

# New System Fire Class Rating Test in UL Standards

Presented by

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## Solar ABCs Research Project

Investigate whether and how the presence of standoff-mounted PV arrays may affect the fire class rating of common roof covering materials.





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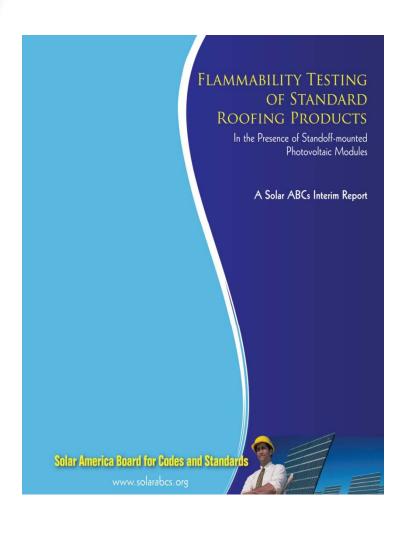
## **Finding**

The fire classification rating of the PV module is NOT a good predictor of the fire class rating of the PV module and roof as a system.

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## **Summary and Results to date**



Flammability Testing of Standard Roofing Products In the Presence of Standoff-mounted Photovoltaic Modules

Report is available at: http://www.solarabcs.org/flammability/

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## **Current Work**

- UL 1703 Standards Technical Panel is considering a *system* fire classification rating to replace the current module fire classification rating.
- UL is conducting PV and roof material and component tests to begin the development of the new PV system fire classification rating

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## **UL 1703 Fire Rating Task Group**

- Fire Rating Task Group established at STP meeting in December 2010.
- Proposal was drafted for group to review in March 2011.
- Proposal is shifting the UL 1703 standard from module test to system test to address 2012 IBC requirement. IBC does not apply to residential one- and two-family dwellings.

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## **UL 1703 Fire Rating Proposal Highlights**

- Create type classification of modules so that one test can represent all similar modules.
- Define typical roofs for tests: one for sloped roof tests and one for flat roof tests.
- Use critical radiant flux of PV module laminate and roofing materials to prove the characterizing tests are valid.
- Exempt systems with perimeter protection from burning brand test.

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## **Status of Proposal**

- Two Task Group meetings have been held this year.
- Proposal has been modified based on comments from Task Group and UL testing.
- Proposal will be presented to STP next week.
- If approved, UL 1703 will be updated in early 2012 so that manufacturers can begin testing to the new requirement.