



An Introduction

International Electrotechnical Commission (IEC)
United States National Committee of the IEC (USNC)

Presented by:
USNC Communications and
Continuing Education Committee



What is the IEC?



- The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes international standards for all electrical, electronic, and related technologies.
 - These standards serve as a basis for national standardization and as reference when drafting international tenders and contracts.



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What is Electrotechnology?



The IEC covers a vast array of technologies in its standardization and conformity assessment activities. Those technologies cover the generation, transmission and distribution of electricity, and the products and systems that use that electricity, as well as their interoperability, environmental impact, performance and safety. Some of these activities include work in:

- Smart Grid
- Electric Vehicles
- Renewable Energies
- Electromagnetic Compatibility (EMC)
- Multimedia



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Objectives of the IEC



- Meet the requirements of the global market efficiently
- Assess and improve the quality of products and services covered by its standards
- Establish the conditions for the interoperability of complex systems
- Increase the efficiency of industrial processes
- Contribute to the improvement of human health and safety
- Help to ensure the protection of the environment



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IEC Structure



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IEC Membership



- 60 Full National Committee Members
- 22 Associate Members
- 81 Affiliates
- 163 Countries in the IEC Family



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National Committee Participation



Full Member	Associate Member	Affiliate
Vote on <i>all</i> TC/SC and Council documents via electronic voting system	Authorized to submit votes on documents of <i>4</i> selected TC/SCs via electronic voting system	No voting rights
Comment on all TC/SC and Council documents	Authorized to submit comments only on TC/SC documents but not on the Council documents	Authorized to submit comments on the documents of 10 selected TC/SC by e-mail
<u>FULL</u> PARTICIPATION RIGHTS	<u>LIMITED</u> PARTICIPATION RIGHTS	<u>NOT A MEMBERSHIP</u> <i>ACCESS TO</i> <i>INFORMATION ONLY</i>



Where Standards are Developed



- IEC Technical Committees (TC) and Subcommittees (SC)
- Working Groups (WG)
- Project Teams/Maintenance Teams (PT/MT)
- National Committees
- USNC Technical Advisory Groups or TAGs



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Stages in the Development of IEC Standards



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What Is the USNC?



- United States National Committee
 - Official U.S. member to the IEC and related regional standardization bodies
- Represents the interests of the U.S. eletrotechnical industry before its international counterparts in the standardization arena
- Committee of the American National Standards Institute (ANSI)



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USNC Mission

*To provide strategy to **effectively participate** in the development of IEC standards to **facilitate international trade** for the benefit of the U.S. industry in the fields of all electrotechnologies, and to **provide a framework to the U.S. industry**, which serves as the focal point, conduit, and advocate for U.S. interests in international and regional electrotechnical standards, conformity assessment, and other related matters*



