



**2023 Annual Report**

# Global Innovation. Inspired Collaboration.

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# Global Innovation. Inspired Collaboration.

IEEE is a driver of worldwide collaboration—engaging, inspiring and leading global communities to address critical challenges through technology. When we build connections among people, we accelerate the transfer of knowledge, which ultimately results in a shared inspiration to reach a common goal—advancing technology for the benefit of humanity through global innovation.

This year, IEEE members and volunteers collaborated with leading organizations to exchange ideas and have meaningful discussions on how we can shape a better tomorrow. From sustainability efforts to initiatives on how to ensure artificial intelligence applications follow industry standards, IEEE had a strong voice in how we can provide leadership for these crucial efforts.

IEEE is a public charity with a global presence, but its impact starts at the local level, through its members and volunteers who actively work with IEEE employees to improve the lives of others—and advance their own professional growth. IEEE serves as the home where like-minded and passionate individuals join together and help push technology to new frontiers.



[▶ CLICK TO WATCH VIDEO](#)

## Message from the IEEE President & CEO and the IEEE Executive Director & COO

From the organization's earliest days, IEEE members have aspired to the Institute's mission: advancing technology for the benefit of humanity. With 344 sections and more than 4,000 chapters worldwide, IEEE facilitates the active participation of thousands of members and volunteers to improve the lives of others through direct participation.

Even when our members aren't on the ground contributing to humanitarian technology activities, they can be found conducting research and sharing knowledge that promotes improved quality of life all over the world. From agriculture and healthcare to affordable energy and clean technology, IEEE members are making a difference and delivering technical solutions to address the world's most pressing challenges, including climate change.

A major focus throughout 2023 was to work with all members and volunteers around the world—particularly our students, young professionals and underrepresented communities—to make IEEE a more successful and resilient global technical organization and for it to be universally recognized as a force for change. It was equally important that technologists at the local level view IEEE membership as a vehicle for professional growth and are aware of the tremendous benefits that come with membership. These offerings include unparalleled networking opportunities at more than 2,000 international conferences—both in person and virtual—as well as access to the finest technical literature, resources for continuing education and innovative collaboration opportunities with colleagues worldwide. And in 2023, our global membership continued to grow, reaching an all-time high of 460,000 members in more than 190 countries.

As the world's largest organization of technical professionals, IEEE has both the opportunity and the responsibility to assist in organizing the response of engineers, scientists and technical professionals around the world to address the causes, mitigate the impact and adapt to climate change. IEEE recognizes this global crisis and is committed to helping alleviate the effects of climate change through pragmatic, accessible technical solutions for sustainability, and providing engineers, technologists and policy makers with a neutral space for discussion and action.

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TOP: Saifur Rahman (right), 2023 IEEE President & CEO and Sophia Muirhead, IEEE Executive Director & COO

IEEE has significant ongoing, relevant efforts and expertise being brought to bear and equips our members with the ability to speak to both technologists and a general audience on these issues. IEEE has a climate change website, [climate-change.ieee.org](https://climate-change.ieee.org), to highlight technology news and resources focused on climate change. It includes the IEEE *Xplore*® [Climate Change Collection](#), a repository of highly cited scholarly publications, conference proceedings and other materials to help foster the exchange of technical knowledge.

IEEE has also been contributing to discussions at international events, such as the Conference of Parties (COP28) to the United Nations Framework Convention on Climate Change, highlighting the key role technologists play in shaping the global energy landscape, as well as building beneficial relationships with partners such as the International Telecommunication Union, UNESCO, World Green Energy Organization and the World Federation of Engineering Organizations.

IEEE is also driving important dialogue around the future of technology. IEEE has been developing a wide range of standards and methods to address safety, biases, transparency, privacy and corporate governance to ensure scientific integrity and the safety of the public. This includes creating standards that support the growing need for digital products and services designed with the best interest of children in mind, as well as artificial intelligence ethics and governance and sustainable design.

IEEE strives to bridge the gap between challenges and technological solutions. Through our vast network and dedicated members and volunteers, the organization not only envisions a better future but actively works towards it.

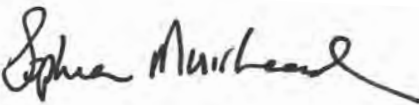
Building bridges between individuals and communities yields tremendous benefits. Through 2023, we saw how collaboration can help push our industries and professions to new frontiers, which creates innovative platforms to address difficult challenges. By strengthening these connections, we ultimately accelerate the transfer of knowledge. Thanks to our global members, volunteers and staff, IEEE continues to be a powerful force for change, embodying its mission of advancing technology for the benefit of humanity and driving global innovation through inspired collaboration.

Sincerely,



**Saifur Rahman**

2023 IEEE President and CEO



**Sophia Muirhead**

IEEE Executive Director and COO

# IEEE by the Numbers

All numbers below reflect 2023 totals

## IEEE *Xplore* Digital Library

**6,162,271** Total Documents

**303,921,589** Total Usage (PDF downloads and HTML Views)

**244,578** New Conference Papers

**91,020** New Journal and Magazine Articles

**188** Standards Approved for Publication

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## Membership

**460,709** Total Members

### TOP 5 COUNTRIES FOR MEMBERS

**154,137** United States

**86,716** India

**43,647** China

**14,500** Canada

**14,293** Japan

---

## Student Members

**171,056** Total Student Members

### TOP 5 COUNTRIES FOR STUDENT MEMBERS

**64,069** India

**22,582** United States

**19,791** China

**6,371** Tunisia

**3,223** Canada

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## 10 Regions Worldwide

**344** Sections

**3,635** Student Branches

**4,194** Chapters

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## Conferences

**2,121** IEEE Sponsored

**562,030** Conference Attendees

## IEEE Society Memberships

<b>6,311</b>	IEEE Aerospace and Electronic Systems Society	<b>42,843</b>	IEEE Power & Energy Society
<b>10,428</b>	IEEE Antennas and Propagation Society	<b>13,901</b>	IEEE Power Electronics Society
<b>1,388</b>	IEEE Broadcast Technology Society	<b>825</b>	IEEE Product Safety Engineering Society
<b>14,140</b>	IEEE Circuits and Systems Society	<b>654</b>	IEEE Professional Communication Society
<b>34,932</b>	IEEE Communications Society	<b>2,975</b>	IEEE Reliability Society
<b>10,155</b>	IEEE Computational Intelligence Society	<b>18,915</b>	IEEE Robotics and Automation Society
<b>56,941</b>	IEEE Computer Society	<b>21,455</b>	IEEE Signal Processing Society
<b>3,087</b>	IEEE Consumer Technology Society	<b>1,950</b>	IEEE Society on Social Implications of Technology
<b>8,979</b>	IEEE Control Systems Society	<b>11,515</b>	IEEE Solid-State Circuits Society
<b>1,902</b>	IEEE Dielectrics and Electrical Insulation Society	<b>5,669</b>	IEEE Systems, Man, and Cybernetics Society
<b>4,154</b>	IEEE Education Society	<b>2,619</b>	IEEE Technology and Engineering Management Society
<b>3,556</b>	IEEE Electromagnetic Compatibility Society	<b>2,198</b>	IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society
<b>13,365</b>	IEEE Electron Devices Society	<b>8,257</b>	IEEE Vehicular Technology Society
<b>3,166</b>	IEEE Electronics Packaging Society		
<b>12,368</b>	IEEE Engineering in Medicine and Biology Society	<b>391,074</b>	<b>TOTAL SOCIETY MEMBERSHIPS</b>
<b>6,229</b>	IEEE Geoscience and Remote Sensing Society		
<b>13,150</b>	IEEE Industry Applications Society		
<b>11,247</b>	IEEE Industrial Electronics Society		
<b>4,060</b>	IEEE Information Theory Society		
<b>3,892</b>	IEEE Instrumentation and Measurement Society		
<b>2,900</b>	IEEE Intelligent Transportation Systems Society		
<b>2,638</b>	IEEE Magnetics Society		
<b>13,527</b>	IEEE Microwave Theory and Technology Society		
<b>3,297</b>	IEEE Nuclear and Plasma Sciences Society		
<b>1,895</b>	IEEE Oceanic Engineering Society		
<b>9,591</b>	IEEE Photonics Society		

**52.3%**

of IEEE members  
belonged to one or  
more societies  
in 2023



## Collaborating on Climate Change

IEEE brings together members and volunteers from around the world to drive discussions that help advance technology for the benefit of humanity. The IEEE community worked together to explore ways to mitigate the effects of climate change and help build a more sustainable future.





United Nations  
Climate Change



COP28 UAE

## Leading the Conversation

With the diverse expertise of its members, volunteers and staff, IEEE serves an important role of enabling collaboration between technology and engineering professionals, policymakers and other organizations to foster a dialogue on sustainable energy policies and practices.

### IEEE Shares Commitment to Climate Change Efforts at COP28

2023 IEEE President Saifur Rahman led an IEEE delegation at the 28<sup>th</sup> Conference of Parties (COP28) to the United Nations Framework Convention on Climate Change, held in Dubai, United Arab Emirates. Through a number of panel discussions, IEEE shared insights about initiatives across the organization, and how technology plays a key role in helping shape the global energy landscape and in tackling climate change challenges.

#### **Organizations that IEEE collaborated with on Climate Change:**

- American Institute of Chemical Engineers
- American Society of Civil Engineers
- American Society of Mechanical Engineers
- American Society of Mining Engineers
- Chinese Society of Electrical Engineers
- Dubai Electricity and Water Authority
- European Union Commission for Energy and Environment
- Institution of Engineering and Technology (IET)
- Institute of Electrical and Telecommunication Engineers – IETE (India)
- International Renewable Energy Agency (IRENA)
- Korean Society of Electrical Engineers
- Rotary International
- Royal Society of Engineering (UK)
- South African Institute of Electrical Engineers – SAIEE
- UNESCO
- US National Academy of Engineering



The IEEE Technology Center for Climate, based in the IEEE Vienna Global Office, was established in July 2023 to support partnerships, collaboration and knowledge sharing with leading institutions as they explore and implement technology to address climate change. One of its inaugural activities was teaming up with Reuters to produce four webinars featuring IEEE member insights on electrification, frontier tech for climate, green digital and workforce for a sustainable future.

