USNC CURRENT

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SUSTAINABILITY PRACTICES AND THE UN SUSTAINABLE DEVELOPMENT GOALS

UPDATED LOOK!

SPECIAL EDITION!

Includes extra content about the 2022 IEC General Meeting

IEC
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SUSTAINABILITY STANDARDS AND THEIR CONTRIBUTION TO THE UN SDGs

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Pushed by the social, economic, and environmental challenges that we are facing, companies, governments, and society in general are committed to moving towards more sustainable development to minimize related negative social and environmental impacts. Industry standards have many benefits and can play an essential role in driving sustainability—where climate change is reversed, human rights are universally protected, and digital equity democratizes opportunity for all. Among those benefits, standards act as means to proliferate technology adoption through network effects, to build trust with customers, and to demonstrate conformity to regulators.

The regulatory landscape is in continuous evolution, and new and stricter requirements are being established through new pieces of legislation, such as in Europe the 'Ecodesign for Sustainable Products Regulation' or the new initiative on consumers' 'Right to Repair.' While the use of standards remains voluntary in most cases, manufacturers, economic operators, or service providers may use standards to demonstrate that the products, services, or processes meet certification requirements and/or regulatory requirements. Certification programs typically leverage from standards developed either by Standards Development Organizations (SDOs) or specifications developed in industry consortia that define requirements and conformity assessment measures to be applied by the certification schemes.

In terms of sustainability, standardization has historically focused on energy efficiency during the use phase. However, the current focus of attention is on the development of more sustainable products by extending their lifetime, ability to reuse components or recycle materials from products at the end-of-life, and use of reused and/or recycled materials in products. Product design plays a critical role in determining a product's environmental impact. To minimize those impacts, companies work towards product circularity, through continued improvements in energy efficiency, and using more sustainable materials. The product lifetime is extended through design, maintenance, upgrades, repair, and innovative service-based business models. Although there are many standards covering certain aspects of circularity such as material efficiency or waste management, there is no industry standard methodology to calculate the circularity of the products, parts,

and packaging nor an agreed-upon common vision on how a company can complete the circle from a cradle-to-cradle perspective. In this context, standards are valuable tools to define basic terminology and develop methodologies to quantify aspects like the circularity or the environmental footprint of a product.

To address those needs, at the International Organization for Standardization (ISO), ISO/TC 323, Circular economy, is working on the development of a set of standards (ISO 59004, 59010, 59020) addressing circular economy principles, terminology, and guidelines for implementing and measuring circularity, and for circular business models and value chains.

Likewise, the effort of moving from a linear to a circular economy leads to the need to develop standardized processes for measuring and comparing the environmental impact, the so-called Life Cycle Assessments (LCAs), which track the footprint from materials sourcing through the material's next life. While LCA standards exist, they focus mainly on the product's impact from cradle-to-grave scope. For example, ISO 14040 describes the principles and framework for LCA, while ISO 14044 specifies requirements and provides guidelines. However, standards should be applied using a cradle-to-cradle perspective to address the environmental impact from materials sourcing through the material's next life.

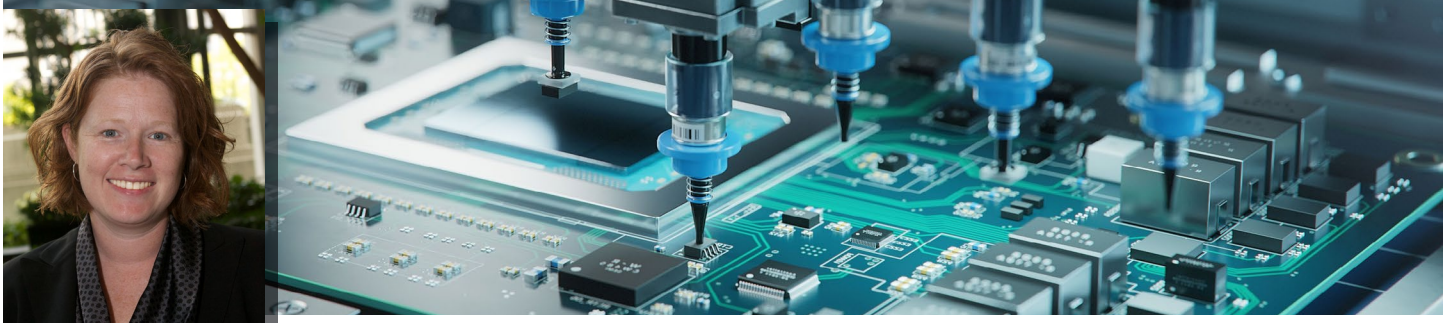
STANDARDS CONTRIBUTION TO THE UN SDGs

The 17 United Nations Sustainable Development Goals are an urgent call to address in a global partnership the challenges we are facing, by setting concrete objectives to ensure—among others—gender equality (SDG 5), sustainable consumption, and production patterns (SDG 12) or to take urgent action to combat climate change and its impacts (SDG 13). For building a better world by 2030, we know what the goals are, but we do not necessarily know how to achieve nor how to measure our contributions against the 17 SDGs. This is where, once again, industry-driven consensus-based standards are a key tool to support sustainable development as they are developed based on consensus, openness, and transparency—thus, ensuring that same metrics, definitions, and methodologies are used to monitor progress towards the SDG goals.

Major Standards Development Organizations, such as ISO and IEC, have mapped their standards projects to several SDGs. However, more work is needed on specific case studies where standards are demonstrated to support specific SDGs, education is needed at all levels (standards development committees, standards development organizations, policy makers, etc.), and governance is needed of standards contributions to SDGs.

ADDRESSING SUSTAINABILITY THROUGH ADVANCED MANUFACTURING

Megan Hayes, Vice President, Technical Services – NEMA, and member of USNC TMC, and USNC Finance Committee



While advanced manufacturing, also referred to as smart manufacturing and Industry 4.0, has many potential benefits, one of the most critical is in addressing sustainability. Advanced manufacturing is manufacturing that integrates innovative technologies to respond, in real time, to meet changing demands and conditions. These technologies include predictive process models, data analytics, sensors, and machine learning. Advanced manufacturing systems drive sustainability in manufacturing by reducing material waste and increasing energy and resource efficiency. Wide deployment of advanced manufacturing systems will support the United Nations Sustainable Development Goals (UN SDGs), specifically goal 13—taking urgent action to combat climate change and its impacts. Deployment of advanced manufacturing technologies will not be possible, however, without standards to ensure compatibility and interoperability.

According to the U.S. Environmental Protection Agency (EPA), industry produces an estimated 24% of all greenhouse gas emissions in the U.S. While the EPA also indicates that industry has reduced such emissions by 22% since 1990, more can be done. Using advanced manufacturing systems to ensure that processes are optimized to use less energy and materials would help to further reduce greenhouse gas emissions from the industrial sector. As an example, digital twin technologies can help manufacturers to virtually view the manufacturing process, including the machines, lines, and full factory to better understand material flow, equipment yield, energy usage, and more, which would ultimately assist in adjusting processes to reduce material inputs and waste.