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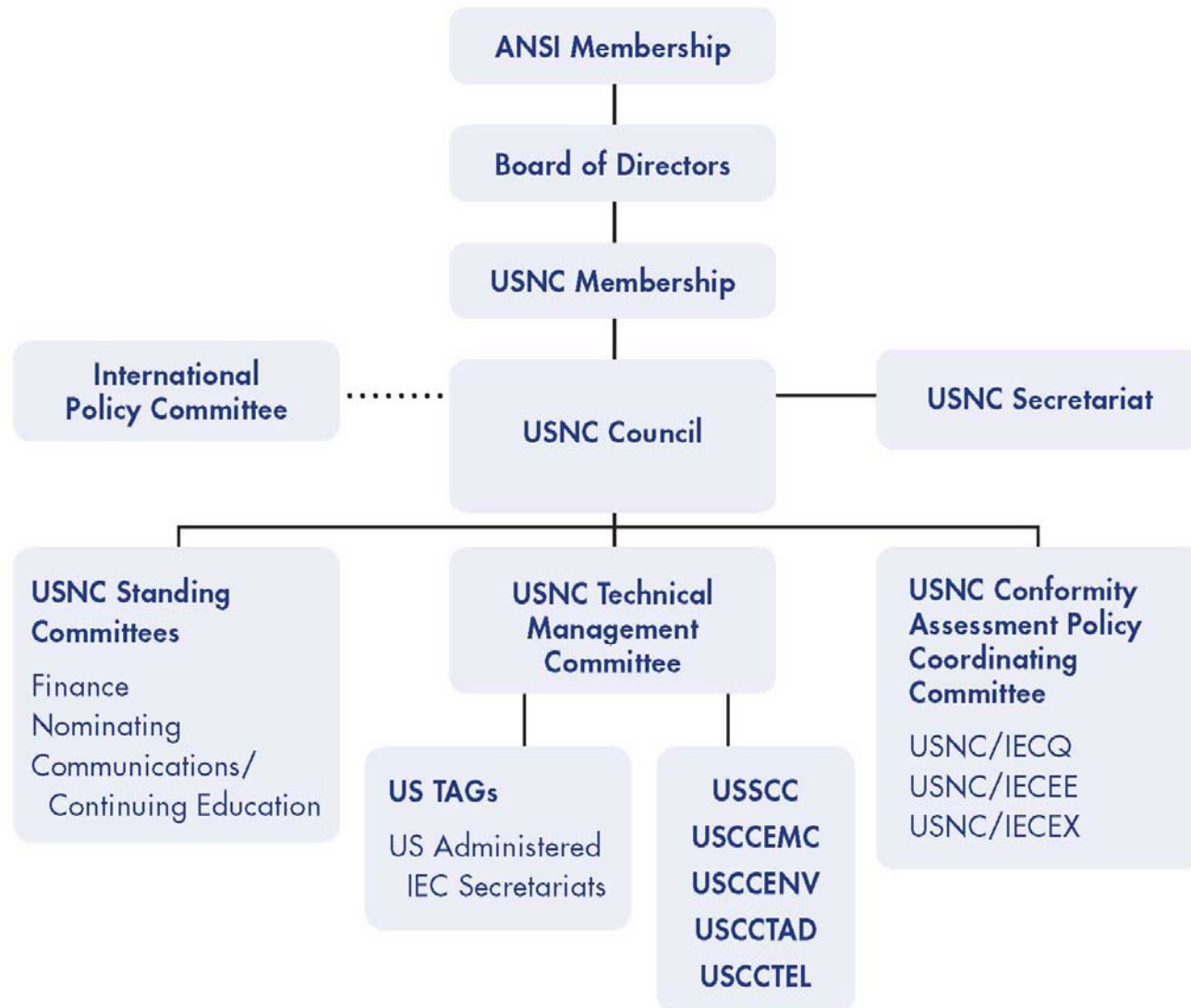
USNC Roles and Responsibilities



- Serves as the U.S. point of contact for industry, government, consumers, academia, and others stakeholders in the eletrotechnical industry
- Represents U.S. interests before the IEC and selected international electrotechnical fora
- Provides guidance to ANSI's Board of Directors on policy issues and procedures involving the electrotechnical industry
- Promotes active engagement between domestic and international standards organizations to encourage cooperation as needed



USNC/IEC Organization Structure



USNC Membership



- The broad-based USNC/IEC constituency represents the stakeholders in the U.S. electrotechnical community

- Members include representatives of (among others):
 - Industry
 - Academia
 - Consumer interests
 - Government agencies
 - Professional societies
 - Testing organizations
 - Trade associations



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Benefits of Participating



- Leverage your organization's position internationally and increase global influence via engagement in the IEC
- Oversight and direct input on IEC policy and technical issues
- Unlimited participation (to qualified members upon payment of applicable fees) in any of the nearly 150 USNC-approved U.S. Technical Advisory Groups (TAGs)
- Networking opportunities with international stakeholders
- Shape the ongoing dialogue on standards and conformity as tools for the facilitation of trade and international commerce



USNC Membership Structure



USNC Voting Members

- Organizations serving as TAG Administrators and/or TC/SC Administrative Secretariats and paid the requisite fees
- Entities which have expressed interest in participating in the USNC and have paid the USNC voting membership annual fee
- ANSI membership is a pre-requisite for USNC voting membership

