Conforming U.S. and International Safety Standards

Status of the U.S. Adoption of IEC 61730

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Benefits of Harmonization

• Consistency
  – Construction/Design Requirements
  – Test methods
  – Pass/Fail Requirements
• Less need for multiple designs
• Leverages global knowledge
• Allows for local differences
Background

UL 1703

- First Published in 1986
- Developed between UL, US-DOE, NASA-JPL
- Intended to provide guidance for safely adapting space-based power technology into a Earth-based consumer power products
- Established basic construction and material requirements,
- Coordinate installation with U.S. NEC
Background

IEC 61730-1 and -2

- First Published in October, 2004
- Established basic construction, material, and test requirements
- Based on a combination of IEC 61215/61646 and UL 1703
- Second editions are currently under draft by TC82, Working Group 2
Harmonization Process

• Initial Proposal for adoption in the US
  – First proposed in 2005/2006 with National Differences
  – Determination by the UL 1703 STP to move many of the national differences to a second edition of the IEC version
  – Proposed again in 2010
  – An International Harmonization Committee was formed, led by John Wohlgemuth

• Current IEC 2\textsuperscript{nd} edition draft status:
  – Multiple iterations were developed and presented to the Working Group, led by Tim Zgonena and a core team of international contributors
  – Draft was presented in May as a proposed 2\textsuperscript{nd} edition
  – 88 pages of comments were received
  – The draft will be rewritten to address those comments
  – A task group was developed to facilitate the process

Solar America Board for Codes and Standards
Next Steps

• IHC committee maintains the responsibility of determining when the harmonization will occur
• Currently, the IHC is recommending that the second editions of 61730-1 and -2 are used as the basis for the harmonization
Bottom Line

Publish the second edition of the IEC documents!
IEC 2nd Edition Efforts

Task Group met Wednesday and determined:

- 61730-1 Revision Goal - Continue 61730-1 revisions, based on the comments received, to:
  - Incorporate insulation coordination concepts (IEC 60664);
  - Move all test methods to 61730-2;
  - Clarify definitions for module safety (not performance related) requirements for polymer applications (for example, define - contact with live parts);
  - Include material level tests or alternative module level tests

- Established sub-task groups to address:
  - Controversial comments for discussion in Oslo in October
  - Clarify insulation coordination (IEC 60664-1)
  - Communicate and clarify polymeric committee involvement
Thank You!