## Thinking Globally, Acting Locally

The impactful work of IEEE volunteers from around the globe took center stage in 2023. This included the development of an IEEE climate change inventory of activities, designed to consolidate and identify opportunities for further collaboration within IEEE and with other organizations.

At IEEE Sections Congress, which brought together over 1,000 attendees from IEEE Sections across the globe, a Climate Change Pavilion showcased projects being executed locally by Sections, Societies, IEEE Young Professionals and more in support of sustainability efforts. IEEE showcased over 50 climate change stories on how volunteers made an impact. Staff collaborated with volunteers to help shape the stories at the pavilion.

The "Net Zero Warriors" initiative was launched by IEEE President Saifur Rahman during his visit to India in July to motivate and facilitate engineers, young professionals and entrepreneurs to undertake key innovation and technology challenges in energy transition, which can enable decarbonization across the energy spectrum, globally.

The IEEE Climate Change community on [IEEE Collabratec®](#) also engaged thousands of IEEE members and non-members in these important discussions.

**200+**  
items in the IEEE  
climate change  
inventory



## Driving Advancements in Sustainability

IEEE scholarly publications, conference proceedings, technical standards and other materials help foster the exchange of technical knowledge and information for the critical climate issues that our planet faces.

- The IEEE [Climate Change website](#) helped tell the IEEE story. The site also instituted a monthly newsletter to help audiences stay current on the latest articles on clean tech trends featuring insights from IEEE members.
- Papers were regularly added to the [IEEE Climate Change Collection](#), which features articles addressing the causes of climate change along with strategies to mitigate and adapt to it.

## Inspiring Students

Providing teachers with tools to integrate sustainability themes into their lessons is key to encouraging students to enter into these fields. [IEEE TryEngineering](#), a website featuring a collection of lesson plans and activities, added a section dedicated to climate change resources to make it easier to teach these important topics.

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TOP LEFT: IEEE's electric vehicle charging at the Operations Center in New Jersey

TOP RIGHT: IEEE TryEngineering Summer Institute students soldering

# IEEE TryEngineering 2023 at a Glance



**18,000**  
**Volunteers**



**1,500**  
**Events**



**60**  
**Countries**



**130,000**  
**School-Aged  
Students  
Participated**

## Setting the Standard

The IEEE Standards Association continued to develop its growing collection of standards for sustainability, climate change and social responsibility solutions. Here are some examples:

### IEEE STANDARDS:

#### IEEE 1547

Series of standards covering the interconnection of distributed energy resources with electric power systems

#### IEEE 1680.1

Standard for Environmental and Social Responsibility Assessment of Computers and Displays

#### IEEE 1801

Standard for Design and Verification of Low-Power, Energy-Aware Electronic Systems

#### IEEE 1888

Standard for Ubiquitous Green Community Control Network Protocol

#### IEEE P2030.5

Standard for Smart Energy Profile Application Protocol

#### IEEE P7802

Standard for Measurement and Verification of Reduction of Greenhouse Gases for Climate Action Project and Solutions



## A Force for Change

In 2023, IEEE was privileged to collaborate with individuals, organizations and governments committed to shaping a more sustainable, compassionate and prosperous world. Their support strengthened IEEE, and together we made great strides in imagining a brighter future and actively working to make it a reality.



## Leading the Conversation on Tech Ethics

IEEE leaders addressed the European Commission and the United Nations Human Rights Council on the urgent need to protect children in the digital age. The [IEEE Standard for Age Appropriate Digital Services \(IEEE 2089™\)](#), which supports the growing need for designing digital products and services with the best interests of children in mind, has served as the foundation for laws in the UK and other regions.

This standard is part of a new program providing free access to artificial intelligence (AI) ethics and governance standards that provide guidance and considerations toward trustworthy AI. Under the IEEE GET Program, selected standards are made available, free of charge, to encourage adoption and use of standards that contribute to advancing technology for humanity in key areas.

Also in 2023, the [IEEE TechEthics](#) website continued to provide access to technology ethics resources and information from across IEEE. This includes education modules, articles, session recordings and ethics frameworks.

### **IEEE Drives AI Policy in the U.S.**

IEEE-USA was also extremely active on artificial intelligence issues in 2023, hosting three separate meetings with the Congressional AI caucus, where it shared insights on AI technology and workforce issues. IEEE-USA worked directly with federal regulators and congressional offices to help craft the rules that will govern AI technology in the United States.



## IEEE Innovates at Conferences Across the Globe

In 2023, IEEE conferences not only showcased the latest groundbreaking research, they also implemented fresh strategies to promote sustainability. The popularity of these events underscores a steadfast commitment to innovation, exploration and collaboration within the technical community.



2,000+

IEEE sponsored  
conferences

560K+

attendees

- **ICASSP 2023 Returns to In-Person (Rhodes Island, Greece)**

The 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) celebrated the return to an in-person experience. The interest in this year's ICASSP broke records in participation, including a nearly 50% increase in submitted and accepted papers and more than 4,000 participants. This unprecedented increase reflects the central role of signal processing in the development and success of AI.

- **EMBC 2023 Unites Innovators (Sydney, Australia)**

The 45<sup>th</sup> annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), provided networking opportunities for engineers, clinicians, scientists and entrepreneurs, as well as for students and young professionals.

- **IGARSS 2023 Showcases Advancements in Geoscience (Pasadena, California)**

The 43<sup>rd</sup> annual International Geoscience and Remote Sensing Symposium (IGARSS) provided a platform for sharing knowledge and experience on recent advancements in geoscience and remote sensing technologies, particularly in the context of earth observation, disaster monitoring and risk assessment.

- **Malaysia Plays Host to Two Major Conferences (Kuala Lumpur, Malaysia)**

The International Conference on Image Processing (ICIP), a premier technical conference focused on image and video processing and computer vision, showcased world-class speakers, exhibits, industry sessions and a women-in-engineering event. GLOBECOM 2023, the flagship conference of the IEEE Communications Society, played host to more than 2,000 participants including researchers, academicians, engineers and industry players from telecommunication fields across the globe.

- **IEEE Power & Energy Society Debuts Grid Edge Technologies Conference**

This year, IEEE hosted several new conferences including the IEEE Power & Energy Society (PES) Grid Edge Technologies Conference and Exposition in San Diego, CA which brought together a variety of organizations essential to delivering enhanced productivity, efficiency and interoperability to the grid. The event featured:

- ◆ A fireside chat featuring IEEE President Saifur Rahman and IEEE PES President Jessica Bian
- ◆ An exhibit hall featuring 30 start up companies
- ◆ Onsite tours of San Diego Gas and Electric

- **ICRA Sets Attendance Record (London, England)**

The IEEE International Conference on Robotics and Automation (ICRA) set an all-time attendance record with 6,000 participants. The packed program featured the most influential and innovative figures in the world of robotics and automation delivering plenary speeches, workshops, business talks and more.

All-time attendance record with **6,000** participants

### IEEE Conferences Embrace Net Zero

Sustainability has long been an interest of the events industry. IEEE and its staff have developed innovative ways to reduce the environmental impact of its conferences. As a part of those efforts, IEEE signed on as a four-year sponsor of the Net Zero Carbon Events Initiative, a leading industry initiative to address climate change. Underscoring the organization’s innovative approach to conferences, IEEE President Saifur Rahman utilized holographic technology to “beam into” the 2023 IEEE Convene event, the annual gathering of IEEE conference leadership and partners from around the world.



[▶ CLICK TO WATCH VIDEO](#)

ABOVE: IEEE President Saifur Rahman as a hologram at IEEE Convene in Panama City, Panama





## Student Engagement

### 330 Students Gain Hands-On Experience

This year's [IEEE TryEngineering Summer Institute](#) gave teens an opportunity to explore engineering disciplines through hands-on design challenges, field trips and more. For their final group challenge, the students participated in an activity called Real World, Real Solutions, creating a prototype using the engineering design process.

#### On campus venues:

University of Pennsylvania, Rice University (Texas),  
University of San Diego

### Rising Stars Connects Students and Young Professionals

The IEEE Rising Stars Conference is where students and young professionals from all over the world gather to get inspired, network and advance their careers. Over the course of three days, attendees gained perspective into potential career paths as they heard from more than 40 expert speakers, learned about emerging technologies and connected with industry professionals and executives.

### STEM Grant Program Supports Volunteer Efforts

The IEEE TryEngineering Pre-university Grant Program, which aims to support IEEE volunteers in their STEM outreach initiatives, funded over 40 programs. The grant recipients were announced in April during IEEE Education Week.

**330**  
students

**31**  
received full scholarships  
thanks to giving to the  
IEEE Foundation

Nearly  
**\$40,000**  
was granted to fund  
programs; included  
contributions from the  
IEEE Foundation  
TryEngineering Fund

## Leading Innovation

IEEE Future Directions, which identifies opportunities for emerging technology areas, added three new initiatives in 2023. [IEEE Wireless Power Technologies](#) champions breakthrough wireless power initiatives by researchers and scientific communities around the world. [IEEE Metaverse](#) fosters technology exchange and global awareness of both the benefits and risks of the Metaverse. [IEEE SusTech](#) addresses the technologies that affect climate change.

TOP: Students from IEEE TryEngineering Summer Institute held at the University of Pennsylvania, in Philadelphia, got a behind-the-scenes look at the Boeing aerospace facility in nearby Ridley Park



## Engaging a Global Community

Whether through collaborations with international organizations or technologists across the globe, IEEE intensified its efforts to take part in meaningful activities that can help shape the world. Additionally, there was a deliberate effort to reach out to underrepresented communities, helping forge a sense of contribution to our core purpose of advancing technology for the benefit of humanity.



## Impacting Society

### Bridging the Digital Divide and More

The COVID-19 pandemic exposed the digital divide like never before. Those who had broadband access thrived while those without meaningful access struggled.

IEEE is working side by side with other key stakeholders to help bridge this accessibility gap. One example of this effort is IEEE's growing partnership with the International Telecommunication Union (ITU), a U.N. agency that helps set policy related to information and communication technologies.