Non-Voting Members

- Technical Advisors, Deputy Technical Advisors, TAG Administrators and Members, U.S. TC/SC Chairs and Secretaries, Conveners, Experts, and Honorary Life Members



USNC/IEC Funding Program



- In 1998, the ANSI Board of Directors challenged the USNC/IEC to become a self-supporting entity
- With the exception of membership fees, the USNC receives no subsidies from other organizations or financial support from the U.S. government
- Numerous funding options were considered and a “Pay to Play” philosophy was ultimately adopted by the USNC/IEC Council



USNC/IEC Funding Program: Pay to Play

- Modest, across-the-board fee for all individual TAG participants (currently \$295 annually; \$590 for TAGs serving two or more TC/SCs)
 - ANSI membership is not required
 - Exemptions, waivers, etc. are considered on a case-by-case basis
 - Determined to be the fairest, most equitable and least onerous payment mechanism
- ANSI members (companies, organizations and government agencies) can become voting USNC Members for an annual fee of \$6,450
 - Individual TAG participation fees are waived for any employee of that company, organization, or agency



USNC Participating Members (Annual Fee)



Agilent Technologies
Apple Inc
Cooper Power Systems
Corning Incorporated
Dell Inc
Eaton Corporation
ECC Corporation
Emerson Electric
FM Approvals
Food and Drug Administration
General Electric
Hubbell Inc
Intertek
National Electrical Manufacturers
Association

National Institute of Standards and
Technology
Pass Seymour/Legrand
Philips Healthcare
Qualcomm
Rockwell Automation
Schneider Electric
Siemens Industry Inc
Sony Electronics
Telecommunications Industries Association
Underwriters Laboratories
U.S Department of Defense
U.S. Coast Guard



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USNC Council: High Level Strategic Participation



- Represents and coordinates U.S. involvement in IEC on behalf of the U.S. electrotechnical community
- Coordinates USNC activities with Standards Developing Organizations (SDO) to promote consistency with IEC in international and national activities
- Reports to the ANSI Board and coordinates with the International Policy Committee on IEC activities
- Recommends an annual budget to the Finance Committee and Board to cover IEC-related activities



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USNC Council Voting Members



- President
(Serves as Council Chairman)
- Three Vice Presidents
 - Finance
 - Technical
 - Membership Development and Recruitment
- Twenty representatives
- Three government representatives
- Primary USNC Representative to CAB
- Consumer Interest Advocate
- U.S. IEC Officer



USNC Council Ex-Officio / Non-Voting Members



- General Secretary
- Chairs of USNC Standing Committees
- ANSI President
- Chair of ANSI International Policy Committee
- Immediate Past President of USNC



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Membership USNC Council



Industry / Companies

Corning Incorporated
Dell Inc
Eaton Corporation
FM Approvals
General Electric
Hubbell Inc
Intertek
Pass Seymour/Legrand (NEMA)
Philips Healthcare
Qualcomm
Rockwell Automation
Schneider Electric
Siemens Industry Inc
Sony Electronics Inc
SCS Consulting (IEEE)
The Boeing Company (ECC Corp)

Thomas & Betts (NEMA)
Underwriters Laboratories

Organizations

CSA Standards
Consumer Electronics Association
ECC Corporation
Institute of Electrical and Electronic Engineers
Electronic Components Industry Association
National Electrical Manufacturers Association
National Fire Protection Association
Telecommunications Industries Association

Government

Food and Drug Administration
National Institute of Standards and Technology
U.S. Department of Defense

Other

U.S. Representative IEC Conformity Assessment Board
Virginia Tech University (Consumer Advocate)



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USNC Council Standing Committees



- Technical Management Committee (TMC)
- Nominations Committee
- Finance Committee
- Communications and Continuing Education Committee
- CA Policy Coordination Committee (CAPCC)



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USNC Coordinating Committees