ITA AND NEMA PARTNERSHIP

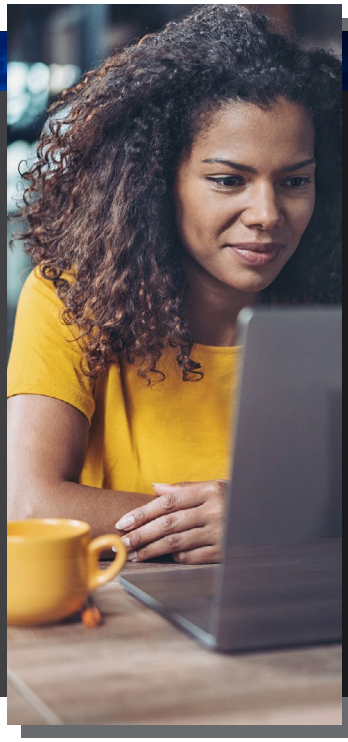
The need for standards-based approaches to ensure that customers can reap the benefits of advanced manufacturing technologies is increasingly evident. On February 9–10, 2022, the National Electrical Manufacturers Association (NEMA) and the International Trade Administration (ITA) hosted an Advanced Manufacturing Summit to discuss technical and trade challenges related to the implementation of advanced

manufacturing systems. During the Summit, participants indicated that advanced manufacturing standards are critically important for system interoperability and to ensure data can communicate across devices and companies in the supply chain. An important aspect of standards is that they can also ensure the safety of components and systems.

While there are many standards that cover aspects of advanced manufacturing systems, there are significant opportunities in standardization relating to these systems, including for increased interoperability, communication protocols, blockchain integration, augmented reality, user guides, cybersecurity, and data. The complexity of the advanced manufacturing standards landscape has led NEMA, through its collaboration with ITA, to begin to develop a technology roadmap for advanced manufacturing systems. This roadmap will identify gaps in standardization, such as those previously mentioned, and key priorities for standardization to support rapid deployment of advanced manufacturing products and systems.

Development of standards to fill the existing gaps will require significant investment in research, stakeholder engagement, collaboration across standards bodies, and time. Without the appropriate expertise to write these standards, the potential environmental benefits of advanced manufacturing systems may never be realized. NEMA and ITA have partnered together to provide financial support for standards experts to travel to international forums to increase engagement and support development of international standards for advanced manufacturing. Additional information about the Market Development Cooperator Grant agreement and an application form for travel reimbursement is available on the NEMA website.

As the electrotechnical community continues to support the UN SDGs and find innovative ways to ensure that manufacturing is efficient, effective, and safe, the use of advanced manufacturing systems will continue to grow. Focusing on the development of priority standards in this space will ensure that the transition to advanced manufacturing meets the needs of the industry, and that the appropriate expertise critical to completing the necessary standards is prioritized and engaged.



USNC/IEC TRAINING & EDUCATION

New to USNC? The USNC provides education and training resources for electrotechnical standardization and conformity assessment.

We encourage you to take advantage of our training opportunities available now on the **USNC webpage**!

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- Why IEC Standards Work Is Important to My Company
- Benefits of Standards Work for Emerging Professionals

Looking for more? IEC Academy & Capacity Building hosts frequent webinars. You can access past webinar recordings and register for upcoming webinars **here**.

UL STANDARDS AND THE UN SDGs

Spencer Barbour, Senior Project Engineer – UL Standards & Engagement
Mark Ramlochan, Standards Manager – UL Standards & Engagement
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BACKGROUND AND MAPPING PROJECT

The United Nations' (U.N.) Sustainable Development Goals (SDGs) are a universal call to action to improve human lives and protect the environment. Adopted by all U.N. member states in 2015 as a part of the 2030 Agenda for Sustainable Development, the SDGs address the economic, social, and environmental dimensions of sustainable development while recognizing interdependence of each of the goals. The 17 SDGs represent a commitment by both developing and developed countries to come together in support of a more sustainable future for all.

At UL Standards & Engagement, we mapped the association between our standards and the SDGs to determine the impact and benefits of our standards globally. We focused on how UL standards directly contribute toward the achievement of the SDGs, prioritizing goals that directly align with our core competence and strategy so we can have the greatest impact as we align existing UL standards to the SDGs and develop new standards to address any gaps.

Our approach combined Subject Matter Expert (SME) knowledge and quantitative assessment to determine the association of a UL standard to one or more SDGs. We used several algorithms to predict the association of a standard to an SDG by quantifying the similarity between the text of each standard's scope statement with a description of the SDG and its targets. The algorithmic results were used as an input to assist the SME's application of knowledge and experience to make a final determination on the association between a standard and the SDG.

To date, we have identified more than 950 individual cases in which a UL standard supports one or more SDGs, with each unique standard associated with an average of at least two SDGs. For each of the 17 SDGs, there is at least one UL standard that can be used to support efforts to achieve its identified targets.

UL STANDARDS FOR SDG 13: CLIMATE ACTION

Due to the rise in frequency and severity of extreme weather events such as rain, flood, wind, snow, or ice accumulation, and increased temperature variations, the Canadian government determined in 2016 that

existing provisions were not adequate to meet the current and anticipated threats to public safety, human health, and well-being posed by changing climate loads on buildings and infrastructure. As a result, the National Research Council (NRC) of Canada initiated the Climate-Resilient Infrastructure program to revise existing codes and standards for Core Public Infrastructure (CPI) and integrate climate resilience into referenced standards that will be the basis for future infrastructure builds and rehabilitation work in Canada.

In support of this program, UL Standards & Engagement revised 24 standards to reflect climate change adaptation accounting for changing climate loads. The revised standards covered the subjects of fire alarm systems, thermal insulation, oil storage tanks, and backwater valves. Through the revision of these standards and incorporation of climate resilience into their requirements, we aim to help support SDG 13 and reduce fatalities, infrastructure damage, and economic losses from climate change and extreme weather events.

UL STANDARDS FOR GOAL 15: LIFE ON LAND

Deforestation, land degradation, and biodiversity loss are critical issues that not only affect the environment but also human health and economic development. SDG 15 aims to halt the degradation of terrestrial ecosystems, including inland freshwater systems. UL 3420, the Standard for Sustainability for Plastic Packaging and Packaging Components, provides requirements for limiting regulated contaminants, promoting the reuse and recyclability of materials, improving energy efficiency during transport, and extending the useful life of plastic packaging. The standard aims to help reduce the volume of plastic that is destined for landfills, thus supporting terrestrial ecosystems.