### SIGHT Supports Global Humanitarian Initiatives

In 2023, the [IEEE Humanitarian Technologies Board](#) and [Special Interest Group on Humanitarian Technology](#) (SIGHT) funded numerous life-changing programs across the globe. Key projects include:

- **IEEE Argentina Section** set up a community garden, cheese production operations and refrigeration system to empower residents to engage in new income-generating activities.
- **IEEE Ecuador Section** used its funding to implement a smart irrigation system to improve land production of crops, benefiting more than 350 people in the rural community of Cruz Loma.
- **IEEE Malaysia Section** designed and deployed an integrated solar lighting and camera surveillance system for a fishing village of 200 residents, to allow better understanding of crocodiles and their behavior in the area.
- **IEEE Uganda Section** installed a solar system comprised of six solar panels, two batteries, one inverter and a charging port to provide sustainable and clean energy to the Nyakinengo Health Centre, directly benefiting over 500 current patients and their families.

[▶ CLICK TO WATCH VIDEO](#)

### The Digital Divide

**45%**

of global households do not have access to the internet (Source: UNESCO)

**1.3BN**

children between the ages of three and 17 lack internet access at home. (Source: UNICEF)

TOP LEFT: IEEE Argentina Section members and students by their newly planted community garden  
 TOP MIDDLE: IEEE Malaysia Section volunteers deploy a solar lighting and crocodile surveillance system  
 TOP RIGHT: Member of the IEEE Uganda Section aids in the installation of a solar power system for a community health center



## Forging Global Connections

IEEE President Saifur Rahman spoke at prominent climate events in 2023, including COP28 in the United Arab Emirates, EU Green Week, European Sustainable Energy Week and the European Parliament in Brussels. Such engagements highlight how IEEE’s global community of engineers and technologists is using its expertise to help address critical climate change issues.

### India and Bangladesh Collaborate on WIE Conference

The IEEE Bangladesh Section and IEEE Kerala Section jointly organized the 9<sup>th</sup> IEEE International Women in Engineering (WIE) Conference in Kerala, India, bringing together leading academic researchers and scholars to exchange and share their experiences and research with their peers.

### IEEE REACH Presents at the U.N.

[IEEE REACH](#), IEEE’s K-12 history program, was invited to present at the United Nations in New York during the Science, Technology and Innovation Forum for the Sustainable Development Goals. The presentation was part of an event titled “Uncovering Gender Disparities in STEM and Higher Education in Southern Africa.”

## The Driving Spirit of IEEE

### IEEE Day Inspires Over 700 Global Events

IEEE Day, which celebrates the first time engineers and IEEE members gathered to share their technical ideas in 1884, inspired more than 700 worldwide events across all 10 Regions.



**200**  
sections

**240**  
student branches  
participated

TOP LEFT: IEEE President Saifur Rahman at the European Parliament in Brussels, Belgium

TOP RIGHT: IEEE Women in Engineering (WIE) Day participants in Kerala, India

ABOVE: IEEE Day participants

## Shaping the Future

IEEE Sections Congress, the triennial gathering of IEEE Section leadership, brings together hundreds of delegates from all 10 IEEE Regions to network, learn and collectively shape the future of IEEE. Sections Congress 2023, held in Ottawa, Canada, centered on the theme of “Enabling Leaders to Build a Sustainable Future.” The event featured a Climate Change Pavilion highlighting what each section is doing to combat global warming. Watch a video with highlights from Sections Congress 2023.

**1,096**

attendees from 95 countries and 303 Sections across the globe

 [CLICK TO WATCH VIDEO](#)



## IEEE Education Week Spurs Technical Advancement

IEEE members, employees and local communities joined together for the second annual [IEEE Education Week](#), designed to highlight the diverse educational opportunities available through IEEE that help advance technical careers.

**180+**

events and 125+ resources, special offers and more

**75+**

operating units

**154**

volunteer ambassadors from around the world



TOP: IEEE Sections Congress participants

BOTTOM: The IEEE Education Week events hosted by the IEEE Sri Lanka Section featured panel discussions, talks, and workshops that attracted hundreds of university students and teachers

### **IEEEExtreme Enjoys Record Participation**

[IEEEExtreme](#) is a global challenge in which thousands of teams of IEEE student members—advised and proctored by an IEEE member—compete in a 24-hour time span to solve a set of real-world programming problems. This year’s IEEEExtreme 17.0 set new participation records, with more than 7,000 team registrations.



**17,000**

individual team members participated

**12%**

of IEEE student membership participated in IEEEExtreme representing more than

**750**

student branches from

**69**

countries



# Advancing the IEEE Mission

In 2023, IEEE reinforced its leadership position, helping to guide innovation in a direction that benefits humanity. In particular, we continued to embrace members from various demographics and locations and to foster a global culture that is diverse, inclusive and respectful.

## Championing Diversity, Equity and Inclusion (DEI)

In 2023, the [IEEE Diversity & Inclusion Committee](#) advanced its strategic plan that focuses on further embedding DEI into procedures and processes throughout the organization. A newly launched volunteer toolkit aimed to bolster DEI initiatives throughout IEEE and provide support for ongoing activities in this area. Cases of IEEE DEI efforts are outlined below.

### Solving Accessibility Issues

IEEE Engineering Projects in Community Service ([EPICS](#)) organizes university and high-school students to work on engineering-related projects with local community organizations. In 2023, the [EPICS in IEEE Access & Abilities Competition](#), made possible thanks to a bequest to the IEEE Foundation, empowered student teams globally to deliver engineering projects that help solve accessibility issues within communities, enable adaptive services, redesign technology for equity and develop assistive technologies. Projects included:

- a soft exosuit for ambulatory patients with spinal muscular atrophy
- a smart E-TRIKE with detachable wheels for disabled students
- a self-navigating robotic walking aid for the elderly



LEFT: Members of the EPICS in IEEE Adaptive Mouse team at the University of Florida at Gainesville collaborate on product design for a mouse and keyboard all in the same device that can be used with one hand

RIGHT: EPICS in IEEE project team member Jordan Britt from North Carolina State University with the Wheelchair Electric Assist prototype





### IEEE Celebrates Inaugural Women in Engineering Day

IEEE Women in Engineering ([WIE](#)) has taken significant steps to promote change in the industry and enhance employment opportunities for women in technical fields. In 2023, IEEE launched IEEE WIE Day to coincide with International Women in Engineering Day. WIE members, staff members, affinity groups and student branches organized more than 100 events worldwide to celebrate the occasion and support an ever-growing community of women in STEM.



Watch "2023—A Year in Review" showing the achievements of IEEE Women in Engineering supporting the advancement of women in STEM this year.

[▶ CLICK TO WATCH VIDEO](#)



## Deploying Tech in Times of Need

### IEEE MOVE Expands Internationally

Since 2016, [IEEE MOVE](#) has aided more than a quarter million natural disaster victims with communications, computers and power solutions. This year, IEEE expanded the award-winning program to provide relief and outreach to India and the Caribbean, which are frequently affected by severe storms. In 2023, the IEEE MOVE team in India assembled more than 50 portable emergency solar mobile chargers and life-saving solutions that can be easily deployed in disaster-stricken areas throughout the country.

In the United States, IEEE MOVE also provided assistance for:

- **Hurricane Lee** (New England)  
14–18 September
- **Hurricane Idalia** (Florida)  
30 August–14 September
- **Mississippi Tornado** (Mississippi)  
26 March–5 April

## In Support of Open Science

### New Open Access Journals Receive First Impact Factors

This year, 12 of IEEE's new fully open access journals were accepted for indexing by Clarivate and received their first Journal Impact Factors. Each year, Clarivate examines the influence and impact of scholarly research and offers an objective means to evaluate the world's leading journals.

**30+**  
fully open access  
journals

**170+**  
hybrid open access  
journals

## IEEE Inks 3-Year Agreements for Open Access in Greece and Spain

In 2023, IEEE reached a three-year open access agreement with Hellenic Academic Libraries Link (HEAL-Link), a consortium of Greek universities that includes 43 institutions, as well as with CRUE, a consortium of Spanish universities. With these new agreements, researchers belonging to participating Greek and Spanish institutions are now able to publish open access articles in approximately 200 leading journals and magazines produced by IEEE, making them instantly available and free to read by the general public.

IEEE's read and publish relationships grew

**52%**

from 2022 to 2023

## IEEE Reaches 100,000 Open Access Articles

### Achieved Milestones of 100,000 Open Access Articles Published

#### 2012

IEEE Photonics Journal flips to open access (OA), making it IEEE's first fully OA Journal

#### 2013

IEEE launches IEEE Access®

IEEE provides an open access hybrid option for all peer-reviewed journals

#### 2016

IEEE Access receives its first Journal Impact Factor™

#### 2019

IEEE launches 14 new fully open access journals as part of the Accelerated Open Access Program (now 29 journals)

#### 2020

IEEE introduces TechRxiv™, a new preprint server

#### 2022

IEEE achieves Plan S transformative status for its periodical portfolio, enabling any Plan S funded author to publish OA in any hybrid title

#### 2023

In March, IEEE reached a new milestone with over **100,000** open access articles published and now available in the IEEE *Xplore* Digital Library

Articles are from IEEE's hybrid journals, 29 fully open access journals, and IEEE Access

### **IEEE Access Celebrates 10<sup>th</sup> Anniversary**

This year, IEEE Access celebrated its 10-year publishing anniversary, with a number of activities marking the occasion. These included a collection of the top 10 most impactful IEEE Access articles over the last decade, as well as a video on IEEE.tv featuring author testimonials and commentary from the editor-in-chief.



[▶ CLICK TO WATCH VIDEO](#)



## Changing the World for the Better

Since 1884, IEEE has actively shaped the future of technology—and the world—by tirelessly advancing innovation and technological excellence. In 2023, IEEE recognized the groundbreaking accomplishments of its members and communities that sparked radical transformation and made our planet a better place for everyone.



## Awards and Recognitions

### IEEE Life Fellow Vint Cerf Receives IEEE Medal of Honor

Sponsored by the IEEE Foundation, the Medal of Honor is IEEE's pinnacle of recognition. In 2023, it was awarded to Vinton "Vint" Cerf, widely known as the "Father of the Internet." Cerf was recognized "for co-creating the Internet architecture and providing sustained leadership in its phenomenal growth in becoming society's critical infrastructure." The award was presented at the 2023 IEEE Honors Ceremony.