IEC Advisory Committee	USNC Coordinating Committee
ACOS (Safety)	USSCC - U.S. Safety Coordinating Committee
ACEA (Environmental Aspects)	USCCENV - US Coordinating Committee on Natural Environmental Aspects
ACEC (Electromagnetic Compatibility)	USCCEMC - U.S. Coordinating Committee on Electromagnetic Compatibility
ACTAD (Transmission and Distribution)	USCCTAD - US Coordinating Committee on Electricity Transmission & Distribution
ACTEL (Telecommunication)	USCCTEL - US Coordinating Committee on Telecommunications



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USNC Technical Management Committee (TMC)



- Manages the technical work of the USNC and represents the interests of the U.S. at the IEC Standardization Management Board (SMB)
- Composed of individuals proposed by USNC voting members and delegated by Council to manage all USNC technical matters
- Develops U.S. positions in preparation of IEC/SMB Meetings
- Appoints and oversees the designation of TAs, DTAs, TAG Administrators, and USNC/IEC Secretariats
- TMC Chair (USNC VP-Technical) is the U.S. Member to the IEC SMB*

* The USNC Deputy General Secretary serves as Alternate



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IEC Secretariats



- An TC/SC Secretariat is held by a National Committee
 - The Secretary provides administrative and technical support to committee activities. The functions of a Secretary may be delegated by the National Committee to a third-party for day-to-day administration
- When the USNC is assigned as TC/SC Secretariat, it in turn reassigns the responsibility to an Administrative Secretariat
 - A minimum four-year commitment required
 - The Administrative Secretariat nominates and supports the assigned Secretary
- The Secretariat, Administrative Secretariat and the Secretary must maintain strict neutrality in the execution of their responsibilities



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Technical Advisory Groups (TAGs)



- The USNC interfaces with IEC TCs / SCs via U.S. TAGs
 - One TAG for each IEC TC / SC where the U.S. is a “P” (Participating) Member
- Each TAG has a Technical Advisor (TA) who often serves as TAG Chair and is the single point of technical contact
- The TAG Administrator is the organization officially assigned by the TMC to provide administrative support to the TAG for a 4-year period
- The TAG Secretary is the person assigned responsibility for the day-to-day administration of the TAG



U.S. TAG Responsibilities



- Determine USNC votes/comments on related documents
- Designate delegates to attend TC/SC meetings
- Appoint experts to serve on Working Groups (WGs), Maintenance Teams (MTs) and Project Teams (PTs)



USNC Secretariat



- USNC staff are ANSI employees
- The General Secretary is nominated by ANSI President and approved by the USNC Council
- The General Secretary serves as the U.S. point of contact on all administrative matters and manages staff for USNC activities
- The Deputy General Secretary provides staff support for the USNC's technical operations



Conformity Assessment Policy Coordination Committee (CAPCC)



The purpose of this USNC standing committee is to coordinate USNC positions on electrotechnical Conformity Assessment (CA) issues which are specifically related to, or impact the IEC global agenda. The Conformity Assessment Policy

Coordination Committee (CAPCC) has the responsibility to ensure that when such issues are identified, that USNC consensus positions are developed and represented in appropriate national, regional and international CA groups.



Conformity Assessment Policy Coordination Committee (CAPCC)



The CAPCC oversees:

- USNC/IEC System Conformity Testing to Standards for Safety of Electrical Equipment (USNC/IECEE)
- USNC/IEC System for quality assessment of electronic components and associated materials and processes (USNC/IECQ)
- USNC/IEC System for Certification to Standards for Safety of Electrical Equipment for Explosive Atmospheres (USNC/IECEX)



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USNC Operational Documents

- USNC Statutes
- USNC Rules of Procedure
- Decisions of Current Interest
- TAG Model Operating Procedures
- USNC Directories



Get Involved!



- Every year hundreds of U.S. experts participate in IEC meetings, directly affecting the development of international standards
- Consumers especially should increase participation in the development of standards impacting consumer health, safety, and the environment to ensure consumer concerns are addressed
 - TAG participation fee waiver provision available for consumers
- *Make a difference*: contact the USNC staff to join a TAG



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Thank you

And remember...

The World Runs on Standards!



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