ZONING ORDINANCE
FRANCONIA, NH

ARTICLE XX – SOLAR ORDINANCE

A. Authority, Purpose and Goals

This article is enacted in accordance with RSA 674:17(I)(j), 674:62-66 and the purposes outlined in RSA 672:1-III-a as amended. The purpose of this ordinance is to accommodate solar energy collection systems and distributed generation resources in appropriate locations, while protecting the public's health, safety and welfare. The Town of Franconia intends to facilitate the State and National goals of developing clean, safe, renewable energy resources in accordance with the enumerated policies of NH RSA 374-G and 362-F and RSA 477:49-51. This ordinance aims to promote the accommodation of distributed, on-site residential and non-residential solar energy systems, while maintaining Franconia's scenic vistas and rural character.

This article establishes guidelines for the siting of solar collection systems and fulfills the following goals:

1. Preserve the authority of Franconia to regulate and to provide for reasonable opportunity for the siting of solar collection systems.

2. Allow Residential Solar and Roof Mount Solar collection systems as defined in this ordinance by right.

3. Reduce any adverse impact such solar collection systems may create, including, but not limited to, impacts on aesthetics, environmentally sensitive areas, historically significant locations, agriculturally significant locations, health and safety by injurious accidents to person and property, and prosperity through protection of property values.

4. Provide for minimal impact siting options through an assessment of locational options, technology, potential glare, and buffering options.

5. Provide for the removal of abandoned facilities that are no longer in operation.

B. Principal or Secondary Use

An existing use or an existing structure on the lot shall not preclude the installation of a solar collection system on such lot. Solar collection systems may be located on leased parcels within lots. Solar collection systems that are constructed in accordance with the provision of this ordinance shall not be deemed to constitute the expansion of a nonconforming use or structure. Nor shall such facilities be deemed to be an accessory use.

C. Performance Requirements for Residential Solar Collection Systems

All residential solar collection systems are required to obtain a solar building permit.

Definitions:

Commercial Solar: A use of land that consists of one or more free-standing ground mounted solar collection systems that are greater than 5 acres in solar land coverage.

Ground Mount: A solar collection system and associated mounting hardware that is affixed to or placed upon the ground including, but not limited to fixed, passive or active tracking racking systems.

Residential Solar: Any ground mounted or roof mounted solar collection system primarily for on-site residential use, and consisting of one or more free-standing ground or roof mounted solar arrays or modules, or solar related equipment, intended to primarily reduce on-site consumption of utility power.

Roof Mount: A solar collection system that is structurally mounted to the roof of a building or other permitted structure. For the purposes of calculating array sizes or solar land coverage under the solar definitions in this section, roof mounted portions shall not be included.

Solar Collection System (SCS): includes all equipment required to harvest solar energy to generate electricity or hot water. The Solar Collection System includes energy storage devices, power conditioning equipment, transfer equipment, and parts related to the function of those items. Solar Collection Systems include only equipment up to (but not including) the stage that connection is made to the utility grid or site service point.

Community Solar: a system on one property that provides electricity to a group of properties.

Large Commercial Solar: 5 to 25 acres producing energy for onsite usage and for distribution.

Municipal Solar: solar to provide Town facilities with power.

Solar Land Coverage: is defined exclusively for the purpose of calculating the footprint of the land area occupied by the components of a solar array. The Solar Land Coverage is the land area that encompasses all components of the solar collection system including but not limited to mounting equipment, panels and ancillary components of the system. This definition does not include access roads or fencing.

Nameplate Solar Panel Rating: equals the amount of solar the panels produce under industry standard test conditions.

Uses permitted by Right and Uses Permitted by Special Exception:

Solar Collection Systems (SCS)	**Res. A**	**Res. B**	**Bus. A**	**Bus. B**
Roof Mount SCS	Y	Y	Y	Y
Residential Solar	Y	Y	Y	Y
Commercial/Large Commercial	SE	SE	SE	SE
Community Solar	SE	SE	SE	SE

Minimum front, side and rear setbacks same as building setbacks.

The total solar land coverage of the solar collection system shall not be considered in the calculation of the maximum lot coverage.

Setbacks: Ground mounted solar collection systems shall be considered structures and shall comply with the building setback requirements from lot lines and road rights of way for the entire system, including panels, in the applicable zoning district. Tracking systems shall have the setback measured from the point and time where the array is closest to the lot line or road right of way. No portion of a system may cross into the setback. If a ground mounted or tracking system is located in a specific overlay district, it should be subject to all requirements of that district.

Height Regulations: Roof mounted solar collection systems as defined in this ordinance shall not increase the height of the existing structure by more than 5 feet and shall not extend beyond the exterior perimeter of the building other than required for ancillary equipment.

Residential ground mounted solar collection systems shall not rise more than 25 feet from the ground measured from the surface of the existing grade to the top of the collector at its highest point.

Commercial ground mounted solar collection systems shall not rise more than 25 feet from the ground measured from the surface of the existing grade to the top of the collector at its highest point.

