

Quality and Market Standards

NY-Sun



The Quality and Market Standards Team manages a network of third-party inspectors to verify a sampling of projects for compliance with program and technical requirements.

This fact sheet is part of a series aimed at helping contractors become knowledgeable about common nonconformances in the NY-Sun Residential and Nonresidential Program.

The 120% Rule

Data collected from NYSERDA inspections indicates that one of the top critical nonconformances observed in the NY-Sun Residential and Nonresidential Program is: “main panel overcurrent protection is sufficient” for load side connections. In other words, the 120% rule is being sufficiently met.

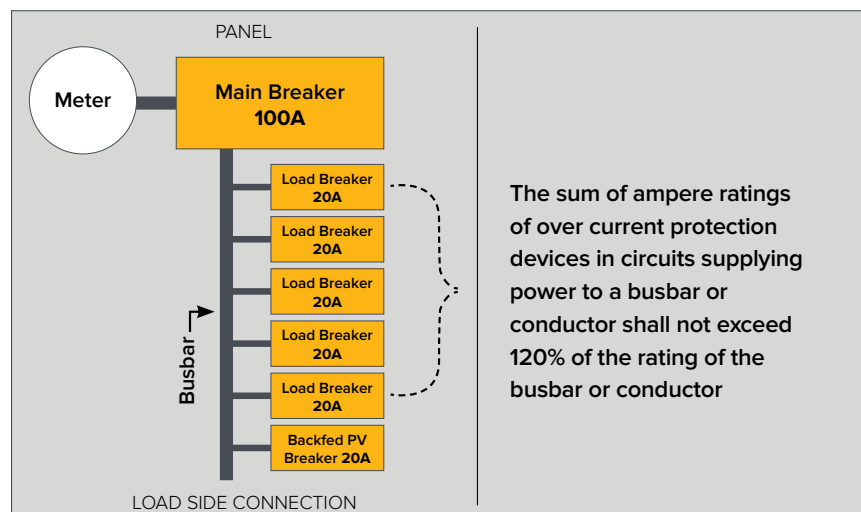
The 120% rule ensures that a site’s electrical service equipment can safely withstand simultaneous electrical load from the utility, solar, storage, and/or other power sources. The rule allows installers to calculate how much new power generation can safely be added as a load side connection. Use this formula to calculate the 120% rule:

$$(\text{Busbar Rating (A)} \times 1.2) - \text{Main Breaker Rating (A)} = \text{Max PV (A)}$$

Example of the 120% rule

If a home has a busbar rating of 100 amps and a main breaker rating of 100 amps, then the maximum PV output over current protection according to the 120% rule would be 20 amps.

$$(100 \text{ A} \times 1.2) - 100 \text{ A} = 20 \text{ A}$$



Ready to get started?

If you have questions, please contact: inspections@nyscrda.ny.gov



NYSERDA
New York State Energy Research and Development Authority

As a reminder, the load side connection must meet all requirements of NEC 705.12(B) to pass inspection, including:

- Inverter output connection is made at a dedicated circuit breaker or fusible disconnect.
- The sum of 125% of the inverter(s) output current plus the main circuit breaker rating must be less than or equal to 120% of the bus or cable rating (NEC 705.12(B)(3)(b)).
- Backfed breaker located at opposite end of busbar from main breaker (NEC 705.12(B)(2)(1))

To help eliminate or reduce the frequency of this nonconformance the Quality Assurance Team suggests:

1. Ensure the installation crew has the current set of plans on site.
2. Verify crew lead thoroughly understands the plans.
3. Confirm the correct parts have been ordered and are on the truck.

Have questions?

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