Terrestrial ecosystems can also be negatively impacted by firefighting foams, which can enter the environment during use if not properly contained. Aqueous film-forming foams (AFFFs) are Class B firefighting foams designed to suppress fires involving flammable liquids and can contain per- and polyfluoroalkyl substances (PFAS). PFAS are sometimes referred to as "forever chemicals," because they do not readily break down in nature and can bioaccumulate in humans and wildlife, causing acute and chronic toxic effects. CAN/ULC 563, the Standard for High-Performance and Aviation Synthetic Fluorine-Free Foam Liquid Concentrates, incorporates environmental impact requirements including acute toxicity and chemical oxygen demand, and contains requirements for total organic fluorine (TOF) to establish limits for permissible PFAS concentrations. The TOF requirement was recently adopted by UL 162, the Standard for Foam Equipment and Liquid Concentrates. As the fire industry begins to transition away from AFFFs, standards such as ULC 563 and UL 162 are also helping ensure new, alternative foam technologies are effective and environmentally friendly, to protect and preserve life on land.

NEXT STEPS IN CONTRIBUTING TO THE ACHIEVEMENT OF THE SDGs

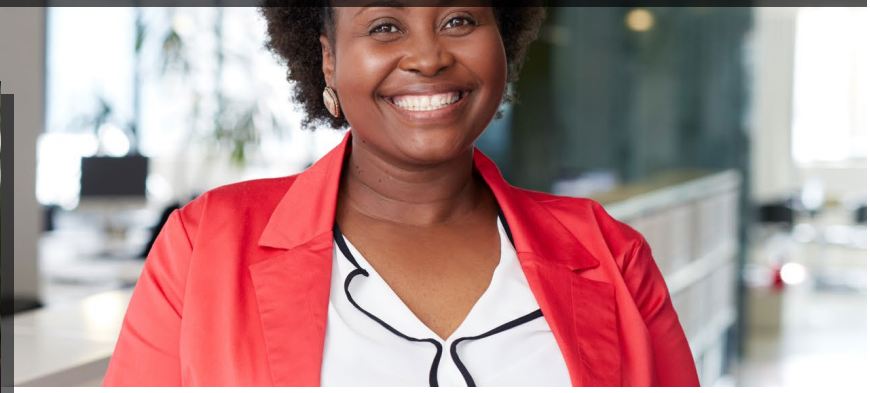
UL Standards & Engagement is dedicated to promoting global safety through the development of consensus standards that guide the performance and sustainability of new and evolving technologies and services. In pursuit of our mission of working for a safer world, we will continue to evaluate the impact of the SDGs on the environment and society, identify existing standardization gaps, and evaluate opportunities for new standards development.

By engaging in our standards development process, standards professionals can help us work toward achieving the SDGs. There are many ways to participate, including submitting a proposal to create a new standard or revise an existing one, submitting comments on proposals, and attending a technical committee (TC) meeting. Our process is open to all interested parties and there are no membership dues. Visit ULSE.org/get-involved to learn more.

Read our full report on the SDGs and UL Standards & Engagement at ULSE.org.

GENDER DIVERSITY AND GENDER RESPONSIVE STANDARDS

Megan Hayes, Vice President, Technical Services – NEMA, and member of USNC TMC, and USNC Finance Committee
Veronica Lancaster, Vice President, Standards Programs – CTA, and USNC President

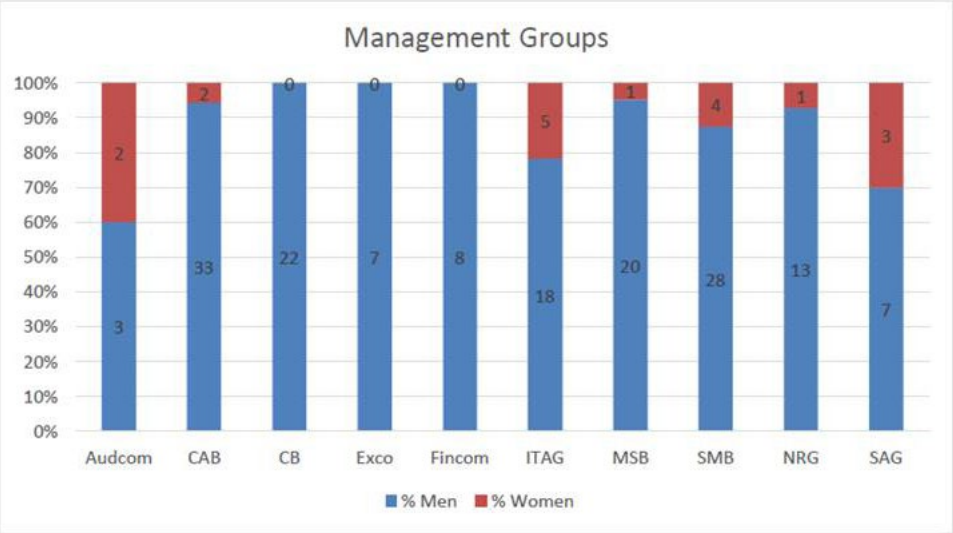


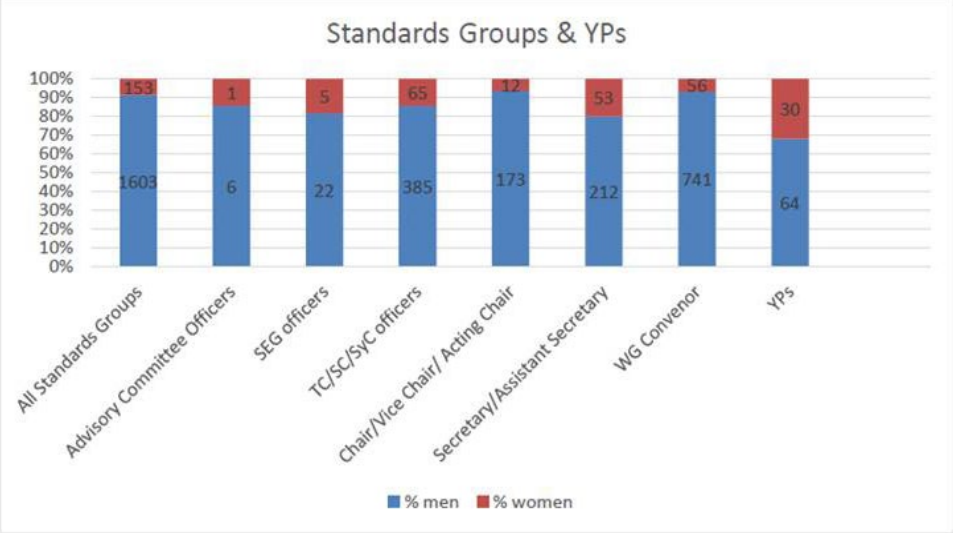
Diversity, equity, and inclusion have become key goals for many organizations and businesses around the world, and the International Electrotechnical Commission (IEC) is no different. As part of a recent governance overhaul, the IEC has created a Diversity Advisory Committee (DAC) to provide guidance to the IEC Board on diversity issues, including gender, geographic, and stakeholder diversity, which are critical factors for the IEC. In 2015, the United Nations Member States created the 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals. Goal 5, to achieve gender equality and empower all women and girls, is closely linked with the IEC's focus on gender and specifically aligned with the development of gender-responsive standards.