1. Setback and Height Requirements – Solar collection systems shall comply with the dimensional standards set forth in this ordinance.

2. Electrical Requirements –All systems not connected to the grid shall be inspected by a licensed Master Electrician at the applicant's cost and approved by the chief of the Franconia Fire Department.

3. Building Permit Requirements - All solar installations are required to obtain a solar building permit.

D. Performance Requirements for Community, Municipal and Commercial Solar Collection Systems

1. Setback and Height Requirements – Solar collection systems shall comply with the dimensional standards set forth in this ordinance.

2. Electrical Requirements – Grid-tied systems shall file a copy of a final approved utility interconnection agreement with the town of Franconia prior to operation of the system. All systems not connected to the grid shall be inspected by a licensed Master Electrician at the applicant's cost and approved by the chief of the Franconia Fire Department.

3. Building Permit Requirements - all community, municipal and commercial solar collection systems are required to obtain a solar building permit.

4. Utilities – Unless specifically waived by the Zoning Board, all electrical lines associated with the system will be underground or mounted on standard wood utility poles with a maximum height of 35 feet.

5. Storm water

    a. Ground mounted systems that are required to secure a New Hampshire Department of Environmental Services Alteration of Terrain (AoT) Permit in accordance with NH RSA 485-A:17 shall secure such permit accordingly.

i. The final Permit issued by NH DES shall be incorporated by reference into the final Town approval and shall be enforceable by the Town in accordance with this Zoning Ordinance.
ii. No further local review of storm water and erosion control shall be required where a project is required to secure the NHDES AoT Permit.

b. Where ground mounted systems do not require a NHDES AoT Permit, the following shall apply:

i. Ground mounted systems that require land clearing and grubbing of mature forested cover to accommodate more than 30% of the solar land coverage area, provided such area of clearing and grubbing is also larger than 1 acre for the proposed system shall include a management plan for storm water that is directly related to the impact of the solar collection system.
ii. Ground mounted systems where the solar land coverage area is larger than 1 acre and located on slopes of greater than 5% shall include a management plan for storm water.

c. Requirements for all Commercial Systems

i. All ground mounted systems shall be constructed in accordance with Best Management Practices for erosion and sedimentation control during the preconstruction, construction, and post-construction restoration period.

ii. Post construction, for the purposes of enhancing natural storm water management, site conditions, and plantings post-construction shall ensure that areas of soil compaction has been restored to more natural conditions. Plantings shall be native species and are recommended to be beneficial habitat for songbirds, pollinators and/or foraging species in order to maintain a healthy surface and subsurface habitat that can attenuate storm water.

6. Glare – Potential significant glare onto abutting structures and roadways, estimating the interaction of sun to panel angle, the time of year, and visibility locations shall be reviewed. Reasonable mitigation, including but not limited to, angle of panels, antireflective coatings, and additional specific screening may be required.

7. Lighting – On site lighting shall be minimal and limited to access and safety requirements only. All lighting shall be downcast and shielded from abutting properties.

8. Buffer – As deemed appropriate, buffering shall be incorporated into the local landscape so that effective screening is provided along public ways and from abutting views. The use of existing or created topography is encouraged to reduce visual impacts.

9. Fencing – If required by the local authority, commercial solar collection facilities shall be surrounded by a fence setback from property lines in conformance with the district regulations for front, side, and rear yards.

10. Emergency Response – Access to and information regarding the site shall be provided to local emergency response organizations. Applicant shall conduct a site orientation tour upon request of local emergency response organization(s) at a mutually-agreed time.

11. Site Plan Review – All Commercial Solar Collection Systems are permitted by special exception from the Franconia Zoning Board of Adjustment and shall be subject to Site Plan Review by the Planning Board.

12. Abandonment and Decommissioning – Solar Collection Systems shall be deemed to be abandoned if operations have discontinued for more than 6 months without written consent of the municipality. An abandoned system shall be removed and the site restored within six (6) months of abandonment. A bond may be required to pay for the cost of removal.

Special Exceptions Conditions Applicable to Commercial Solar Collection System

a. Factors considered in review

i. Potential glare impact on abutting structures or roadways
ii. Height of the proposed Commercial Solar Collection System
iii. Ingress and egress to the site
iv. Surrounding topography
v. Suitability of perimeter fencing

b. Additional criteria for granting a Special Exception.

i. The use will not materially endanger the public health or safety.
ii. Required modifications at or beyond the utility interconnection point.
iii. Required screening shall be maintained during the operative lifetime of the Solar Collection System Special Exception.
iv. In granting a Special Exception pursuant to this section, the Zoning Board of Adjustment may impose any reasonable conditions or restrictions deemed necessary to carry out the intended purpose of this ordinance.

c. Information Required – Each applicant for a Special Exception shall submit a plan prepared in accordance with the Town of Franconia Site Plan Review Regulations and further information including a system layout, rated nameplate capacity, solar land coverage, equipment specifications, electrical requirements, glare analysis, setbacks, lighting, visual buffering, storm water management plan, if applicable, and a decommissioning plan.