

Town of Stratham, NH

Department of Planning & Community Development

Solar Energy System Permit (Residential)

Application Checklist



The Town of Stratham recognizes the importance of solar power as a renewable energy source and tool for homeowners to both help reduce greenhouse gas emissions and to reduce their energy costs. Accordingly, the Town permits residential property owners to install solar energy facilities on their properties by right subject to certain requirements.

This solar array permit application checklist has been developed by the Town of Stratham to assist homeowners and others to understand the planning and zoning requirements associated with solar energy systems and the materials necessary for a complete and successful building permit application. This checklist is specific to accessory solar energy systems on residential properties (single-family homes and duplexes) and is intended only to be a guide.

All applications shall conform to the applicable requirements of the Zoning Ordinance and local and state building regulations, as applicable. Planning and/or Zoning applications, if required, must be approved by the Stratham Planning Board and/or Zoning Board of Adjustment prior to submission of a building permit application. A completed and signed building permit application along with the application fee and a complete set of plans that are legible and drawn to scale are required to be submitted to initiate the building permit review process. If a new roof will be installed, a separate building permit application must be submitted. Applications can be submitted online, by mail, or in person, and the fee schedule is located at <https://www.strathamnh.gov/building-department-code-enforcement>.

If you still have questions about solar energy permitting after reviewing this checklist, contact us at **(603) 772-7391, ext. 180** or **building@strathamnh.gov**.

1. Planning & Zoning Requirements:

Stratham's zoning requirements governing solar energy systems differ depending on whether the proposal is for a roof-mounted or ground-mounted system. Projects that are permitted by right (roof-mounted solar and some small, ground-mounted solar) may move forward immediately to the building permit application process; systems not permitted by right require Planning Board and/or Zoning Board review and approval.

Roof-mounted solar

Roof-mounted solar energy systems are permitted by right in all of Stratham's zoning districts. All solar energy systems require a building permit to be issued before any work begins on the project.

Ground-mounted solar

Accessory ground-mounted solar energy systems are permitted by right in Stratham's residential zoning districts **IF** the proposal meets **ALL** the criteria (items 1-5) outlined below. If a project does not meet all of the criteria, the use is allowed only subject to the approval of a Conditional Use Permit by the Planning Board.

1. The array must be a small-scale system occupying no more than 1,750 square-feet of surface area.
2. The solar energy system must be sited in the rear yard only and shall not require the clear-cutting of vegetation or the removal of mature trees within 20-feet of any property boundary.
3. The solar energy system must be located a minimum of 50-feet from the front property boundary (or any lot boundary that directly borders a road frontage) and a minimum of 35-feet from all other property boundaries.
4. The solar energy system must comply with the Town's wetlands and shorelands setbacks.
5. The solar energy system must not exceed a height (tallest point of structure) of 12-feet above natural grade.

Proposed ground-mounted solar energy systems which do not meet all criteria above are subject to the approval of a Conditional Use Permit by the Planning Board. This requires the applicant, or a representative of the applicant, to appear before the Planning Board in a public hearing with notification to abutting property owners. The application is available online at: <https://www.strathamnh.gov/planning-zoning-department/pages/forms-applications>.

Town staff can assist applicants with the submittal of Conditional Use Permit applications. If you need assistance, please contact **(603) 772-7391, x. 184** or planning@strathamnh.gov.

All solar projects must meet certain zoning requirements, including conforming to property setback and height requirements. If a proposal does not meet these requirements, it is not permitted. Town staff is always available to help applicants interpret zoning requirements.

2. Review Process Timeline:

The Building Inspector is dedicated to providing a comprehensive review of your application within a reasonable timeframe. Complete permit applications expedite this process. To facilitate review, please insure the following:

1. Submit all required forms and information in one package.
2. A New Hampshire licensed electrician must sign the application.

3. Codes and Criteria:

The following State of New Hampshire and Town of Stratham codes and ordinances apply:

1. 2018 IRC (until January 1 st , 2025)	6. NFPA 1
2. 2021 IRC (starting January 1 st , 2025)	7. NFPA 101
3. 2020 NEC	8. Stratham Zoning Ordinance Section 5.13
4. 2018 IBC (until January 1 st , 2025)	
5. 2021 IBC (after January 1 st , 2025)	

The following local design criteria should be used:

1. Max Wind Speed: 115 MPH
2. Ground Snow Load: 50
3. Frost Depth: 4 feet
4. Maximum assumable soil bearing capacity: 3000 psi

4. Building Permit Application Materials Checklist:

Requirements for all building permit applications:

Completed and Signed Residential Building Permit Application.

Link for Application Submittal:

<https://forms.monday.com/forms/f0f955dfbdd30f25c2dda524675d315a?r=use1ed>

Link for downloadable applicable: <https://www.strathamnh.gov/building-department-code-enforcement/pages/1-permit-applications>

Application fee received before review takes place.

Link to Fee Schedule: <https://www.strathamnh.gov/building-department-code-enforcement>

Please note the total cost of construction must include the costs for electrical work.

Construction documents (1 paper and 1 electronic) submitted along with a completed and signed application sent electronically, mailed, or dropped off at the office.

Copy of Manufacturer's Specifications, installation instructions and signage details for labeling.

Does the system meet Zoning regulations for the Town of Stratham including setbacks for property lines, wetlands, specific zone ordinance, and flood zone requirements?

Plot Plan showing location of the array on the property in relation to those setbacks.

If Ground Mounted:

Show array supports, framing members, and foundation posts and footings.

Provide information on mounting structure(s) construction. Engineering calculations by a design professional may be required.

Show detail on module attachment method to mounting structure. Gravity loads and wind uplift must be addressed by design.

If Roof Mounted:

- Letter from NH Licensed Structural Engineer after review of the existing roof system and the proposed mounting system.
- Two copies of a roof plan that shows the existing condition and location of proposed equipment. This includes access pathways required by Fire Code.
- If panels are not mounted flush to the roof, what is the total height of the building with proposed equipment? _____
- 1 copy of construction documents or sealed assembly / installation plans of the photovoltaic system.
- 1 copy of construction documents of the photovoltaic systems' connection to the structure of the building. Construction documents shall include, but are not limited to, framing plans, any structural upgrades needed, connection details to the building, and any structural calculations or load documents.

NOTE: Engineered plans may be required for existing buildings to make sure they meet structural requirements.

- 1 copy of a line diagram showing the array configuration, array wiring, combiner/junction box, conduit/wiring from array to inverter, DC grounding system, disconnecting means, inverter, conduit/wiring from inverter to utility point of connection, AC grounding and system grounding, and point of connection attachment method.

Additional Notes:

- All documents submitted for review must have a minimum text size of 3/32", a minimum drawing sheet size of 11"x17", and a maximum drawing sheet size of 36"x48," "E" size.
- Additional information required by the Building Official may be necessary for the issuance of the permit.
- Multiple inspections will be required, including, but not limited to, footing/foundation, framing/structural upgrades, labeling, grounding, and rapid shutdown/disconnect.