Many people are aware of research supporting the benefits of diversity, more specifically, the correlation between diversity and business performance. There are many benefits that extend to standards development as well, which likely was not thought of when engineers first began writing their standard. A more diverse standards community leads to greater creativity and innovation through the variety of different voices. While women are making gains with an 8% rise in STEM occupations in the latest U.S. Census, women only make up 27% of STEM jobs in the U.S. This correlates with low participation by women in standards development—whether that be at the Technical Committee, Working Group, or Governance levels.

It is imperative that the IEC and its National Committees, including the United States National Committee (USNC) work to increase participation and engagement from women, which will ultimately lead to improved perspectives in standardization. An example of why this is important is crash test dummies used in crash impact testing. It may surprise readers to learn that it was only in late 2022 that the first female crash test dummy was created by Astrid Linder, research director of traffic safety at the Swedish National Road and Transport Research Institute. It might also be surprising to learn that the majority of safety policy and research is based on a male body—a 171 pound, 5 foot 9 inch male body that is 26 pounds heavier than a female. Consumer Reports highlighted the problem in October 2019, noting that researchers have known for decades that women are more at risk to be killed or injured in a car crash. Not

by a small amount, mind you, but 73% of females have greater odds at being seriously injured than males in a frontal car crash. And that's while wearing a seatbelt. They are 17% more likely to be killed than males. This is because only "male" crash test dummies are mandated for testing by regulators. Despite the huge differences in male and female anatomy, requests by some regulators, automakers, and the National Highway Traffic Safety Administration, prior to Linder's creation of a true female crash test dummy, a scaled down male version was used in testing to represent females in crashes. Even in trying to represent the female population, the crash test dummy was equivalent to a typical 12 or 13-year-old male, representing only the smallest 5% of females. This is precisely why it is important to improve diversity through increasing participation and engagement of women in standardization. We need our perspectives to be considered while requirements are being written.





* Statistics are based on title registered in IBIS. Participants that wish to be identified differently can contact Central Office and we will update the details accordingly.

The USNC has already done much work on this, and, in fact, for the first time in its history has a woman as USNC President, Veronica Lancaster. The USNC also has two female officers, VP Technical, Hae Choe and VP Conformity Assessment, Joan Sterling. Additionally, the USNC is engaged in the IEC DAC, with Megan Hayes chairing the committee. Finally, during the 2022 IEC General Meeting held in San Francisco, the USNC hosted the first of its kind Women in the IEC lunch. Speakers included Veronica Lancaster, Megan Hayes, Sonya Bird, and Carrie Schmaus. Our goal was to present information from the USNC on the importance of diversity and to create a unique interactive networking event, which was very successful!

One aspect of gender diversity for standards developers is the need to consider gender responsiveness in all standards activities. As demonstrated through the example of crash test dummies, standards have been written by men, and often, for men. This could lead to unequal impacts of standards and unintended consequences, such as negative financial impact, lower quality of life, or even increased injury or death. IEC has joined the International Organization for Standardization (ISO) in a joint working group developing guidance for gender responsive standards. The intent is to ensure that the specific needs of women are considered during standards development. These needs might include body fat percentage, different anatomy, peripheral vision, sensitivity to sound, pain tolerance, hormones, or strength characteristics. Standards impact aspects of all or our lives regardless of gender. Ensuring comprehensive consideration of all issues impacting humanity are addressed in relevant standards will make those standards more important because they solve problems for all.

In the end, focusing on ensuring that women are represented throughout standards development—from working groups, to committees to the board room—will only strengthen the outcome of the work of those organizations, creating an environment that considers human solutions.

SPOTLIGHT ON IEC SYSTEMS COMMITTEE ACTIVE ASSISTED LIVING (SYC AAL)

Anthony Ciccarello, Senior Manager of Global Regulations & Standards – Philips
Veronica Lancaster, Vice President, Standards Programs – CTA, and USNC President
Grace Roh, Senior Standards Specialist – UL Standards & Engagement, USNC Communications Committee member and TAG Assistant Secretary, IEC/TC 61, IEC TC/108

As the global population is aging and technology continues to evolve, the ability to live, play, and work also continues to evolve. This is great news for adults that want to age in place, as well as people wanting to live productive and independent lives regardless of their abilities. In the U.S., from 2019 to 2040, the number of people who are 85 and older is expected to more than double from 6.6 million to 14.4 million[1]. Globally, in 2050 it is projected that 1.5 billion people aged 65 years or over worldwide will outnumber adolescents and youth aged 15 to 24 years (1.3 billion)[2]. The World Health Organization amplifies the global need for assistive technology, including 200 million people with low vision, 75 million people who need a wheelchair, and 466 million people with hearing loss[3].

As standards developers, we have an important role to play in not only creating a safe environment for those aging in place, but in considering how technology can assist the older population to be able to live independently.

IEC Systems Committee Active Assisted Living (SyC AAL) was established in 2015 to support solutions that allow all to live independently as long as possible, whether that is the aging global population or due to illness or disability. IEC SyC AAL is tasked with developing systems standards that ensure interoperability among vendors of AAL products, services and systems, safety, security, and privacy. Within the IEC, systems committees consider standardization for the entire system—a top-down approach—rather than individual product standards.

The work of SyC AAL is to ensure that products, services, and systems are usable, accessible, and interoperable. SyC AAL also addresses safety, security, and privacy for this vulnerable population. For example, SyC AAL covers technologies such as wearable health trackers

1 Administration for Community Living (ACL), part of Administration of Ageing (AoA), US Dept of HHS, 2020 Profile of Older Americans, May 2021.

2 United Nations World Population Prospects, 2019.

3 World Health Organization Assistive Technology, May 2018.

that support the health and well-being of the user, their caretakers, and medical doctors by providing health information and supporting continuity of care. AAL technologies also include products that can support independent and safe living environments such as home monitors, sensors, and smart home systems. Daily routines and needs can also be facilitated by the use of robots and automation.

SyC AAL's vision is to enhance quality of life through inclusive standardization, allowing independent living for all. Its scope is to create understanding by taking evolving technology and the evolving market into account to enhance that quality of life. This action creates a benefit for all AAL users leading to higher inclusion.

