbance to other resources from the amount of land area cleared, fragmented, or otherwise utilized. The method staff has proposed provides the highest degree of clarity with regard to those impacts.

Currently the only large scale development permitted in the RO District is a cluster housing development. Under the cluster development ordinance, 60% of the site shall be set aside for open space, leaving 40% of the site to be occupied for residential use. Although the Maximum Lot Coverage allowed in the RO district is 10%, essentially, the allowed “occupied area” for a cluster development is 40%.

The proposed Solar Land Coverage of 40% for the RO District is comparable to the requirements for the cluster development where 60% is left unencumbered by the development, and 40% remains to be available for the development, regardless of the total impervious surface area. However, the 60% not utilized by the solar installation may still be used by the resident for any other uses permitted in the district.

It is important to note that by using the Solar Land Coverage calculation, the impervious area for the solar development is not quantified or limited by the ordinance, with the exception of roads or parking areas. It is likely that impervious surface area will exceed the 10% allowed under the

existing ordinance, since it is not counted towards impervious surface maximums. In this way, the proposal is more permissive than under the current ordinance with regard to impervious surface area.

Lot sizes in the remaining districts will not likely accommodate large commercial scale solar development. In those districts outside of the RO and RM where commercial and community solar development is allowed, higher solar land coverage percentages are proposed because the protection of open space and natural resources are not the purpose of those districts. The higher percentages attempt to allow for solar development to be maximized on lots in those districts. The recommended percentages account for secondary principal uses, density to match the district, setbacks and buffers.

Community solar percentages are higher in certain zoning districts to incentivize local energy production, which is in line with the master plan goal of focusing on local energy, and the recently adopted goal of 100% renewable energy. Moreover, the size of a Community solar facility is limited under New Hampshire's net metering rules, which are currently capped at 1MW (although legislation has been proposed to increase net metering to 5MW).

With regard to the amount of solar land coverage permitted, Staff feels that the original recommendation is most consistent with the goals of the Master Plan and current land use practices in the RO District. No changes are proposed regarding solar land coverage.