

# ICC 900/SRCC 300-2020 Checklists

2015 to 2020 Update for Existing OG-300 Solar Water Heating System Certifications

The ICC 900/SRCC 300 standard forms the qualification basis of SRCC’s OG-300 program, and compliance with the standard is required for certification to be granted. Most existing SRCC OG-300 certifications are based on the 2015 edition of the standard. With the completion and ANSI approval of the 2020 edition of the standard, ICC-SRCC will offer existing OG-300 clients the opportunity to update their certifications to the new edition. To do so, certification holders will be required to show compliance with all requirements in the 2020 edition. The 2020 edition may be viewed in its entirety on the SRCC website at <https://solar-rating.org/resources/standards/>

These checklists were created to assist manufacturers to identify new or revised requirements their specific systems must meet to update their OG-300 certifications from the 2015 to the 2020 edition of the ICC 900/SRCC 300 standard. Certification holders can use the checklists to help with the decision whether to update their existing certifications. Or they may also be used as a tool during the update process for a given system.

The checklists assume that the system was previously tested and certified to the 2015 edition of ICC 900/SRCC 300 and identifies only those provisions that were either changed or added in the 2020 edition. New OG-300 certification applications received after 7/1/2021 must include a test report conducted in accordance with ICC 900/SRCC 300-2020 and will be evaluated to that standard (therefore no update will be needed in the future).

Two checklists are provided below to help manufacturers to identify the new requirements that apply to their specific system type. The first checklist provides Prerequisite Requirements that apply to all systems. The second lists System-Specific Requirements that apply in some cases. A questionnaire is also provided to help identify which system-specific requirements apply in each case.

Each checklist provides the requirement, relevant section of the 2020 standard, and information that must be submitted to SRCC to demonstrate that the system satisfies the requirement. Note that ICC-SRCC staff may request additional submittals as needed.

## PREREQUISITE CHECKLIST

The items included in Section 1 apply for all OG-300 certifications to be converted from the 2015 to the 2020 standard, regardless of type.

| SECTION 1: PREREQUISITES (APPLY TO ALL SYSTEMS)  |   |                                      |
|--|---|--------------------------------------|
| <b>X</b>   | <b>1A: System Labeling (§502.2)</b>   | Submittal:<br>Image of OG-300 label. |
| Requirement:   | Description:  |                                      |
| Systems are required to be individually labeled with the following information:<br><ol style="list-style-type: none"> <li>1. Mfg name</li> <li>2. Model name/number</li> <li>3. Certifier and OG-300 number</li> <li>4. Collector OG-100 number</li> <li>5. Heat transfer fluid</li> </ol> | The standard committee revised the requirements for labeling to remove numerous individual component labels. They were replaced with a single system label to be placed on the tank or backup water heater. |                                      |

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|          | 6. Storage tank volume<br>7. Expansion tank volume<br>8. Relief valve specification and setpoint<br>9. Maximum water supply pressure<br>10. Maximum solar loop pressure.<br>11. Flow rate range.<br>12. Backup energy rating<br>13. Installation date (field entry) | An ICC-SRCC OG-300 certification label template design has been to include the new information. Details regarding the use and format of the label can be found the latest version of the <i>ICC-SRCC Rules for Mark and Certificate Use</i> . Template images of the new labels in various graphic formats are available by contacting <a href="mailto:srcc@solar-rating.org">srcc@solar-rating.org</a> . Values provided for the label must match those reported in the associated test report and must be provided in both the imperial and SI units shown. |
| <b>X</b> | <b>1B: Electrical Diagram (§402.5)</b>  | Submittal:<br>Electrical diagram and location.  |
|          | Requirement:<br>Wiring diagram must be provided that includes:<br>1. Electrical phase, voltage<br>2. Maximum current  | Description:<br>This change was made by the standard committee to provide the primary electrical information since it is often lost. The diagram may be combined with the label or affixed separately to the system.  |
| <b>X</b> | <b>1C: Mechanical Diagram (§402.6)</b>  | Submittal:<br>Mechanical diagram/schematic and location.  |
|          | Requirement:<br>A mechanical diagram showing all major system components and connections must be affixed to the system.   | Description:<br>This change was made by the standard committee to provide the primary electrical information since it is often lost. The diagram may be combined with the label or affixed separately to the system. The OG-300 schematic may be used to satisfy this requirement.  |
| <b>X</b> | <b>1D: Product Manual(s) (§403)</b>   | Submittal:<br>Updated manual for use with OG-100 certification.   |
|          | Requirement:<br>Systems are required to be provided with one or more manuals describing procedure for installation, operation, and maintenance. A detailed list of the information that is required is provided in Section 403.                                     | Description:<br>Installation instructions addressed in 403.1.1.1, Operation instructions in 403.1.1.2, Maintenance plan in 403.1.1.3. Heat transfer fluids in 403.1.2, Service and replacement parts in 403.1.3, Hazards in 403.1.4 and Warranty coverage in 403.1.5.   |