SyC AAL is working on an ecosystem that involves a broad range of participants, including technology developers, manufacturers and suppliers, researchers, medical device companies, pharmaceutical companies, and new entrants into the market. Because it's a systems committee, this work also considers end users that need the technology, health service providers, health insurance companies, policymakers, and regulators. Technology continues to create new opportunities to assist members of our world in living independently, and SyC AAL works to ensure that international standards support global inclusivity.

SyC AAL is comprised of the following working groups:

WG 1: User Focus
Covers all user-related issues of AAL products, services, and systems

WG 2: Architecture and Interoperability
Develops an architecture model and a reference architecture

WG 3: General specifications, Quality, and Conformity Assessment
Covers all general specifications, quality, conformance, and interoperability related issues of AAL products, services, and systems

WG 4: Regulatory Affairs
Develops an overview of regulatory requirements on national and regional level affecting AAL

WG 5: AAL in the connected home environment
Covers horizontal integration and interoperability aspects of AAL in the connected home environment

MT 6: Terminology
Coordinate the development of terms and definitions

WG 7: Cooperative multiple systems in connected home environments—Functional safety of electrical/electronic safety-related systems—AAL aspects
Develops AAL functional safety requirements

SyC AAL has identified the following UN Sustainable Development Goals (SDGs) in its Strategic Business Plan that are supported by its work:

- **Goal 3:** Good Health and Well-being
- **Goal 8:** Decent Work & Economic Growth
- **Goal 9:** Industry, Innovation, & Infrastructure
- **Goal 10:** Reduced Inequality
- **Goal 11:** Sustainable Cities and Communities

SyC AAL currently has 14 projects in its work program addressing important standardization topics, including how these devices function in multiple systems in the connected home, management requirements for AAL service providers, functional performance criteria for AAL connected homes, safety aspect for adult AAL care, and updates to AAL use cases. The U.S. Technical Advisory Group (TAG) to SyC AAL needs additional members to participate in the review and development of these standards. If interested, please reach out to the USNC to get involved.

CALL FOR MEMBERS – USNC TAG TO IEC/TC 78

The USNC Technical Advisory Group (TAG) to IEC/TC 78 would like to grow its membership. Individuals who are interested in joining the USNC TAG to IEC/TC 78 are invited to contact Mackenzie Connors at maconnors@ansi.org as soon as possible.

SCOPE: TC 78, LIVE WORKING

- To prepare International standards for tools, equipment, and devices for utilization in Live Working, including their performance requirements, care, and maintenance. Excluded: Work practices and methods for Live Working.
- To prepare technical publications related to the utilization of tools, equipment, and devices on, and in the vicinity of, live parts of electrical installations and systems.

CALL FOR MEMBERS – USNC TAG TO IEC/TC 111

The USNC Technical Management Committee would like to grow the membership of the USNC TAG to IEC/TC 111. Individuals who are interested in joining the USNC TAG to IEC/TC 111 are invited to contact Mackenzie Connors at maconnors@ansi.org as soon as possible.

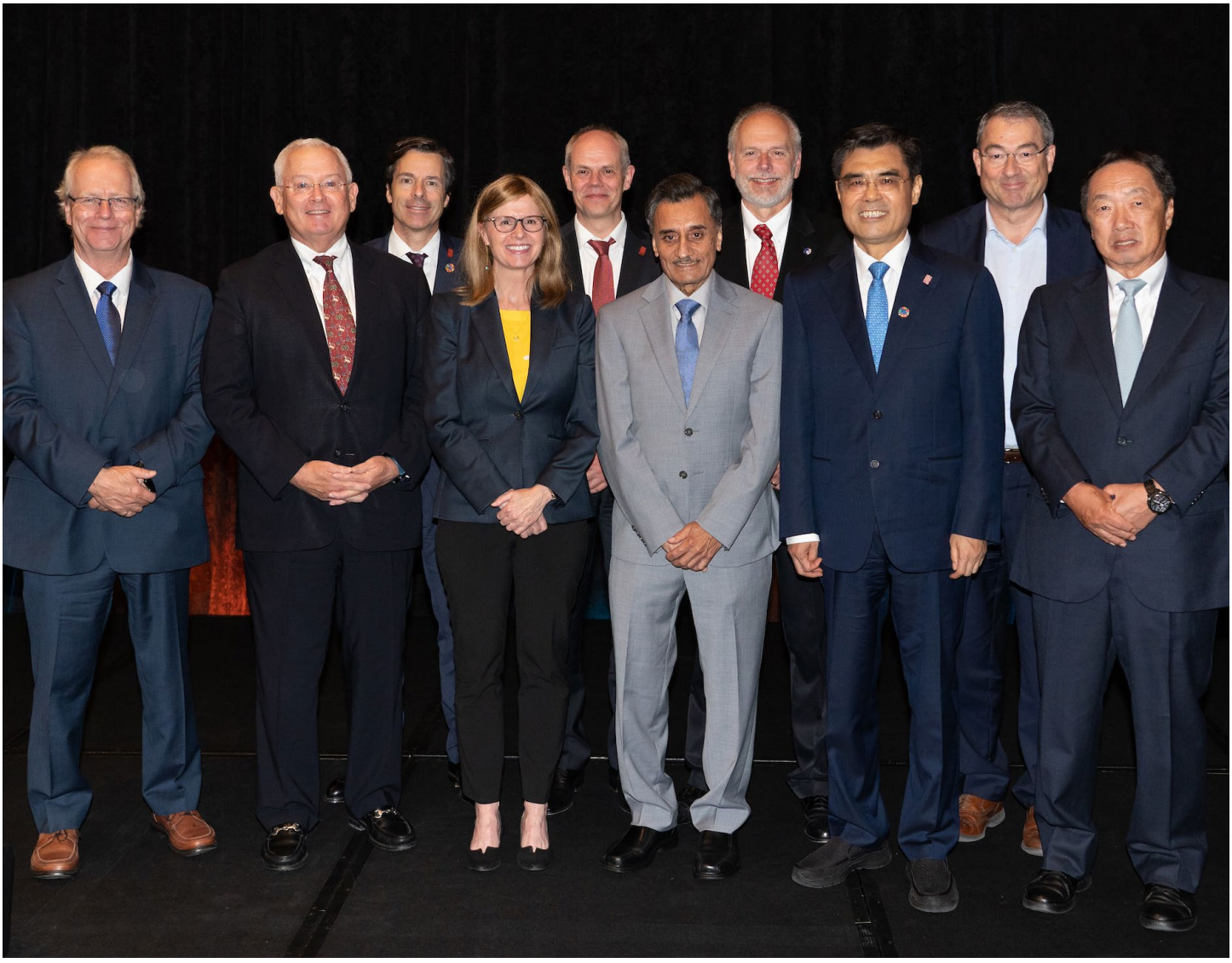
SCOPE: TC 111, ENVIRONMENTAL STANDARDIZATION FOR ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS

Standardization of environmental aspects concerns:

- To prepare the necessary guidelines, basic and horizontal standards, including technical reports, in the environmental area, in close cooperation with product committees of IEC, which remain autonomous in dealing with the environmental aspects relevant to their products;
- To liaise with product committees in the elaboration of environmental requirements of product standards in order to foster common technical approaches and solutions for similar problems and thus assure consistency in IEC standards;
- To liaise with ACEA and ISO/TC 207;
- To monitor closely the corresponding regional standardization activities worldwide in order to become a focal point for discussions concerning standardization;
- EMC and EMF aspects are excluded from the scope.