[▶ CLICK TO WATCH VIDEO](#)

### IEEE VIC Summit Showcases Influential Figures in Technology

The 2023 IEEE Vision, Innovation, and Challenges Summit (VICS) featured panel discussions with several of this year's award recipients on everything from career advice to the impact of AI. In a "fireside chat," IEEE Medal of Honor recipient Vint Cerf raised concerns about the digital divide. During the Innovators Showcase session, IEEE medalists Luc Van den hove, Melba M. Crawford and James Truchard offered advice on how to lead a successful company or research lab. The "Artificial Intelligence and ChatGPT" panel featured award recipients Carlotta Berry, Lydia E. Kavradi and Rodney Brooks discussing the ethics of generative AI and how educators can successfully adapt these tools in the classroom.

[▶ CLICK TO WATCH VIDEO](#)

### Doreen Bogdan-Martin Earns IEEE President's Award

ITU Secretary-General Doreen Bogdan-Martin received the 2023 IEEE President's Award for her "distinguished leadership and contributions to the public." Bogdan-Martin has demonstrated a commitment to bridging the digital divide, emphasizing the need for digital transformation to achieve economic prosperity, gender equality and socio-economic inclusion. Her contributions also included helping to build circular economies and reduce climate impact.

### David Coe, Gerald Deboy and Tatsuhiko Fujihira Awarded IEEE Medal for Environmental and Safety Technologies

David Coe, IEEE Senior Member Gerald Deboy and IEEE member Tatsuhiko Fujihira received the 2023 IEEE Medal for Environmental and Safety Technologies for "contributions to the concept and realization of superjunction power devices that significantly improve power efficiency." They are the inventors of the superjunction principle, which has delivered immense energy savings by significantly reducing the power consumed by everyday electronics used by people around the world.

TOP LEFT: 2023 IEEE Medal of Honor recipient Vint Cerf

TOP RIGHT: Doreen Bogdan-Martin receiving the IEEE President's Award from IEEE President Saifur Rahman in Geneva

# Recognizing Historic Technology Milestones

Each year, the IEEE Milestones in Electrical Engineering and Computing program honors exceptional technical achievements that occurred at least 25 years ago. In 2023, 12 Milestones were dedicated globally, including:

## 1820-1827

### [The Birth of Electrodynamics](#)

*Paris, France*

Stimulated by experimental reports that an electric current could deflect a compass needle, André-Marie Ampère discovered the fundamental law of electrodynamics, the science of interactions between electric currents.

## 1915-1918

### [Invention of Sonar](#)

*Paris, France*

Paul Langevin demonstrated the feasibility of using piezoelectric quartz crystals to both transmit and receive pulses of ultrasound and thereby detect submerged submarines at ranges up to 1,300 meters. The system, later called sonar, was used successfully during World War II, and led to other applications including depth sounding and medical echography.

## 1978

### [First Demonstration of a Fibre Bragg Grating](#)

*Ottawa, Ontario, Canada*

Researchers at the Communications Research Centre Canada were the first to observe photo-induced change of refractive index in glass optical fibers and demonstrate writing permanent refractive index gratings that act as very selective optical filters.

## 1981-1988

### [The Development of RenderMan® for Photorealistic Graphics](#)

*Emeryville, California, USA*

RenderMan® software, developed at Lucasfilm and Pixar, revolutionized photorealistic rendering, significantly advancing the creation of 3D computer animation and visual effects.

## 1988

### [First Robotic Control from Human Brain Signals](#)

*Skopje, Macedonia*

In the Laboratory of Intelligent Machines and Bioinformation Systems, human brain signals controlled the movement of a physical object (a robot) for the first time worldwide, opening a new channel for communication between humans and machines.

# Celebrating Our History

## IEEE Standards Association Commemorates Numerous Milestones in 2023

- In honor of the 50<sup>th</sup> anniversary of Ethernet, IEEE celebrated the IEEE 802.3 series of standards and the many innovations shaped by these standards
- 135<sup>th</sup> anniversary of the inaugural Committee on Units and Standards
- 60<sup>th</sup> anniversary of the inaugural Standards Committee
- 50<sup>th</sup> anniversary of the IEEE Standards Committee transitioning to the Standards Board

## IEEE Foundation Commemorates 50<sup>th</sup> Anniversary

The [IEEE Foundation](#) celebrated 50 years of philanthropy. Over the years, it has raised more than US\$135 million for over 250 IEEE programs that improve access to technology, enhance technological literacy and support education.



 [CLICK TO WATCH VIDEO](#)

## IEEE Signal Processing Society Celebrates 75 Years

The IEEE Signal Processing Society, the organization's first society, has promoted innovation and collaboration for 75 years, connecting a global community that now numbers 23,000 members.

## IEEE Aerospace and Electronic Systems Society Celebrates 50<sup>th</sup> Anniversary

For 50 years, IEEE AESS has played an essential role in the worldwide technical community and has been recognized for outstanding contributions in the fields of aerospace and electronic systems.

## IEEE Broadcast Technology Society 75<sup>th</sup> Anniversary

For 75 years the IEEE Broadcast Technology Society has served as an international working group driving the advancement of technology in the broadcast industry.

## Members Celebrate 50 Years of IEEE-USA

To foster member engagement in a fresh manner, IEEE-USA celebrated its 50<sup>th</sup> anniversary with over 100 members on a five-day cruise featuring lightning talks and networking opportunities to commemorate the milestone.



## IEEE Board of Directors



### **1<sup>st</sup> Row from Left:**

Sophia A. Muirhead, Mary Ellen Randall, K. J. Ray Liu, Saifur Rahman, Thomas M. Coughlin, Forrest D. Wright

### **2<sup>nd</sup> Row from Left:**

Bob G. Becnel, Kathy Herring Hayashi, Jill I. Gostin, Vickie A. Ozburn, Claudio Cañizares, Rabab Kreidieh Ward, Yu Yuan, Cecilia Metra, ChunChe Fung, Theresa A. Brunasso, Stephanie M. White

### **3<sup>rd</sup> Row from Left:**

Eduardo F. Palacio, Ali H. Sayed, Robert L. Anderson, Kevin L. Peterson, Greg T. Gdowski, Sergio Benedetto, Khaled Ben Letaief, Andrew D. Lowery, Kamal Al-Haddad, John P. Verboncoeur, Vincenzo Piuri

### **Not Pictured:**

Jenifer Castillo Rodriguez, Leila De Floriani, Alistair P. Duffy, Theodore W. Hissey, Franco Maloberti, James E. Matthews, Enrique A. Tejera

\*Jenifer Castillo Rodriguez (as of November), Theodore W. Hissey (through October), James E. Matthews (as of November), Enrique A. Tejera (through November), Yu Yuan (through November)

## IEEE Management Council



### **Left to Right**

Konstantinos Karachalios, Donna Hourican, Russell Harrison, Karen L. Hawkins, Anta Cisse-Green, Jamie Moesch, Mary Ward-Callan, Sophia A. Muirhead, Cherif Amirat, Liesel Bell, Cecelia Jankowski, Thomas Siegert, Steven Heffner

## Message from the Treasurer

IEEE is a public charity with a global presence and a mission to advance technology for the benefit of humanity. IEEE upheld its commitment to its members and volunteers, remaining agile and responsive, while implementing creative solutions that further strengthened connections to our worldwide communities.

I am pleased to present the audited financial reports of IEEE. These reports indicate that the overall financial health of the organization remains strong.

The IEEE Statement of Activities reflects total operating revenues for 2023 of \$584.0 million, an increase of \$41.8 million, or 7.7%, from 2022. IEEE had total operating expenses for 2023 of \$535.2 million, an increase of \$65.1 million, or 13.8%, from 2022, as further discussed below:

- **Periodicals and Media:** Overall customer demand for IEEE products remained strong. IEEE continued its focus on improving publication efficiency and cost reduction. Revenues increased by \$14.9 million, or 6.1%, while expenses increased by \$13.2 million, or 8.2%.
- **Conferences:** Increase of 14.2% in the number of conferences, surpassing pre-pandemic activity levels. Revenues increased by \$25.7 million, or 13.5%, and expenses increased by \$31.0 million, or 21.1%.
- **Membership:** The number of members increased, but revenues declined by \$1.6 million or 2.8%, in part due to reduced dues rates for students and individuals from developing economies. Expenses increased by \$10.6 million, or 11.3%
- **Standards Association:** Revenues increased by \$2.1 million, or 4.5%, while expenses increased by \$5.0 million, or 11.2%.

Non-operating activities generated \$112.7 million in net gain, primarily due to \$106.8 million in net gains from investments (inclusive of interest and dividends), \$2.5 million in conference related insurance claims, \$3.3 million in pension related gains and \$0.1 million in unrelated business income tax income.

Total IEEE net assets increased by \$161.5 to \$988.1 million, or 19.5%, as of December 31, 2023.

Crowe LLP, the independent auditors for IEEE, met with the IEEE Audit Committee to discuss the scope and results of the financial statement audit, to review the adequacy of IEEE's internal accounting controls and to examine the quality of IEEE's financial reporting prior to issuing its opinion on the financial statements. IEEE received an unmodified opinion from Crowe LLP in the Report of Independent Certified Public Accountants.

IEEE is tax exempt under Section 501(c)(3) of the Internal Revenue Code. I submit these financial statements with confidence that IEEE continues to be a financially sound organization.



*Mary Ellen Randall*

**Mary Ellen Randall**  
2023 IEEE Treasurer

# Independent Auditor's Report

To the Board of Directors of: **The Institute of Electrical and Electronics Engineers, Incorporated**

## Opinion

We have audited the consolidated financial statements of The Institute of Electrical and Electronics Engineers, Incorporated and subsidiaries (collectively, the "Institute"), which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Institute as of December 31, 2023 and 2022, and the changes in their net assets and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Institute and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Institute's ability to continue as a going concern for one year from the date the consolidated financial statements are available to be issued.

## Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Institute's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.



