

RESIDENTIAL ROOFTOP SOLAR PHOTOVOLTAIC APPLICATION
Sample Permit Application

JOB SITE ADDRESS _____

NAME OF BUILDING OWNER _____

JOB VALUATION _____

	Name _____
Installation	Address _____
Contractor	City _____ State _____ Zip _____
	State License No. _____ Phone _____

Required Information for Permit:

1. Site plan showing location of major components on the property and a framing cross section that identifies type of support (rafter or truss), spacing, span dimension, and approximate roof slope. The drawings need not be exactly to scale, but it should represent relative location of components.
2. Specification sheets and installation manuals for all manufactured components including, but not limited to, PV modules, inverter(s), combiner box, disconnects, and mounting system.
3. *If city manages electric permit process* - Electrical diagram showing PV array configuration, wiring system, overcurrent protection, inverter, disconnects, required signs, and AC connection to building (see accompanying standard electrical diagram).

Step 1: Structural Review of PV Installation Mounting System

1. Is the solar installation to be mounted on pitched roof in good condition, without visible sag or deflection, no cracking or splintering of support, or other potential structural defect? Yes No
For truss systems, additional information may be needed to ascertain the truss' design loads. Please contact the building official for standards on when structural analysis will be needed.
2. Is the equipment to be flush-mounted to the roof such that the collector surface is parallel to the roof? Yes No
3. Is the roofing type lightweight? Yes (composition, lightweight masonry, metal, etc...) No
4. Does the roof have a single layer roof covering? Yes No

If No to any of questions 1 -4 above, additional documentation may be required demonstrating the structural integrity of the proposed solar installation and all proposed structural modifications, or a statement stamped by a Minnesota licensed/certified structural engineer, and possibly other information. Please contact the building official to determine additional information requirements.

5. Provide method and types of weatherproofing for roof penetrations (e.g. flashing, caulk).

Mounting System Information:

6. Is the mounting structure an engineered product designed to mount PV modules with no more than an 18" gap beneath the module frames? Yes No

If No, provide details of structural attachment certified by a design professional. Manufacturer's engineering specifications are sufficient to meet this requirement.

7. For manufactured mounting systems, fill information on the mounting system below:
 - a. Mounting System Manufacturer _____
 - b. Product Name and Model# _____

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- c. Total Weight of PV Modules and Rails _____ lbs
- d. Total Number of Attachment Points _____ (attachment points must be equally distributed across the array)
- e. Weight per Attachment Point _____ lbs
- f. Maximum Spacing Between Attachment Points on a Rail _____ inches (see product manual for maximum spacing allowed based on maximum design wind speed).
- g. Total Surface Area of PV Modules (square feet) _____ ft²
- h. Distributed Weight of PV Module on Roof ($b \div f$) _____ lbs/ft²

If distributed weight of the PV system is greater than 5 lbs/ft², a study or statement demonstrating the structural integrity of the installation, or a statement stamped by a Minnesota licensed/certified structural engineer, may be required. Contact the building official to determine requirements.

Step 2: Electrical Review of PV System (to be completed for the local government only if the local government administers electric permits. Otherwise the electric permit is administered by the State of Minnesota Department of Labor and Industry. In either case, the electric permit application can be a separate document, as the licensed electrician may be a different contractor)

Please document the following information to be issued an electric permit. If the installation does not meet the following thresholds, additional information may be needed, as requested by the permit official.

1. PV modules, utility-interactive inverters, and combiner boxes are identified for use in PV systems.
2. The PV array is composed of 4 series strings or less per inverter.
3. The total inverter capacity has a continuous AC power output 13,440 watts or less
4. The AC interconnection point is on the load side of service disconnecting means (NEC 2011 705.12(D), NEC 2008 690.64(B)).
5. A standard electrical diagram should be used to accurately represent the PV system. Acceptable diagrams, in interactive PDF format, are available at www.solarabcs.org/permitting.

Fill out the standard electrical diagram completely. A guide to the electrical diagram is provided at www.solarabcs.org/permitting to help the applicant understand each blank to fill in. If the electrical system is more complex than the standard electrical diagram can effectively communicate, provide an alternative diagram with appropriate detail.

Step 3: Permit fee for residential installations

____ Fees \$ (fixed fee between \$100 – 250, consistent with cost for services).
____ Additional inspection \$ 50.00 (When re-inspection is needed)

TOTAL FEE = \$ _____

RECEIPT NO. _____ DATE _____

I HEREBY CERTIFY that I have completed and examined this application and certify that the information contained therein is correct. If a permit is issued, I agree all work will be done in conformance with all applicable ordinances and codes of this City and laws of the State of Minnesota.

CONTRACTOR OR AUTHORIZED AGENT/HOMEOWNER