SPECIAL EDITION

2022 IEC GENERAL MEETING IN SAN FRANCISCO



The U.S. was thrilled to host the 86th IEC General Meeting in San Francisco on October 24th through November 4th, 2022. During these two weeks, over 1,800 individuals from 78 TC/SC/SyCs met for a total of nearly 300 meetings and events.

The USNC would like to thank everyone involved for an incredibly successful IEC General Meeting. We would like to extend a special thank you to the USNC Planning Committee and its Chair, Steven Margis, Vice Chairs Veronica Lancaster and Sonya Bird, the IEC Secretariat, and to all of our General and Technical sponsors. The General Meeting was as success because of you all. Thank you!

GENERAL SPONSORS

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HistoSonics	TC 87
JEDEC	TC 47
Laars Heating Systems	TC 72
NEMA	TC 22
NEMA Magnet Wire Section	TC 55
Nextracker	TC 82
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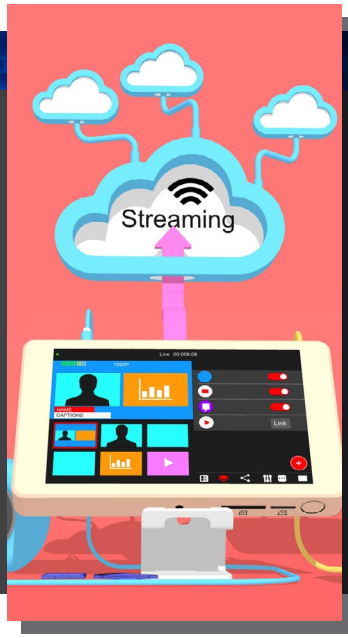
Therm-O-Disc, Inc.	TC 72
UL Standards & Engagement	TC 82
VDE	CISPR



ANSI MEMBERSHIP WEBINARS

Membership in ANSI is the key to unlocking the benefits and opportunities that standardization can provide. Standardization and conformity assessment activities lead to lower costs by reducing redundancy, minimizing errors, and reducing time to market resulting in enhanced profitability.

These interactive 30-minute webinars—held on the first Friday of each month and free of charge—are hosted live and provide an overview of ANSI's activities, as well as information on how to take full advantage of ANSI membership. A Q&A session encourages active dialogue between all participants.

For more details, visit our **website**!

U.S. CELEBRATES DIVERSITY AT GENERAL MEETING LUNCHEON

The U.S. was proud to host a feature event at the IEC 2022 General Meeting, the Women in IEC luncheon. This event brought women participating in IEC standards and conformity assessment activities together to celebrate diversity and discuss how to engage more women within IEC.

The idea first came about when Sweden was planning to host the IEC General Meeting a few years back. They envisioned some event to get the women of IEC together. Due to the pandemic, Sweden was unable to host, but the SMB representative from Sweden shared their ideas with our then U.S. SMB representative, Sonya Bird. Thanks to Bird and fellow USNC Planning Committee Vice Chair, Veronica Lancaster, the idea for holding this event in San Francisco took off! The idea gained so much momentum that the event was turned into a full-scale luncheon.

Around 130 individuals registered for the Women in IEC luncheon. Attendees included many women—those experienced in IEC work as well as young and emerging professionals—and featured special guests Vimal Mahendru, Shawn Paulsen, Gabriella Ehrlich, and Marianna Kramarikova, and several representatives from the IEC SMB, CAB, SMB, and IB.

Luncheon speakers included Megan Hayes, Carrie Schmaus, Bird, Paulsen, and Lancaster. Speakers highlighted the importance of diversity, including stakeholder category, geographic region, and gender diversity. Other speakers highlighted the importance of seeing other women in the room and in leadership roles. Also mentioned was the current work by IEC and ISO to provide guidance on how to develop standards that are responsive to needs of both women and men.

Luncheon guests were asked to complete a survey regarding diversity. As follow-up to this event, Bird and Lancaster will be reviewing the information provided and working to develop a white paper addressing the trends in diversity. The paper will hopefully provide ongoing excitement and celebration about engaging women in IEC, and will serve as an open invitation to encourage others to get involved.

KEY UN SDG EVENT HELD AT IEC GENERAL MEETING

IEC hosted an informative and engaging event on the UN Sustainable Development Goals at the General Meeting held in November in San Francisco. Widely referenced around the world, the UN Sustainable Development Goals are a clear blueprint to make our planet a better place. IEC Standards and Conformity Assessment Systems contribute to all 17 goals, either directly or indirectly.

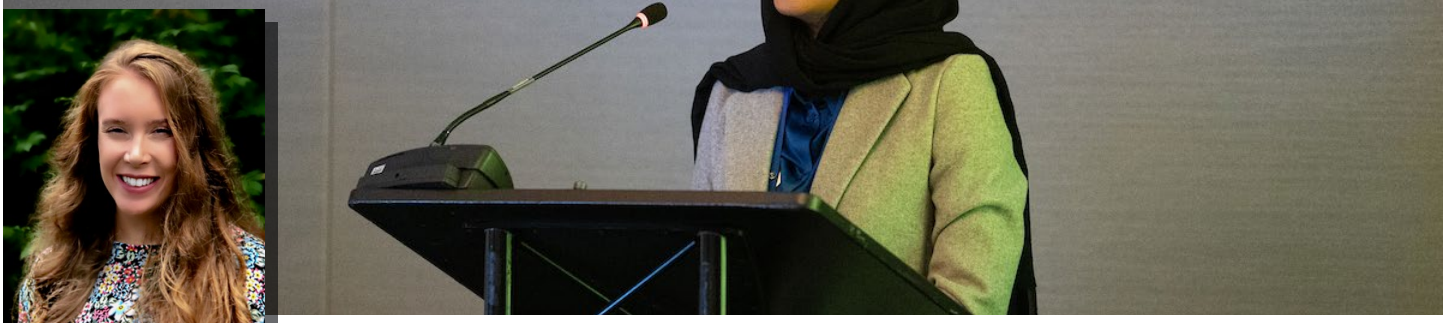
The SDGs have become increasingly important markers for IEC Technical Committees, many of which have modified their strategic business plan to include them and show how they intend to help meeting them. For IEC stakeholders taking part in the GM, it is important to understand the relevance of these goals and how they connect to IEC Standards and Conformity Assessment Systems. It is also important to comprehend how industry and big business have taken on the SDGs in their own strategies.

