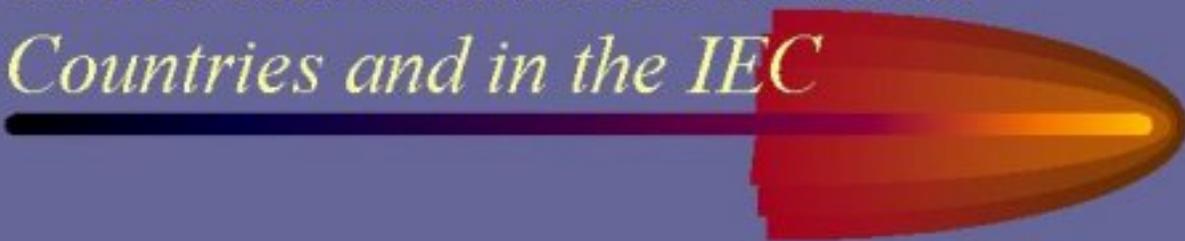


Codes and Standards in Other Countries and in the IEC



DOE Summit IV on Fuel Cell Codes and Standards

May 11, 2000

Kelvin Hecht, US Technical Advisor

David R. Conover, Deputy US TA

Purpose of the Presentation



- Review individual international initiatives to develop and implement codes and standards for stationary fuel cell power generation installations
- Review efforts of the International Electrotechnical Commission TC 105 on fuel cells

Codes and Standards in Other Countries



- **Canada**
 - Joint standard with United States (ANSI Z21.82/CSA 12.10)
- **Japan**
 - Japan Standards Association - Technical Reports
 - Glossary of terms for fuel cell power systems
 - Test methods for PAFC performance
 - Test methods for environment and maintenance of PAFC
 - Marking of fuel cell power plants

Codes and Standards in Other Countries



- **France**
 - No Standards to date but support normalization on:
 - Terms and symbols
 - Noise, safety, and performance testing
 - Utility interconnection standards and environmental issues
- **Germany**
 - DKE K384 (National Committee of IEC TC 105)
 - Supporting efficient international standards development to address safety and performance
 - Limit standards to fuel cell specific issues

Codes and Standards in Other Countries



- **Denmark**
 - No ongoing standards work but support work on environmental issues, performance, installation, and safety
- **United Kingdom**
 - Building Regulations do not specifically address fuel cells nor are efforts underway to revise them
 - “CE” marking will be important to acceptance

International Efforts



- **International Electrotechnical Commission - IEC TC 105 on Fuel Cells**
 - Scope - To prepare international standards regarding fuel cell technologies for all fuel cell applications such as stationary, transportation, and portable power generation systems
 - Membership - CA, CN, FR, DE, IT, JP, NL, CH, GB, and US

IEC TC 105 on Fuel Cells

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- **First Meeting February 23 and 24, 2000**
 - Overview of IEC processes
 - Activities in other countries
 - Strategic Policy Statement
 - Program of work
 - Liaison with other ISO and IEC activities

IEC TC 105 on Fuel Cells

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- **Structure for Future Set of Stationary Fuel Cell Standards**
 - General Terms and Definitions (applies to all fuel cells)
 - Safety
 - Performance Tests
 - Interfaces
 - Installation
 - Markings

IEC TC 105 on Fuel Cells

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- **Future Efforts to Support IEC TC 105 Structure for Fuel Cells**
 - Ad Hoc WG on Definitions (US)
 - Ad Hoc WG on FC Module (DE)
 - Structure for Stationary FC Systems
 - WG on Safety (US)
 - WG on Performance (JP)
 - WG on Installation (US)