## SYSTEM-SPECIFIC CHECKLIST

The requirements in Section 2 apply for certain systems in certain cases. A questionnaire is provided following the checklist to assist manufacturers to determine when a given requirement applies. Note that in each case, additional criteria may apply, and the final determination of applicability will be made by ICC-SRCC staff.

| <b>SECTION 2: SYSTEM-SPECIFIC (APPLY TO CERTAIN SYSTEM)</b>   |   |
|---|---|
| <b>2A: Rubber Hoses (Table 301.9.3)</b>   | Submittal:<br>Component listing.  |
| Rubber hoses used for non-potable fluids must be EPDM material complying with ASTM D3568-03.  | Previously the standard allowed for “rubber hoses” for non-potable fluids. This has been further clarified to mean EPDM materials and they must be listed to ASTM D3568-03.   |
| <b>2B: Solar Trackers (§303.2.3)</b>  | Submittal:<br>Component listing.  |
| Requirement:<br>Solar trackers must be listed and labeled to UL 3703  | Description:<br>Where solar trackers are used, they must be listed to UL 3703.  |
| <b>2C: Tank Listing (§301.4.2)</b>  | Submittal:<br>Tank specification sheet and/or listing certificate.  |
| Requirement:<br>Storage tanks must be listed by a third-party agency.   | Description:<br>Pressurized and unpressurized hot water storage tanks must be listed but the standard does not specify the criteria or standard they must be listed (except in the case of ICS where the standard is ICC 901/SRCC 100). Outdoor storage tank requirements are addressed in 301.4.3 and unpressurized tank requirements are in 301.4.1.5. Contact SRCC staff for available options for tank listings. Note too that backup water heaters of all types must also be listed. Reference standards for backup water heaters are listed in Table 301.3.2. |
| <b>2D: Unpressurized Tank Venting (§301.4.2)</b>  | Submittal:<br>Tank specification sheet and/or drawing.  |
| Requirement:<br>Unpressurized tanks must have vents that are 6” above the fluid level, protected from contamination and entrance of insects and vermin.                           | Description:<br>Venting requirements have been refined to protect the water within the tank. Vacuum relief valves are now permitted as a means of venting in addition to free vents.  |
| <b>2E: Autoignition of Combustibles (§303.1.3)</b>  | Submittal:<br>Material specification sheets or test reports.  |
| Requirement:<br>Combustible materials must have a self-ignition temperature of 650 F or greater per ASTM D1929. Plastic materials must conform to Class CC1 or CC2 per ASTM D635. | Description:<br>Addresses combustible materials used within solar water heating systems. Primary focus will be on custom components exposed to high temperatures. Listed components like piping are subject to their relevant standards instead.  |

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|              | <b>2F: Pump Listings (Table 303.2.3)</b>  | Submittal:<br>Specification sheets and/or listings.   |
| Requirement: | Pumps must be listed to CSA 22.2 No. 108 or UL 778  | Description:  |
|              | <b>2G: Differential Controller Listings (Table 303.2.3)</b>   | Submittal:<br>Specification sheets and/or listings.   |
| Requirement: | Differential controllers must be listed to CSA E60730-1, EN 60730-2-9, UL 60730-1 or UL 873.  | Description:<br>Applicable to controllers that utilize voltages greater than 24 V.  |
|              | <b>2H: Electrical Safety (§303.2)</b>   | Submittal:<br>Electrical schematic and listings.  |
| Requirement: | Wiring that is not part of a listed electrical component, and electrical components themselves must comply with NFPA 70 or CSA C22.1. | Description:<br>Electrical components and wiring must comply with the electrical codes. Components like heaters, trackers, PV modules and pumps must be listed to standards within the electrical codes if over 24 V per Table 303.2.3. Wiring must be sized and installed per NFPA 70. |

## System-Specific Checklist Questionnaire

The following questionnaire is intended to serve as a guide to identify the new or revised system-specific requirements in the ICC 900/SRCC 300-2020 standard that apply to a given domestic solar water heating system.

1. Does your system utilize rubber hoses? *[If yes, 2A applies]*
2. Does your system include a solar tracker? *[If yes, 2B applies]*
3. Does your system have one or more hot water storage tank? *[If yes, 2C applies.]*
4. Does your system include an unpressurized tank (including drainback tanks)? *[If yes, 2D applies]*
5. Does your system include custom components (not off-the-shelf) made of combustible materials? *[If yes, 2E applies]*
6. Does your system include a pump? *[If yes, 2F applies]*
7. Does your system include an electrically operated differential controller over 24 V? *[If yes, 2G applies]*
8. Does your system custom electrical wiring over 24 V? *[If yes, 2H applies]*

For questions regarding ICC 900/SRCC 300-2020 or the process of updating an existing OG-300 certification [Contact Us](#) on the SRCC website or via e-mail at [srcc@solar-rating.org](mailto:srcc@solar-rating.org).