The International Roundtable on the SDGs proposed to discuss these issues and more. The first morning panel was dedicated to the role and responsibility of corporations in addressing the SDGs, moderated by Jim Matthews (Corning, Inc.). Panelists included Jonathan Colby (Streamwise Development), Ajay Garg (Hydro One), and Phil Piqueira (UL Standards & Engagement). A second panel looked at how IEC Standards and Conformity Assessment Systems help to meet the SDGs, moderated by Kareen Riley-Takos (Standards Australia). Panelists included Bruche Nordman (Lawrence Berkeley National Laboratory), Sadhvir Bissoon (SABS), and Battsengel Guragchaa (IEC Affiliate Program). A summary of the work done to date was also communicated.

For more information on how IEC TCs are working to meet the SDGs, read: IEC TC 106 adopts new strategic business plan.

IEC YOUNG PROFESSIONALS WORKSHOP PROVIDES OPPORTUNITY FOR NEW VOICES AND IDEAS IN STANDARDIZATION

Grace Callahan, International Standards Specialist – UL Standards & Engagement, USNC Young and Emerging Professionals Committee member, and 2022 IEC YP



In 2022, I was selected by the U.S. National Committee (USNC) of the IEC to represent the U.S. in the IEC Young Professionals (YP) Programme. Held in conjunction with the 86th IEC General Meeting in San Francisco, California, the YP workshop was an excellent opportunity to help shape international standardization and conformity assessment by bringing together the next generation of experts and leaders in the electrotechnical industry. It was truly an unforgettable experience to be one of 85 young professionals from 43 IEC National Committees who participated in the week-long program. The other Young Professionals selected by the USNC in 2022 included Amanda Johnson, Festool USA; Eric Jonardi, Rockwell Automation; and Allison Managlia, Intel Corporation.

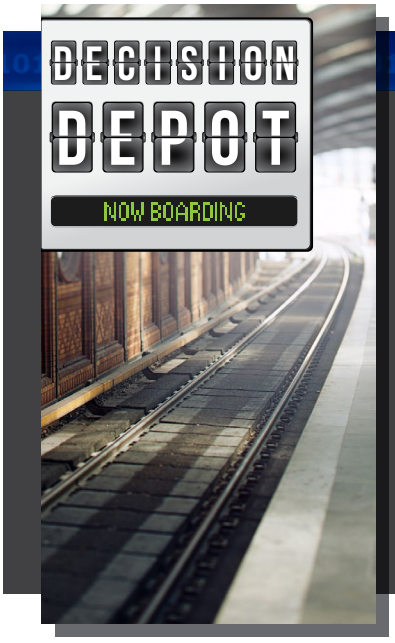
By participating in the IEC YP Programme, we were able to learn more about the work of the IEC by observing Technical Committee (TC) meetings, collaborating with each other in breakout sessions on standardization and conformity assessment topics, and making lifelong international connections in the industry. In one of the breakout sessions, we focused on diversity in the IEC and explored ways to increase representation on TCs in terms of gender, geographical region, and stakeholder interest category. To tackle this issue and brainstorm ways to build awareness and mobilize technical experts, I worked with young professionals from countries including Ethiopia, China, Japan, Iceland, Turkey, Poland, and France. I also had the opportunity to observe TC 108, which focuses on the safety of electronic equipment within the field of audio/video, information technology, and communication technology. Observing the TC allowed me to see the standards development process in action and observe how committees reach consensus.

Although the electrotechnical industry faces challenges with attracting the next generation of experts, the YP workshop helps to address the issue by providing a great opportunity for young professionals to share their experiences and collaborate with others in standards and conformity assessment. Input from young professionals is important in standardization activities, as these individuals can contribute new ideas and unique perspectives on how to help make the world safer, more sustainable, and more inclusive through standards. As a nontechnical professional participating

in the workshop, I also found it interesting to see how people from different disciplines can contribute to the standards development process. To develop strong and effective standards, technical committees need professionals with soft skills like creative thinking, communication, diplomacy, and conflict resolution.

After the workshop, the Young Professionals are encouraged to continue engaging in standardization and conformity assessment activities on both national and international levels. The program provides young professionals with many ways to stay engaged, including through opportunities to attend technical meetings as observers, contribute to the work plan of selected IEC systems committees, and collaborate with the elected IEC Young Professional leaders as they complete their annual projects. These projects include establishing a database to help IEC experts and young professionals collaborate, and developing a guide for how National Committees can reach out to young professionals.

Attending the IEC Young Professionals workshop allowed me to expand my knowledge, collaborate with other emerging professionals, and advance my career in standardization. Together with the other young professionals from around the world, I look forward to helping shape the future of the standards. After participating in the IEC Young Professionals program, I am even more excited to be a part of the next generation of professionals in the electrotechnical industry. Young professionals play an important role in standards development and it is important for the standards community to ensure that all perspectives are considered to help build a safer and more efficient world through standardization.



DECISION DEPOT

This column provides easy access to recent decisions that have been made regarding IEC and USNC policies and procedures that directly affect our members. Click the link below to access the recent decisions.

See the Decision List below for decisions made at the following meetings: IEC Board meeting held on 2022-11-02; SMB meeting 175 held on 2022-10-31; and CAB meeting 52 held on 2022-10-31.

IEC BOARD: IB/153/DL

SMB: SMB/7720/DL

CAB: CAB/2276/DL

USNC PROFESSIONAL MENTORING PROGRAM PARTNERS MEET AT THE IEC GENERAL MEETING

Jonathan Colby, President and Founder – Streamwise Development, and USNC Professional Mentoring Program Mentor (2021-2023), chair of IEC TC 114, member of USNC CAPCC, USNC/IECRE, USNC Nominations Committee, and USNC TAG to IEC TC 8

Amanda Johnson, Compliance Engineer – TTS North America, USNC Professional Mentoring Protégé (2021–2023), Member of the USNC Communications Committee, and Member of USNC TAG to IEC TC 116

INTRODUCTION

In 2021, the USNC formally established the USNC Mentoring Program following a successful six month "Pilot Program." The USNC Mentoring Program is intended to be an opportunity for emerging standards and conformity assessment professionals to enter into a one-on-one relationship with a more experienced member of the standards and conformity assessment community for the purpose of retention, development, and overall success.

Whereas training is typically a significant volume of information passed from one to many, mentoring is a partnership in which two individuals set their own agenda, and the mentor provides guidance to the protégé in order to assist in achieving the latter's goals. A mentoring program fosters the growth of emerging standards and conformity assessment professionals and enables them to be successful in their endeavors, whether their goals are to take on leadership roles in U.S. or international programs or to be successful contributing experts or delegates. The mentoring program can be seen as a way to retain new standards and conformity assessment professionals and as a means of filling the pipeline for future leaders in the USNC.