Crowe LLP  
New York, New York

May 21, 2024

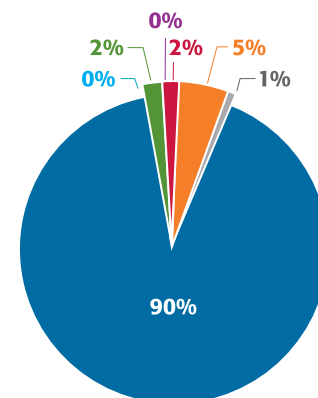
## CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

December 31, 2023 and 2022

	2023	2022
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 20,019,700	\$ 19,359,500
Accounts receivable, less allowance for credit losses of \$1,785,500 in 2023 and \$1,376,500, in 2022	64,220,400	37,219,000
Prepaid expenses and other assets	16,364,200	15,129,900
Investments, at fair value	1,142,975,300	981,250,000
Investments - other	3,779,900	3,751,800
<b>Total current assets</b>	<b>1,247,359,500</b>	<b>1,056,710,200</b>
<b>NONCURRENT ASSETS</b>		
Land, buildings and equipment, net	26,495,000	28,053,700
Right of use of assets – operating	6,681,000	7,282,500
Right of use of assets – finance	34,600	–
Deferred tax assets	67,600	36,100
<b>Total assets</b>	<b>\$ 1,280,637,700</b>	<b>\$ 1,092,082,500</b>
<b>LIABILITIES AND NET ASSETS</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 88,077,400	\$ 58,939,900
Current lease obligations – operating	2,087,000	2,061,100
Current lease obligations – finance	11,700	–
Accrued pension and other employee benefits	676,900	634,100
Amounts held on behalf of IEEF Foundation, Incorporated	65,109,000	54,106,400
Deferred revenue	118,661,400	128,816,700
<b>Total current liabilities</b>	<b>274,623,400</b>	<b>244,558,200</b>
<b>NONCURRENT LIABILITIES</b>		
Lease obligations – operating	4,527,000	6,313,800
Lease obligations – finance	22,900	–
Accrued pension and other employee benefits	13,405,600	14,629,400
<b>Total liabilities</b>	<b>292,578,900</b>	<b>265,501,400</b>
<b>Commitments and contingencies</b>		
<b>NET ASSETS</b>		
Without donor restrictions		
Undesignated	979,431,600	815,690,500
Board-designated fund	6,032,500	8,538,300
<b>Total without donor restrictions</b>	<b>985,464,100</b>	<b>824,228,800</b>
With donor restrictions	2,594,700	2,352,300
<b>Total net assets</b>	<b>988,058,800</b>	<b>826,581,100</b>
<b>Total liabilities and net assets</b>	<b>\$ 1,280,637,700</b>	<b>\$ 1,092,082,500</b>

### 2023 ASSETS

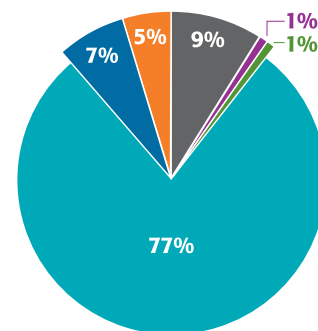
IEEF total assets as of December 31, 2023, was \$1,280.6 million. Investments comprised 90% or \$1,146.8 million of the total assets. IEEF total assets increased by \$188.6 million from 2022, primarily due to change in investments value.



- Cash and cash equivalents
- Accounts receivable, less allowance for credit losses
- Prepaid expenses and other assets
- Investments (current and long-term)
- Right of use assets
- Land, buildings and equipment, net
- Deferred tax assets

### 2023 LIABILITIES

IEEF total liabilities and net assets was \$1,280.6 million. Net assets comprised 77% of the total IEEF total liabilities and net assets. IEEF net assets increased by \$161.5 million, or 19.5%, to \$988.1 million, as of December 31, 2023, from \$826.6 million as of December 31, 2022. This increase in net assets is primarily due to gain on non-operational activities.



- Accounts payable and accrued expenses
- Deposits by IEEF Foundation
- Deferred revenue
- Lease obligations (current and long-term)
- Accrued pension (current and long-term)
- Net assets

See accompanying notes to consolidated financial statements.

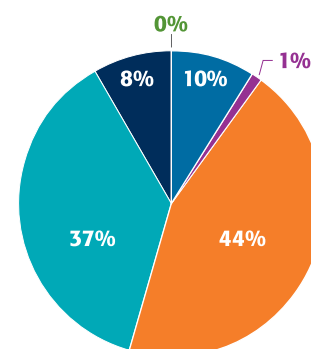
## CONSOLIDATED STATEMENT OF ACTIVITIES

Year ended December 31, 2023 (with comparative total for 2022)

	Without Donor Restrictions	With Donor Restrictions	Total 2023	Total 2022
<b>REVENUES</b>				
Memberships	\$ 56,311,200	\$ –	\$ 56,311,200	\$ 57,939,200
Periodicals	259,004,600	–	259,004,600	244,125,400
Conferences	215,723,000	–	215,723,000	190,069,700
Standards	49,016,000	–	49,016,000	46,918,400
Public imperatives	3,708,500	190,000	3,898,500	3,070,100
Other income	47,900	–	47,900	39,700
Net assets released from restrictions	38,700	(38,700)	–	–
<b>Total revenues</b>	<b>583,849,900</b>	<b>151,300</b>	<b>584,001,200</b>	<b>542,162,500</b>
<b>EXPENSES</b>				
Program services				
Memberships	104,654,600	–	104,654,600	94,066,400
Periodicals	173,295,900	–	173,295,900	160,130,600
Conferences	178,095,000	–	178,095,000	147,087,900
Standards	49,751,600	–	49,751,600	44,747,000
Public imperatives	14,534,500	–	14,534,500	11,669,500
<b>Total program services</b>	<b>520,331,600</b>	<b>–</b>	<b>520,331,600</b>	<b>457,701,400</b>
Supporting services				
In-Kind contribution	1,603,400	–	1,603,400	1,483,700
General and administrative	13,246,800	–	13,246,800	10,896,400
<b>Total expenses</b>	<b>535,181,800</b>	<b>–</b>	<b>535,181,800</b>	<b>470,081,500</b>
Changes in net assets before non-operating activities	48,668,100	151,300	48,819,400	72,081,000
<b>NON-OPERATING ACTIVITIES</b>				
Investment gain (loss), net	106,742,400	91,100	106,833,500	(102,662,400)
Pension and related benefits activity other than net periodic benefit cost	3,251,500	–	3,251,500	4,760,900
Gain on insurance recoveries	2,500,000	–	2,500,000	1,879,900
Changes in net assets before income tax	161,162,000	242,400	161,404,400	(23,940,600)
Benefit (expense) for income taxes	73,300	–	73,300	(851,200)
Changes in net assets	161,235,300	242,400	161,477,700	(24,791,800)
Net assets, beginning of year	824,228,800	2,352,300	826,581,100	851,372,900
<b>Net assets, end of year</b>	<b>\$ 985,464,100</b>	<b>\$ 2,594,700</b>	<b>\$ 988,058,800</b>	<b>\$ 826,581,100</b>

### 2023 REVENUES

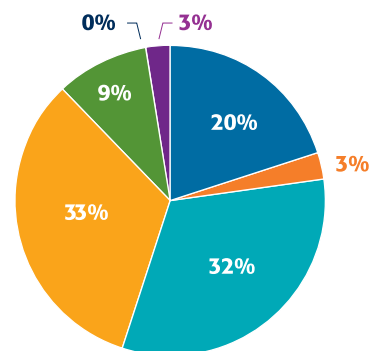
Total operating revenues for 2023 was \$584.0 million, an increase of \$41.8 million, or 7.7%, from 2022. A 14.9% increase in periodicals revenue and 25.7% increase in conference revenue was a contributing factor.



- Memberships
- Public imperatives
- Periodicals
- Conferences
- Standards
- Other income

### 2023 EXPENSES

Total operating expenses for 2023 of \$535.2 million, an increase of \$65.1 million, or 13.8%, from 2022, primarily due to increase in membership and conference related activities.



- Memberships
- Public imperatives
- Periodicals & media
- Conferences
- Standards
- In-Kind contribution
- General and administrative

See accompanying notes to consolidated financial statements.

## CONSOLIDATED STATEMENT OF ACTIVITIES

Year ended December 31, 2022

	Without Donor Restrictions	With Donor Restrictions	Total
<b>REVENUES</b>			
Memberships	\$ 57,939,200	\$ —	\$ 57,939,200
Periodicals	244,125,400	—	244,125,400
Conferences	190,069,700	—	190,069,700
Standards	46,918,400	—	46,918,400
Public imperatives	2,722,400	347,700	3,070,100
Other income	39,700	—	39,700
Net assets released from restrictions	20,200	(20,200)	—
<b>Total revenues</b>	<b>541,835,000</b>	<b>327,500</b>	<b>542,162,500</b>
<b>EXPENSES</b>			
Program services			
Memberships	94,066,400	—	94,066,400
Periodicals	160,130,600	—	160,130,600
Conferences	147,087,900	—	147,087,900
Standards	44,747,000	—	44,747,000
Public imperatives	11,669,500	—	11,669,500
<b>Total program services</b>	<b>457,701,400</b>	<b>—</b>	<b>457,701,400</b>
Supporting services			
In-Kind contribution	1,483,700	—	1,483,700
General and administrative	10,896,400	—	10,896,400
<b>Total expenses</b>	<b>470,081,500</b>	<b>—</b>	<b>470,081,500</b>
Changes in net assets before non-operating activities	71,753,500	327,500	72,081,000
<b>NON-OPERATING ACTIVITIES</b>			
Investment (loss) gain, net	(102,590,000)	(72,400)	(102,662,400)
Pension and related benefits activity other than net periodic benefit cost	4,760,900	—	4,760,900
Gain on insurance recoveries	1,879,900	—	1,879,900
Changes in net assets before income tax	(24,195,700)	255,100	(23,940,600)
(Expense) benefit for income taxes	(851,200)	—	(851,200)
Changes in net assets	(25,046,900)	255,100	(24,791,800)
Net assets, beginning of year	849,275,700	2,097,200	851,372,900
<b>Net assets, end of year</b>	<b>\$ 824,228,800</b>	<b>\$ 2,352,300</b>	<b>\$ 826,581,100</b>

See accompanying notes to consolidated financial statements.

