

**CITY OF PEORIA, ARIZONA  
CITY MANAGER REPORT**

RCM #: 3a

Date Prepared: April 20, 2009

Council Meeting Date: May 5, 2009

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**TO:** Carl Swenson, City Manager

**THROUGH:** Susan J. Daluddung, Deputy City Manager 

**FROM:** Glen Van Nimwegen, Community Development Director 

**SUBJECT:** New Requirements for Residential Solar Photovoltaic and Water Heating Permits

**SUMMARY:**

The Building Safety Division has developed new requirements for the safe installation of solar photovoltaic and water heating systems by Peoria residents.

The new permitting requirements provide for verification by the installer of maximum weight loads per installation point on the roof. This verification should be simple for more than 90% of the residential installations.

Staff has kept the fee at the minimum amount of \$50.00. If the submittal is made in conformance with the attached requirements, a permit would be issued within three business days. Both attachments are posted on the Building Safety website.

**ATTACHMENTS:**

Building Safety Handouts 235 and 240



**RESIDENTIAL (SINGLE-FAMILY)  
SOLAR PHOTOVOLTAIC (PV)  
SYSTEMS**

**PERMIT SUBMITTAL  
REQUIREMENTS**

**Handout  
235**

**04/09**

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**Community Development Department  
Building Safety Division**  
9875 N. 85<sup>th</sup> Avenue  
Peoria, Arizona 85345  
623-773-7225 FAX: 623-773-7245

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# PERMIT SUBMITTAL REQUIREMENTS

## Residential (Single-Family) Solar Photovoltaic (PV) Systems

In an effort to promote uniformity under the purview of life safety, the following submittal requirements are required for securing necessary electrical/building permits for residential (single-family) photovoltaic (PV) systems:

1. By signing the permit application, installer verifies that they have visually inspected trusses for pre-existing damage. If damage is noted, repair requirements designed by a structural engineer must be submitted with the PV application.
2. Complete Misc. Building Permit Application (400G) and submit with two (2) sets of plans and all supporting documentation.
3. Location of PV installation indicated on roof plans. Systems structural engineering analysis shall not be required for flat plate collectors whose weight does not exceed 4.5 lbs. per square foot and point loads do not exceed 40 lbs. If either amount exceeds these values a structural analysis will be required.
4. Provide mounting details for PV panel installation. Note: Anchor points should be a maximum of 4' (feet) apart perpendicular to truss plane and minimum 5' (feet) in line of truss. Show locations on plan.
5. Provide electrical one-line and three-line (showing phases, neutral and ground) diagram.
6. Provide cut sheet and listing for inverter (DC to AC conversion)
7. Provide cut sheet for solar panels
8. Note on plans that PV equipment shall be installed in accordance with NEC 690 and posted with applicable warnings, signage and plaques per NEC 705-10, 690-17 & 690-64(b)(5).
9. Permit fee will total \$50.00. This fee will be guaranteed until July 1, 2010.
10. Solar Photovoltaic submittals, if all required documents are properly completed and submitted, will be expedited with a guaranteed first submittal turnaround time of 3 business days.



**SOLAR WATER HEATING  
PERMIT SUBMITTAL  
REQUIREMENTS**

**Handout  
240**

**04/09**

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# PERMIT SUBMITTAL REQUIREMENTS

## Solar Water Heating Systems

In an effort to promote uniformity under the purview of life safety, the following submittal requirements are required for securing necessary building permits for solar water heating systems:

1. By signing the permit application, installer verifies that they have visually inspected trusses for pre-existing damage. If damage is noted, repair requirements designed by a structural engineer must be submitted with the solar water heating application.
2. Complete Misc. Building Permit Application (400G) and submit with two (2) sets of plans and all supporting documentation.
3. Location of thermal collector installation indicated on roof plans. Systems structural engineering analysis shall not be required for thermal collectors whose weight does not exceed 4.5 lbs. per square foot and point loads do not exceed 40 lbs. Solar thermal collector weight shall include the weight of the working fluid inside the collector. If either amount exceeds these values a structural analysis will be required.
4. Note on plans that Solar Domestic Water Heating equipment shall be installed in accordance with applicable plumbing codes and in accordance with SRCC Guidelines.
5. Plumbing plan review is required for solar water systems for multi-family, commercial and industrial installations.
6. If a thermal storage tank is to be installed on the roof, a structural review of the roof trusses must be completed by a registered Arizona engineer and that review must be submitted with the application.
7. Provide mounting details for thermal installation. Note: Anchor points should be a maximum of 4' (feet) apart perpendicular to truss plane and minimum 5' (feet) in line of truss. Show locations on plan.
8. Provide cut sheet for solar thermal panels
9. Permit fee will total \$50.00. This fee will be guaranteed until July 1, 2010.
10. Solar water heating submittals, if all required documents are properly completed and submitted, will be expedited with a guaranteed first submittal turnaround time of 3 business days.