The USNC Mentoring Program, managed by the USNC Communications Committee, is a yearlong program with an open application period from August to September annually. Mentors and protégés are matched based on the total applicants and the interest areas of each applicant. The program provides training and guidance materials and hosts an initial kick off meeting, protégé only meetings, and other events during the year to ensure successful partnerships. Mentors and protégés are encouraged to meet monthly, at a minimum, based on their individual schedules and needs. The 2023–2024 Mentoring Program will open a call for volunteers, both mentors and protégés, in August 2023.

Jonathan Colby, mentor, and Amanda Johnson, protégé, share their experience working together since January 2021, through the Pilot Program, the 2021–2022 Mentoring Program and the current 2022–2023 Mentoring Program.

Amanda Johnson is a Compliance Engineer with TTS North America, better known by the brands Festool USA, SawStop, and Shaper, among others. Johnson joined the U.S. TAG to IEC TC 116, Safety of motor-operated electric tools, in 2020 and she joined IEC TC 116 WG 7, Electric motor-operated hand-held transportable tools and lawn garden machinery – Safety – Part 1: General Requirements, as a subject matter expert in 2021. Johnson is also a member of ANSI ASC01, Woodworking machinery safety requirements. Johnson was elected as one of the U.S. IEC Young Professionals (YPs) in 2022 and attended the weeklong workshop held in San Francisco, CA during the 2022 IEC General Meeting hosted by the USNC.

Jonathan Colby is the president and founder of Streamwise Development, a renewable energy consultancy focused on risk and quality management. Colby started participating in IEC standardization and conformity assessment work in 2008, shortly after the formation of IEC TC 114, Marine energy – Wave, tidal and other water current converters. He currently serves as the Chair of IEC TC 114 and as the Convener of the Marine Energy Sector Working Group (ME-SWG) of the IECRE System. Colby was an IEC YP from the U.S. in 2011 and is currently involved in a number of USNC activities, including serving as a USNC TMC and USNC CAPCC Member. He was also involved in the establishment of the USNC Mentoring Program.

AMANDA'S PROTÉGÉ EXPERIENCE

"It's hard to believe it's already been two years since I signed up for the mentoring program. When I look back on what I've accomplished within my IEC Technical Committee and other standards development groups during that time it's clear how valuable this program has been to me.

About three years ago I started a new job that required me to be involved in standards development. At this point in my short career, I'd spent a lot of time reading and applying standards, but I had no idea how they were developed. It was overwhelming being thrown into this new world. The number of acronyms alone were enough to scare anyone away! So, when my boss forwarded me an email from the United States National Committee (USNC) regarding a new mentoring program they were starting, I felt like this was exactly what I needed. I was looking for someone I could ask questions to when I was too shy to speak up in the committee meetings.

This program completely exceeded my expectations. Over the past two years, Jonathan has helped me prepare for committee meetings, shared best practices on working with international groups, showed me how to navigate the IEC portal, explained the process of submitting a change to a standard, and answered countless questions. He helped me find the confidence to speak up in committee meetings and share my opinions which ultimately led me to become a better participant within my IEC Technical Committee and other standards development groups.

Jonathan also introduced me to a whole new side of standards and conformity assessment I was not aware of by helping me get involved with the USNC. By joining the USNC Young & Emerging Professionals (YEP) Committee and the USNC Communications Committee, I've been able to continue learning more about standards development, see all the work that goes on "behind the scenes" maintaining a National Committee, and work with a group on finding ways to introduce others to the standards world."

JONATHAN'S MENTOR EXPERIENCE

"Working with Amanda has been an incredibly rewarding experience for me. Her growth in the two-plus years that we have been working together is amazing and something that we are both very proud of. Through our work together, I have been able to learn how other industries, TCs, and TAGs operate. This has given me

valuable insights into areas for improvement within my own TC. It has been very enjoyable working with Amanda on a variety of technical and logistical issues associated with effective participation on an IEC TC, a TAG, and within the USNC.

Our first 18+ months working together were entirely online due to COVID-19 and it was very special to finally meet her in person at the IEC General Meeting in San Francisco. I was incredibly happy when she was named one of the 2022 YPs from the U.S.; as a former YP, I knew how valuable the program would be for her and her growth within the IEC and the USNC. As an example, she has now joined the USNC Communications Committee and the USNC Young and Emerging Professionals (YEP) Committee, and she is actively contributing to both.

To reiterate, serving as a mentor has been very rewarding for me. The time commitment has been very manageable, we have a standing monthly meeting for about one hour with intermediate emails based on time sensitive questions or concerns that arise, and the time we spend is both enjoyable and productive. I strongly encourage all experienced USNC members to consider volunteering as mentors and to identify members of their organizations that would benefit from mentoring to apply as protégés."

SUMMARY

In summary, the USNC Mentoring Program is a valuable program that will benefit the protégés, mentors ,and the USNC at large. Additional information can be found here on the USNC webpage or by contacting Megan Pahl at mpahl@ansi.org. As a reminder, the 2023–2024 Mentoring Program will be open for applications this summer. Interest from both mentors and protégés is strongly encouraged to ensure a long-term, sustainable program.

JUST PUBLISHED

Check out the latest and greatest recently published standards by the IEC. A complete list of recently published documents can be found **here**. Here's just one (of many!) we think you'll find interesting:

IEC 62321-3-4:2023 PRV PRE RELEASE VERSION

Determination of certain substances in electrotechnical products – Part 3-4: Screening – Phthalates in plymers of electrotechnical products by high performance liquid chromatography with ultraviolet detector (HPLC-UV), thin layer chromatography (TLC) and therman desorption mass spectrometry (TD-MS). Developed by IEC TC 111.

PHOTOS

Photographer credit: Rand Larson, Morning Start Productions


VERONICA LANCASTER
SONYA BIRD
MEGAN HAYES


YAMAHA


Don't Worry
Be Hippie

United States National Committee of the IEC

LinkedIn

JOIN THE USNC LINKEDIN GROUP

Would you like to stay updated with the news and events of the USNC? **Join our LinkedIn Group** to learn about and provide input on all issues electrotechnical that can affect your life, from your own home to the other side of the globe! If you have any information to share on LinkedIn, please contact Megan Pahl (**mpahl@ansi.org**).

ABOUT THIS PUBLICATION

The USNC Current newsletter is distributed to the constituency of the U.S. National Committee (USNC) of the International Electrotechnical Commission (IEC). It provides updates on technical activities and other information of interest to members of the electrotechnical community. Some articles are reprinted with permission from the IEC News log.

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HOW TO CONTRIBUTE

Contributions are gladly accepted for review and possible publication, subject to revision by the editors. Submit proposed news items to: Megan Pahl, **mpahl@ansi.org**.