## CONSOLIDATED STATEMENTS OF CASH FLOW

Years ended December 31, 2023 and 2022

	2023	2022
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Changes in net assets	\$ 161,477,700	\$ (24,791,800)
Adjustments to reconcile changes in net assets to net cash provided by operating activities		
Depreciation and amortization	8,336,600	10,940,300
Finance lease amortization	11,300	–
Realized and unrealized (gains) losses on investments	(79,722,900)	120,802,100
Noncash operating lease expense	968,000	1,086,400
Credit loss expense (recovery)	1,121,400	(57,600)
<i>Changes in assets and liabilities</i>		
Change in operating lease liability	(2,127,400)	(21,300)
Accounts receivable	(28,122,800)	(2,317,800)
Prepaid expenses and other assets	(1,234,300)	(3,050,600)
Deferred tax assets	(31,500)	878,400
Accounts payable and accrued expenses	28,927,800	3,829,600
Accrued pension and other employee benefits	(1,181,000)	(5,361,300)
Amounts held on behalf of IEEE Foundation, Incorporated	11,002,600	(8,913,300)
Deferred revenue	(10,155,300)	6,059,500
<b>Net cash provided by operating activities</b>	<b>89,270,200</b>	<b>99,082,600</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Proceeds from sales of investments	514,546,900	746,160,300
Purchases of investments	(596,577,400)	(839,045,400)
Purchase of land, buildings and equipment	(6,777,900)	(4,023,300)
<b>Net cash used in investing activities</b>	<b>(88,808,400)</b>	<b>(96,908,400)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Change in cash overdraft	209,700	(225,500)
Payment of finance lease obligations	(11,300)	–
<b>Net cash used in (provided by) financing activities</b>	<b>198,400</b>	<b>(225,500)</b>
Net increase in cash and cash equivalents	660,200	1,948,700
Cash and cash equivalents, beginning of year	19,359,500	17,410,800
<b>Cash and cash equivalents, end of year</b>	<b>\$ 20,019,700</b>	<b>\$ 19,359,500</b>
<b>SUPPLEMENTAL DATA</b>		
Purchases of fixed assets included in accounts payable and accrued expenses	\$ 209,700	\$ –
<b>SUPPLEMENTAL DISCLOSURE OF NON-CASH ACTIVITIES</b>		
Recognizing of right of use of assets and lease liabilities under ASC 842	\$ 366,400	\$ –

See accompanying notes to consolidated financial statements.



## CONSOLIDATED NOTES TO FINANCIAL STATEMENTS

December 31, 2023 and 2022

### NOTE 1: THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INCORPORATED

The objectives of The Institute of Electrical and Electronics Engineers, Incorporated (the "Institute," or "IEEE") are (a) scientific and educational, directed toward the advancement of the theory and practice of electrical engineering, electronics engineering, computer engineering, computer sciences, and the allied branches of engineering and related arts and sciences and (b) professional, directed toward the benefit of the engineering community and the general public.

Implementation of the Institute's objectives is performed by members and volunteer communities organized as regions, sections, chapters, societies, and councils, none of which are separately incorporated, and their financial results are incorporated in the Institute's accompanying consolidated financial statements. These units are aligned to serve the technical interests of members and to coordinate local activities of the sections and the broader activities of the Institute. The societies and councils promote the technical interests of their members through symposia, conferences, various publications, and the development of standards.

The consolidated financial statements include the accounts of IEEE, Inc., Global IEEE Institute for Engineers, Inc., IEEE Global LLC, IEEE International LLC, IEEE Europe GmbH, IEEE Latin America SA, IEEE Broadcast Technology Convention LLC, IEEE Worldwide Limited, IEEE Asia-Pacific Limited, and IEEE Technology Center GmbH.

### NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Basis of Presentation

The Institute's consolidated financial statements are presented in conformity with accounting principles generally accepted in the United States of America ("GAAP") and have been prepared on the accrual basis of accounting. All intercompany accounts and transactions have been eliminated in the accompanying consolidated financial statements.

#### Cash and Cash Equivalents

Cash and cash equivalents are defined as cash balances held in bank accounts and highly liquid short-term investments held by the Institute for operating use with original maturities of three months or less from the date of purchase.

#### Investments

Investments in publicly traded debt and equity securities are recorded at fair value determined on the basis of quoted market prices as of the reporting date. Investments in alternative investments (e.g., commingled funds) that are not readily marketable are reported at fair value as determined by the respective investment manager as of the reporting date. The Institute follows guidance on measuring the fair value of alternative investments, which offers investors a practical expedient for measuring the fair value of investments in certain entities that calculate net asset value ("NAV"). Under this practical expedient, entities are permitted to use NAV without adjustment for certain investments which: (a) do not have a readily determinable fair value and (b) prepare their financial statements consistent with the measurement principles of an investment company or have the attributes of an investment company. Additionally, the Institute follows guidance that removes the requirement to categorize, within the fair value hierarchy, all investments for which the fair value is measured using NAV.

Such valuations involve assumptions and methods that are reviewed by the Institute and have been concluded to be reasonable and appropriate. Because such investments are not readily marketable, their estimated fair value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for such investments existed. Such difference could be material. However, the risk to the Institute is limited to the amount of the Institute's investment in each of the respective funds with respect to its ownership interests.

Purchases and sales of securities are reflected on a trade-date basis. Gains and losses on sales of securities are determined on an average cost basis and are recorded on the consolidated statements of activities in the period in which the securities are sold. Dividends and interest are recognized as earned.

#### Investments – Other

Investments – other consist of certificates of deposit held to maturity with original maturities greater than three months that are not debt securities and are carried at amortized cost.

## Fair Value Measurements

The Institute follows guidance that defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. This guidance provides a consistent definition of fair value, which focuses on an exit price between market participants in an orderly transaction. The guidance also prioritizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available to determine the fair value of an instrument as of the reporting date.

Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from independent sources. Unobservable inputs reflect assumptions that market participants would use in pricing the asset or liability based on the best information available in the circumstances. The hierarchy is broken down into three levels based on the transparency of inputs as follows:

- Level 1: Quoted prices are available in active markets for identical assets or liabilities as of the measurement date. A quoted price for an identical asset or liability in an active market provides the most reliable fair value measurement because it is directly observable to the market.
- Level 2: Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the measurement date. The nature of these securities includes investments for which quoted prices are available but traded less frequently and investments that are fair valued using other securities, the parameters of which can be directly observed.
- Level 3: Securities that have little to no pricing observability as of the measurement date. These securities are measured using management's best estimate of fair value, where the inputs into the determination of fair value are not observable and require significant management judgment or estimation.

## Concentration of Market and Credit Risks

Cash, cash equivalents and investments are exposed to interest rate, market, and credit risks. The Institute maintains its cash and cash equivalents in various bank deposit accounts that may exceed federally insured limits at times. To minimize risk, the Institute's excess cash accounts are placed with high-credit quality financial institutions, and the Institute's investment portfolio is diversified with several investment managers in a variety of asset classes. The Institute regularly evaluates its depository arrangements and investments, including the performance thereof. At December 31, 2023 and 2022, the Institute maintains accounts with two financial institutions with balances exceeding the FDIC limit.

## Accounts Receivable and Allowance for Credit Losses

Accounts receivable are stated at the amount the Institute expects to collect on outstanding balance. In general, the Institute reviews a customer's credit history before extending credit. The Institute maintains allowances for credit losses against certain billed receivables based upon the latest information available regarding whether the receivables are ultimately collectible. Assessing the collectability of customer receivables requires management's judgment. The Institute determines its allowance for credit losses by specifically analyzing individual accounts receivable, historical collection information, customer creditworthiness, current economic conditions, and accounts receivable aging trends. Valuation reserves are periodically re-evaluated and adjusted as more information about the ultimate collectability of accounts receivable becomes available. Upon determination that a receivable is uncollectible, the respective receivable balance and any associated reserve are written off. Any payments subsequently received on such receivables are recorded as income in the period received. The Institute believes that all accounts receivable balance at December 31, 2023 and 2022 are collectible within one year.

## Land, Buildings, and Equipment

Land, buildings, and equipment are stated at cost, including interest expense capitalized during the period of construction, or period of development, until the time that it is ready for its intended use. Additions and improvements costing more than \$5,000 and with useful lives greater than three years are capitalized. Maintenance and repairs are expensed as incurred.

Assets acquired under finance lease agreements are depreciated over the term of the respective lease agreement to which they pertain. Leasehold improvements are amortized over their useful lives or lease period, whichever is shorter.

During fiscal year 2020, the Institute began the process of updating its financial system and moving to an integrated, cloud-based platform for financial recording and reporting (including contracts, banking, and expense reporting). This implementation was completed in 2021. The Institute capitalized implementation costs relating to such financial system upgrade in accordance with FASB Accounting Standards Update ("ASU") 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract, and such costs are reflected in the "Software" and "Information systems upgrade in process" lines of Note 5 for 2023 and 2022, respectively.

Depreciation and amortization are provided on a straight-line basis over the following estimated useful lives:

	Years
Buildings	20–40
Building improvements	10–15
Furniture, equipment and vehicles	5–10
Software and information systems	3–5
Computers	3

### Leases, Right of Use Assets and Lease Liabilities

At the inception of an arrangement, the Institute determines if an arrangement is a lease based on all relevant facts and circumstances. Leases are classified as operating or finance leases at the lease commencement date. Lease expense for operating leases is recognized on a straight-line basis over the lease term. Leases with a term of 12 months or less (short-term leases) are not recorded on the consolidated statement of financial position.

Right of use ("ROU") assets represent the Institute's right to use the underlying assets for the lease term and lease liabilities represent the net present value of the Institute's obligation to make payments arising from these leases. The lease liabilities are based on the present value of fixed lease payments over the lease term using the implicit lease interest rate or, when unknown, the Institute's incremental borrowing rate on the lease commencement date or January 1, 2022 for leases that commenced prior to that date. If the lease includes one or more options to extend the term of the lease, the renewal option is considered in the lease term if it is reasonably certain the Institute will exercise the options. Operating lease expense is recognized on a straight-line basis over the term of the lease. As permitted by ASC 842, leases with an initial term of twelve months or less ("short-term leases") are not recorded on the accompanying balance sheet.

The Institute has lease agreements with lease and non-lease components, which are accounted for as a single lease component under the practical expedient provisions of the standard. The Institute has lease agreements with terms less than one year. For the qualifying short-term leases, the Institute elected the short-term lease recognition exemption in which the Institute will not recognize ROU assets or lease liabilities, including the ROU assets or lease liabilities for existing short-term leases of those assets in upon adoption.

