Status of the U.S. Adoption of IEC 61730

October 21, 2011

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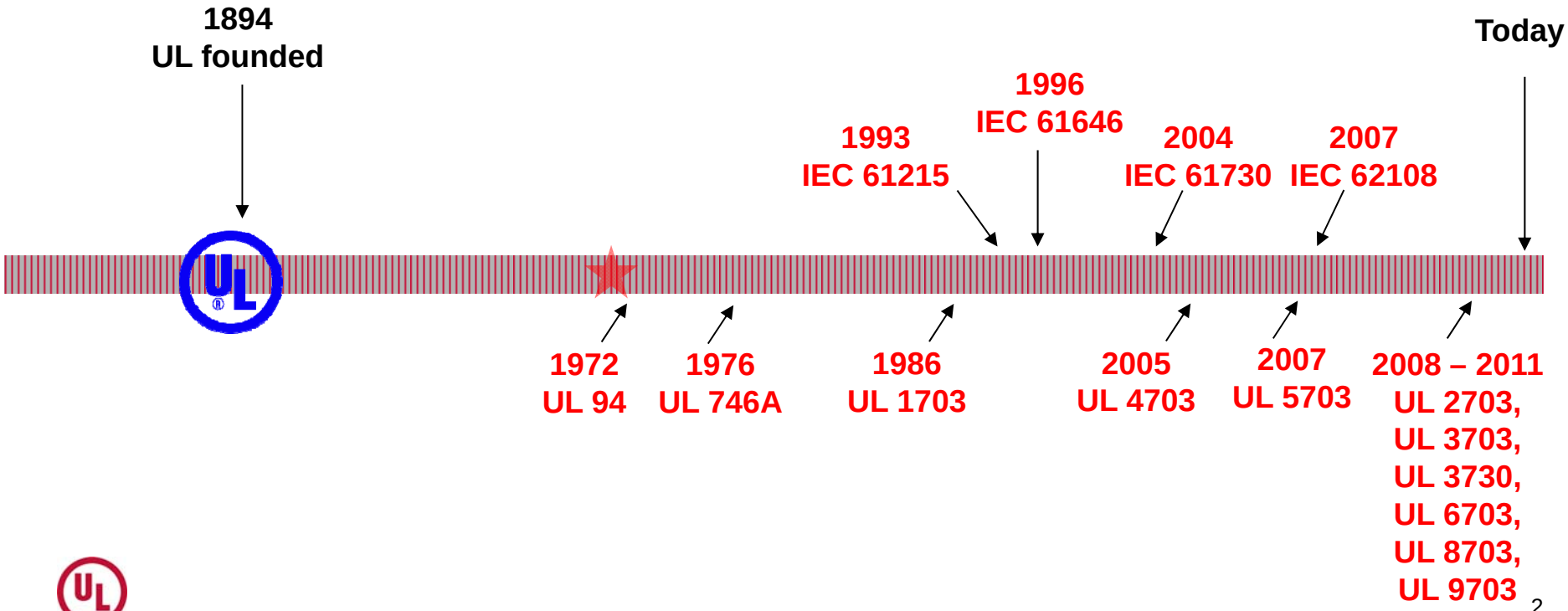
PV Standards Timeline

Safety and performance based reliability standards

- development
- testing
- certification



UL 1703 and IEC 61730
Safety Standards for PV Modules

Scope and Objective

- Describes PV module fundamental construction and test requirements to ensure safe operation
- Electrical shock hazard (product and application)
- Fire resistance & propagation hazards
- Mechanical hazards (Loading, securement etc.)

Harmonization of UL and IEC Standards

UL1703 Standards Technical Panel (STP)

- International Harmonization Committee (IHC)
  - Chair, John Wohlgemuth of NREL
  - 30 volunteers from UL1703 STP
  - Membership overlaps between
    - UL1703 STP and IEC TC82 Solar PV Energy Systems, WG2 Modules

- Goal to minimize national differences
  - Facilitate international use of document per Certification Body (CB) Scheme

Overview 61730-1 Revisions

- New module classifications types.
- Significant revisions of isolation coordination (creepage and clearances)
- Polymeric material section has been totally rewritten.
- Expanded glossary

New Module Classifications

To be more consistent with Horizontal IEC 60664

Current:

61730 Edition one Class A, B and C

Proposed:

61730 Edition two Class 0, I, II and III

Creepage and Clearances

- These requirements are being revised to be match IEC 60664 horizontal standard requirements.

- The UL, VDE and TUV task group identified the applicable creepage and clearance requirements and developed significant supporting text to explain what they mean and how to use them.

- Safety Class issues – the new draft includes safety Class 0, I, II and III requirements. The inclusion of these requirements takes advantage of the work done under IEC 62109-1.

Polymerics

- The proposed draft of IEC 61730-1 includes minimum polymeric material properties based on the specific relied upon use of materials in the module design to achieve the appropriate safety class compliance.
  - Insulation properties
  - Current tracking properties
  - Thermal Index properties, etc.

- Work by Polymeric Task Groups continues.

Next Steps for Harmonization

- The currently proposed harmonization document has been tabled by the IHC while work on the second editions of IEC 61730-1 and -2 are underway.
- The IHC has determined up until this point that there would be too many national differences between the first edition of the IEC standards and the US harmonized version.
- The IHC will be presenting their position at the UL 1703 STP meeting next week.
- UL is prepared to move forward immediately with adoption of the currently tabled harmonization proposal, but will support the decision of the IHC.

Thank you for your attention!

Any questions?

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