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Solar Panel Installation Licensing & Permitting Guidelines

Introduction

Residential Solar Photovoltaic Panels (SPVP) have become a common addition to single-family residences recently. Government grants and incentives have increased the frequency of SPVP installations.

With the increase in popularity of SPVP installations, several issues have come to light regarding the requirements for permitting and installation. Confusion regarding the requirements for SPVP installations has resulted in Permitting & Inspections Offices, the General Contracting Industry and the Electrical Contracting Industry. Common questions include: Is a building permit required? Is a licensed General Contractor Required? Is an electrical permit required? Is a licensed Electrician required? This document will address these questions and provide links to useful documents related to the permitting and installation of SPVP on residential roofs.

General Contractor Related North Carolina General Statutes

North Carolina General Statutes N.C.G.S. §§87-1 and 87-1.1 define general contracting and provide an exception for licensees under Article 2 or 4 of this Chapter.

A building permit is required for any project, including PV installations at a cost of \$20,000 in the State of North Carolina. The North Carolina Licensing Board for General Contractors (the Board) considers SPVP Installations to be electrical work unless the scope of work to be performed includes structural or other improvements that are \$30,000 or more and consist of work that is typically performed by licensed general contractors and regulated by the Board.

Electrical Contractor Related North Carolina General Statutes

North Carolina General Statutes N.C.G.S. 87-43 defines electrical contracting as follows:

“Electrical contracting shall be defined as engaging or offering to engage in the business of installing, maintaining, altering, or repairing any electric work, wiring, devices, appliances, or equipment. No person, partnership, firm, or corporation shall engage, or offer to engage, in the business of electrical contracting within the State of North Carolina without having received a

license in the applicable classification described in G.S. 87-43.3 from the State Board of Examiners of Electrical Contractors in compliance with the provisions of this Article, regardless of whether the offer was made, or the work was performed by a qualified individual as defined in G.S. 87-41.1.”

Solar Photovoltaic installations of any value requires an electrical contractor license. Installations valued at \$60,000.00 or less may be contracted by an limited, intermediate, or unlimited license. Installations valued at \$150,000.00 or less may be contracted by an unlimited or intermediate license. Installations with a project value greater than \$150,000.00 may only be contracted by an unlimited license.

NC Department of Insurance

In early 2019, the North Carolina Department of Insurance issued a ‘Guidance Paper’ regarding the permitting and inspection process for solar panels entitled, “**Statewide Uniform Requirement of Inspection Procedures for Solar Photovoltaic Systems Installed on residential Rooftops**”. This document can be found at the following link: [Residential Rooftop Solar Photovoltaic Inspection Procedure April 23, 2019 | OSFM \(ncosfm.gov\)](https://www.ncosfm.gov/inspections/Residential-Rooftop-Solar-Photovoltaic-Inspection-Procedure-April-23-2019)

This document addresses the uniformed inspection process by detailing two options that can be followed by the local authority having jurisdiction (inspections department). It includes a requirement, under certain circumstances, to enlist a Professional Structural Engineer for the design and inspections.

According to the Guidance Paper, “the provisions of this document are not optional”. All inspection departments across the State should be issuing permits and inspecting the project in accordance with this document.

- Provisions of this document are not optional
- Provide sketch of electrical design complying with NEC
- Provide sketch of structural mounting design.
- Structural design by Professional Engineer required when the following exists
 - Weight of PV system exceeds 3 pounds per square foot
 - The roof possesses more than 1 layer of asphalt shingles
 - The roofing material consists of a type other than asphalt shingles
 - The roof is located in a 140 mph or greater wind zone
- Select one of two inspection protocol options at time of application
- Option 1 requires a rough-in inspection

Summary

Permits can be issued to a licensed Electrician, as the responsible party, for installation of solar panels. Pursuant to N.C.G.S. §87-1.1 a General Contractor may act as a sub-contractor to the Licensed Electrician. If problems persist with obtaining a permit, contact the Department of Insurance.

In closing, we hope the above information and links will help to ease confusion on the requirements for solar panel installation, permitting and inspections. As always, please feel free to call the Licensing Board for General Contractors at 919-571-4183, Licensing Board for Electrical Contractors at 919-733-9042 or the Department of Insurance/Office of State Fire Marshall at 919-647-0000.