Variable lease payments consist primarily of common area maintenance, utilities, and taxes, which are not included in the recognition of ROU assets and related lease liabilities. The Institute's lease agreements do not contain material restrictive covenants.

### Accounts Payable and Accrued Expenses

Cash overdrafts are included in accounts payable and accrued expenses. At December 31, 2023 and 2022, cash overdrafts amounted to \$209,700 and \$0, respectively.

### Net Asset Classifications

The Institute's net assets, revenues, expenses, gains, and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, the net assets of the Institute and changes therein are classified and reported as follows:

*Without donor restrictions* – net assets that are not subject to donor-imposed stipulations. Net assets without donor restrictions may be designated for specific purposes by actions of the Board of Directors. Net assets without donor restrictions can be utilized to carry out any of the purposes of the Institute.

Included within net assets without donor restrictions are balances of \$6,032,500 and \$8,538,300 as of December 31, 2023 and 2022, respectively, relating to funds that were designated by the Board of Directors for the sole purpose of upgrading the Institute's financial systems and processes.

*With donor restrictions* – as of December 31, 2023 and 2022 net assets with donor restrictions totaled \$2,594,700 and \$2,352,300, respectively. These balances represent amounts restricted by donors for specific activities of the Institute or to be used at some future date. The Institute records contributions as net assets with donor restrictions if they are received with donor stipulations that limit their use either through purpose or time restrictions. When a donor restriction expires, that is, when a time restriction ends or a purpose restriction is fulfilled, net assets with donor restrictions are reclassified to net assets without donor restrictions and reported on the consolidated statements of activities as net assets released from restrictions. However, when restrictions on donor-restricted contributions and investment returns are met in the same accounting period, such amounts are reported as part of net assets without donor restrictions.

Another portion of net assets with donor restrictions include funds wherein donors have stipulated that the principal contributed be invested and maintained in perpetuity. Income earned from these investments is available for expenditure according to restrictions imposed by donors and consideration of the appropriation for expenditure criteria by the Institute pursuant to the New York Prudent Management of Institutional Funds Act ("NYPMIFA").

### Operating Measure

The Institute classifies its consolidated statements of activities into operating and non-operating activities. Operating activities include all income and expenses related to carrying out the Institute's mission. Non-operating activities include interest and dividends, realized and unrealized gains (losses) on investments, pension and other employee benefit related activity other than net periodic benefit cost, and other items considered to be unusual or of a non-recurring nature.

### Revenue

In accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"), the Institute recognizes revenue when control of the promised goods or services are transferred to the Institute's customers in an amount that reflects the consideration the Institute expects to be entitled to in exchange for those goods or services, as outlined in note 3. The standard outlines a five-step model whereby revenue is recognized as performance obligations within which a contract is satisfied.

## Public Imperatives

Public imperative revenues primarily consist of grants and contributions, including unconditional promises to give. Grants and unconditional promises to give are reported as revenues in the period received. Conditional contributions are recorded as revenue when the conditions on which they depend are substantially met.

Public imperatives are social good activities that are directed at the public and not an individual or small group of individuals. They are generally related to the promotion of the public's understanding and appreciation of the Institute's fields of interest and/or positioning the Institute's technical expertise in ways to benefit humanity. Typically, these activities are not expected to create a financial surplus but rather are funded by the surplus of other activities.

Public imperative revenues primarily consist of IEEE-USA Assessments, History Center, and Foundation related activities.

Public imperative expenses consist of History Center, grants, certain IEEE-USA activities, and educational activities, initiatives, honors ceremonies, presentations and some Society activities.

## Contributed Services (In-Kind Contribution)

Contributed services are recognized as expenses for services that create or enhance nonfinancial assets of IEEE Foundation, Incorporated (the "IEEE Foundation"), require specialized skills, are provided by individuals possessing those skills and typically would need to be purchased if not otherwise provided by donation. Contributed services are recorded at the fair value of the services provided and are recorded on the statement of activities as expenses in the period incurred. See also Note 13.

IEEE Foundation is a related organization, which works side by side with its donors and the Institute to unleash exciting, thoughtful and impactful programming that advances technology for the benefit of humanity since 1973.

## Income Taxes and Tax Status

### a. Uncertain Tax Positions

The Institute is qualified under Section 501(c)(3) of the Internal Revenue Code ("Code") as an organization exempt from federal income tax and applicable state income tax and is classified as a publicly supported charitable organization under Section 509(a)(2) of the Code. Nevertheless, the Institute is subject to tax on income unrelated to its exempt purpose, unless that income is otherwise excluded by the Code.

The Institute follows guidance that clarifies the accounting for uncertainty in tax positions taken or expected to be taken in a tax return, including issues relating to financial statement recognition and measurement. This section provides that the tax effects from an uncertain tax position can be recognized in the financial statements only if the position is "more-likely-than-not" to be sustained if the position were to be challenged by a taxing authority. The assessment of the tax position is based solely on the technical merits of the position, without regard to the likelihood that the tax position may be challenged. As of December 31, 2023 and 2022, management has determined that there are no significant uncertain tax positions that would require recognition or disclosure in the accompanying consolidated financial statements.

### b. The Institute's Income Tax Provision

The Institute generates revenue from unrelated business income activities and files federal Form 990-T and associated equivalent state unrelated business income tax returns. The Institute has historical losses and tracks federal Net Operating Losses ("NOLs") in two separate categories: NOLs generated prior to January 1, 2018 ("pre-TCJA"), which can be carried forward up to 20 years, and NOLs generated after December 31, 2017 ("post-TCJA"), which can be carried forward indefinitely.

For the year ending December 31, 2023, the Institute generated current year losses of \$918,000, resulting in cumulative federal NOLs of \$6,406,000, which is comprised of \$4,156,000 pre-TCJA and \$2,250,000 post-TCJA. The Institute also has cumulative state NOLs of \$807,000 with carryforward periods ranging from 12 years to indefinite-lived.

Deferred income taxes are recognized for the temporary differences between the tax basis of assets and liabilities and financial-reporting amounts at each year-end, taking into consideration enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are recognized if, based on the weight of available evidence, it is more likely than not that all or some portion of any deferred tax asset will not be realized. The benefit or provision for income tax represents the income tax benefit or payable for the year and the change in deferred tax assets and liabilities during the period.

As of December 31, 2023 and 2022, the Institute's deferred tax asset with respect to its NOL from unrelated business activities had total balances of \$67,600 and \$36,100, respectively, reflecting a full valuation allowance booked against its federal deferred tax asset. The Institute booked the respective valuation allowances against the deferred tax assets since there is no expectation the Institute will utilize these benefits in the foreseeable future.

The Institute's deferred tax assets are netted with deferred tax liabilities on the accompanying 2023 and 2022 consolidated statements of financial position.

### c. Income Tax Provisions of For-Profit Subsidiaries

IEEE, Inc., a subsidiary of the Institute, is considered a for-profit entity under the Code. Management is maintaining a full valuation allowance against the net deferred tax assets for IEEE, Inc.

#### d. Consolidated Income Tax Provision

For the years ended December 31, 2023 and 2022, the expenses (benefit) for income taxes consisted of the following:

	2023	2022
Current		
Federal	\$ (10,200)	\$ –
State	(31,700)	(27,200)
	(41,900)	(27,200)
Deferred		
Federal	–	881,700
State	(31,400)	(3,300)
	(31,400)	878,400
<b>Expense (benefit) for income taxes</b>	<b>\$ (73,300)</b>	<b>\$ 851,200</b>

For the year ended December 31, 2023, the Institute's consolidated income tax benefit is \$73,300, which is comprised of \$10,200 in income tax benefit related to the Institute's unrelated business income activities and associated off-setting valuation allowance, and \$63,100 in income tax benefits from associated state activities. For the year ended December 31, 2022, the Institute's consolidated income tax expense was \$851,200, which was comprised of \$881,700 in income tax expense related to the Institute's unrelated business income activities and associated off-setting valuation allowance, and \$30,500 in income tax benefits from associated state activities.

#### Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### Adoption of Recent Accounting Pronouncements

On January 1, 2023, the Institute adopted Accounting Standards Update ("ASU") 2016-13 Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (ASC 326) using the modified retrospective approach. This standard replaced the incurred loss methodology with an expected loss methodology that is referred to as the current expected credit loss ("CECL") methodology. CECL requires an estimate of credit losses for the remaining estimated life of financial assets using historical experience, current conditions, and reasonable supportable forecasts. The new standard had no significant impact on the Institute's financial statements.

#### Subsequent Events

The Institute evaluated its December 31, 2023 consolidated financial statements for subsequent events through May 21, 2024, the date the consolidated financial statements were available to be issued. The Institute is not aware of any other material subsequent events which would require recognition or disclosure in the accompanying consolidated financial statements.

### **NOTE 3: REVENUE RECOGNITION**

#### **Membership Dues**

The Institute offers membership for a term of one year. The Institute satisfies its performance obligation and recognizes revenue evenly over the membership term as its members simultaneously receive and consume the benefits over that timeframe. Generally, membership does not commence until after the Institute receives payment.

Payments received for membership dues in advance of the Institute satisfying its performance obligation are recorded within deferred revenue in the accompanying consolidated statements of financial position. The changes in deferred revenue relating to membership dues were caused by normal timing differences between the satisfaction of performance obligations and customer payments.

#### **Periodicals**

Periodicals revenues primarily include subscriptions and online products and content. Such revenues are recognized upon delivery of the online product or content or over the related subscription period.

Payments received for periodicals and media agreements in advance of the Institute satisfying its performance obligations are recorded within deferred revenue in the accompanying consolidated statements of financial position and recognized as revenue in future periods as performance obligations are satisfied. The changes in deferred revenue were caused by normal timing differences between the satisfaction of performance obligations and customer payments.

For the years ended December 31, 2023 and 2022, the Institute recognized 100% of the periodicals revenues over time, respectively.

#### **Conferences**

Conference revenues primarily include registration and sponsorships, and also includes the conference proceedings and published articles related to respective conferences. Revenues from conference registration and sponsorships are recognized when the conferences take place. Revenues from conference proceedings and articles are recognized in the period in which they are sold.

Payments received for conferences in advance of the Institute satisfying its performance obligation are recorded within deferred revenue in the accompanying consolidated statements of financial position and recognized as revenue in future periods as performance obligations are satisfied. The changes in deferred revenue were caused by normal timing differences between the satisfaction of performance obligations and customer payments.

