IEC SC45A,

Standards for Instrumentation, control and electrical power systems for nuclear facilities

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IEC SC45A Secretary

4th MDEP Conference
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International
Electrotechnical
Commission

Who are we (1/2) …

- One of the oldest international standard body (1906) : 81 countries represented, In the world: 97% population, 98% electrical energy, 80% trade
- Electrotechnology domain covered by 174 Technical Committees and Sub-Committees
- IEC at International level
  - ISO/ITU/IEC sister organizations
  - WTO, TBT agreement recognising ISO/IEC standards
  - IEC/IAEA agreement and collaboration
  - IEC/CENELEC agreement and collaboration
  - IEC/IEEE agreement and collaboration
  - IEC/OECD-MDEP liaison and collaboration

Who are we (2/2) …

- IEC TC45 (Nuclear Instrumentation) and its two SCs : 45A (Instrumentation, control and electrical power systems of nuclear facilities) and 45B (Radiation monitoring instrumentation)
- IEC SC45A (Instrumentation, control and electrical power systems of nuclear facilities)
  - 200 experts from the 22 major nuclear supporting countries
  - 8 active Working Groups
  - Focus on safety and security
  - Standard portfolio of 65 standards continuously maintained

How do we work …

- Transparent, traceable, consensus based
    - 3 stages of approval and 4 stages for comment
- All the actors represented in the technical debate (SAs, operators, vendors)
- National Committees vote and comment
- 32 months in average to develop a standard
- For more information on those general aspects go to www.iec.ch

IEC SC45A-IAEA relationships

- **1977-1981 IEC-IAEA agreement to eliminate the overlap between the 2 organizations to cover the I&C safety domain**
- **2014 extension of the collaboration to the security domain**
- **IAEA responsible for developing safety and security principles, IEC SC45A implement them technically in detail in industrial standards**
- **IEC SC45A implement technically IAEA safety and security principles for I&C in detail in industrial standards using IAEA safety and security glossaries**
- **IEC SC45A standards use the IAEA safety glossary for decades and more than 30 IEC SC45A standards implementing the SSG-39 recommendations**
- **IEC 62645 "Requirements for security programme for computer based systems" based on IAEA NSS17 and ISO/IEC 27000 series**

Other successful collaborations going on with objectives of requirements harmonization …

- 17 IEC SC45A main standards are already adopted as EN (European standards) without modification in Europe and published as national standards in 33 European countries
- 8 IEC/IEEE standards are already or currently developed in collaboration with IEEE NPEC
- Invitation of the IEC/SC45A to the OECD-MDEP-DICWG meetings, integration of 17 IEC SC45A standards in the MDEP library for consideration
- Liaison established with WNA-CORDEL

Thank you!

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