#### **Standards**

Standards revenues primarily include subscriptions, publications and online products and content relating to technology standards. Such revenues are recognized upon delivery of the online products or content or over the related subscription period.

Payments received for standards agreements in advance of the Institute satisfying its performance obligation are recorded within deferred revenue in the accompanying consolidated statements of financial position and recognized as revenue in future periods as performance obligations are satisfied. The changes in deferred revenue were caused by normal timing differences between the satisfaction of performance obligations and customer payments.

For the years ended December 31, 2023 and 2022, approximately 35% and 38% of standards revenue were recognized "over time" and at "point-in-time," respectively.

## Accounts Receivable

Accounts receivable relating to the above revenues consist of the following:

	2023	2022
Periodicals and standards	\$ 29,548,100	\$ 27,935,600
Conferences	33,019,400	8,336,700
Other	3,438,400	2,323,200
Total accounts receivable	66,005,900	38,595,500
Less: allowance for credit losses	(1,785,500)	(1,376,500)
<b>Accounts receivable, net of allowance for credit losses</b>	<b>\$ 64,220,400</b>	<b>\$ 37,219,000</b>

## Deferred Revenue

Deferred revenue from contracts with customers represents payments received in advance for which services have not been performed as of December 31, 2023 and 2022. The following tables present contract balances along with activities for deferred revenue as of and for the years ending December 31, 2023 and 2022:

	Balance at January 1 2023	Revenue Recognized 2023	Cash Received In Advance of Performance	Balance at December 31 2023
Membership dues	\$ 32,219,100	\$ (32,219,100)	\$ 32,299,200	\$ 32,299,200
Periodicals	89,595,200	(89,595,200)	82,989,500	82,989,500
Conferences	4,812,900	(4,812,900)	1,041,800	1,041,800
Standards	2,189,500	(2,189,500)	2,330,900	2,330,900
	<b>\$ 128,816,700</b>	<b>\$ (128,816,700)</b>	<b>\$ 118,661,400</b>	<b>\$ 118,661,400</b>

	Balance at January 1 2022	Revenue Recognized 2022	Cash Received In Advance of Performance	Balance at December 31 2022
Membership dues	\$ 27,025,800	\$ (27,025,800)	\$ 32,219,100	\$ 32,219,100
Periodicals	85,191,900	(85,191,900)	89,595,200	89,595,200
Conferences	8,511,700	(8,511,700)	4,812,900	4,812,900
Standards	2,027,800	(2,027,800)	2,189,500	2,189,500
	<b>\$ 122,757,200</b>	<b>\$ (122,757,200)</b>	<b>\$ 128,816,700</b>	<b>\$ 128,816,700</b>

**NOTE 4: INVESTMENTS**

The Institute's investments, at fair value, by level within the fair value hierarchy, consist of the following as of December 31:

	<b>December 31, 2023</b>		
	<b>Level 1</b>	<b>Net Asset Value</b>	<b>Total</b>
<i>Common stock</i>			
Consumer	\$ 28,770,400	\$ —	\$ 28,770,400
Technology	96,778,300	—	96,778,300
Financial services	40,826,300	—	40,826,300
Healthcare	47,893,400	—	47,893,400
Industrials	29,786,100	—	29,786,100
Energy	15,558,800	—	15,558,800
Other	14,705,000	—	14,705,000
<b>Total common stock</b>	<b>274,318,300</b>	<b>—</b>	<b>274,318,300</b>
<i>Mutual funds</i>			
Growth funds	106,324,700	—	106,324,700
Fixed income funds	236,328,400	—	236,328,400
Money market funds	213,636,900	—	213,636,900
Other funds	110,477,500	—	110,477,500
<b>Total mutual funds</b>	<b>666,767,500</b>	<b>—</b>	<b>666,767,500</b>
U.S. government securities	46,006,500	—	46,006,500
Commingled funds	—	110,536,600	110,536,600
	<b>\$ 987,092,300</b>	<b>\$ 110,536,600</b>	<b>1,097,628,900</b>
Cash held for investment			44,894,900
Add: receivables for securities sold and accrued interest			951,200
Less: liabilities for securities purchased and accrued fees			(499,700)
<b>Total investments, at fair value</b>		<b>\$</b>	<b>1,142,975,300</b>



**December 31, 2022**

	<b>Level 1</b>	<b>Net Asset Value</b>	<b>Total</b>
<i>Common stock</i>			
Consumer	\$ 35,542,100	\$ —	\$ 35,542,100
Technology	86,252,000	—	86,252,000
Financial services	45,249,100	—	45,249,100
Healthcare	51,969,800	—	51,969,800
Industrials	30,398,400	—	30,398,400
Energy	17,102,300	—	17,102,300
Other	16,636,900	—	16,636,900
<b>Total common stock</b>	<b>283,150,600</b>	<b>—</b>	<b>283,150,600</b>
<i>Mutual funds</i>			
Growth funds	67,585,200	—	67,585,200
Fixed income funds	238,052,200	—	238,052,200
Money market funds	114,888,400	—	114,888,400
Other funds	73,748,800	—	73,748,800
<b>Total mutual funds</b>	<b>494,274,600</b>	<b>—</b>	<b>494,274,600</b>
U.S. government securities	41,736,600	—	41,736,600
Commingled funds	—	130,762,400	130,762,400
	<b>\$ 819,161,800</b>	<b>\$ 130,762,400</b>	<b>949,924,200</b>
Cash held for investment			31,278,500
Add: receivables for securities sold and accrued interest			569,900
Less: liabilities for securities purchased and accrued fees			(522,600)
<b>Total investments, at fair value</b>			<b>\$ 981,250,000</b>

The Institute's policy is to recognize transfers in and transfers out of levels at the end of the reporting period.

Investments valued at NAV by major category as of December 31, 2023 and 2022 consisted of the following:

**December 31, 2023**

Type	Strategy	NAV in Funds	# of Funds	Remaining Life	\$ Amount of Unfunded Commitments	Redemption Terms	Redemption Restrictions
Commingled funds	One fund seeks to outperform the Russell 2000 Index over a 1 to 3 year period; and one fund seeks to maximize portfolio returns while minimizing risk through an asset allocation based on measurements of the investible universe of institutional real estate.	\$110,536,600	2	Subject to the determination of the respective fund manager.	N/A	One fund has daily redemption upon notice; and one fund has quarterly redemption with 60 days notice.	N/A

**December 31, 2022**

Type	Strategy	NAV in Funds	# of Funds	Remaining Life	\$ Amount of Unfunded Commitments	Redemption Terms	Redemption Restrictions
Commingled funds	One fund seeks to outperform the Russell 2000 Index over a 1 to 3 year period; and one fund seeks to maximize portfolio returns while minimizing risk through an asset allocation based on measurements of the investible universe of institutional real estate.	\$130,762,400	2	Subject to the determination of the respective fund manager.	N/A	One fund has daily redemption upon notice; and one fund has quarterly redemption with 60 days notice.	N/A

The Institute also held investments, which included certificates of deposits and term deposits, totaling \$3,779,900 and \$3,751,800 as of December 31, 2023 and 2022, respectively, that were classified as investments — other on the accompanying consolidated statements of financial position. These investments do not qualify as securities, as defined by relevant guidance, and as such, fair value disclosures are not provided.

Investment (losses) income, net, for the years ended December 31, 2023 and 2022, are reflected in the accompanying consolidated statements of activities and consist of the following:

	2023	2022
<b>IEEE</b>		
Interest and dividends, net	\$ 27,110,600	\$ 18,139,700
Net realized and unrealized gains (losses) on investments	79,722,900	(120,802,100)
<b>IEEE investment income (loss), net</b>	<b>\$ 106,833,500</b>	<b>\$ (102,662,400)</b>

Investment expenses, which are netted with interest and dividends, amounted to \$1,729,400 and \$1,721,300 in 2023 and 2022, respectively.

For the years ended December 31, 2023 and 2022, investment returns related to amounts held on behalf of IEEF Foundation, that have not been reflected in the accompanying consolidated statements of activities, consist of the following:

	2023	2022
<b>IEEF Foundation, Incorporated</b>		
Interest and dividends, net	\$ 1,255,500	\$ 991,400
Net realized and unrealized gains (losses) on investments	4,223,000	(7,495,000)
<b>IEEF Foundation investment income (loss), net</b>	<b>\$ 5,478,500</b>	<b>\$ (6,503,600)</b>

**NOTE 5: LAND, BUILDINGS, AND EQUIPMENT, NET**

Land, buildings, and equipment, carried at cost, net of the related accumulated depreciation and amortization, at December 31, 2023 and 2022 consist of the following:

	<b>2023</b>		
	<b>Cost</b>	<b>Accumulated Depreciation and Amortization</b>	<b>Net</b>
Buildings	\$ 17,385,900	\$ 16,283,200	\$ 1,102,700
Furniture, equipment, vehicles and computers	16,163,000	14,021,200	2,141,800
Software	62,614,000	51,566,000	11,048,000
Building improvements	22,206,300	17,241,200	4,965,100
	<b>118,369,200</b>	<b>99,111,600</b>	<b>19,257,600</b>
Land	836,400	–	836,400
Information systems upgrade in process	6,401,000	–	6,401,000
<b>Total</b>	<b>\$ 125,606,600</b>	<b>\$ 99,111,600</b>	<b>\$ 26,495,000</b>

	<b>2022</b>		
	<b>Cost</b>	<b>Accumulated Depreciation and Amortization</b>	<b>Net</b>
Buildings	\$ 17,385,900	\$ 15,886,100	\$ 1,499,800
Furniture, equipment, vehicles and computers	17,644,000	15,935,300	1,708,700
Software	62,812,900	47,956,300	14,856,600
Building improvements	22,250,200	16,184,700	6,065,500
	<b>120,093,000</b>	<b>95,962,400</b>	<b>24,130,600</b>
Land	836,400	–	836,400
Information systems upgrade in process	3,086,700	–	3,086,700
<b>Total</b>	<b>\$ 124,016,100</b>	<b>\$ 95,962,400</b>	<b>\$ 28,053,700</b>

Depreciation and amortization expense amounted to \$8,336,600 and \$10,940,300 for the years ended December 31, 2023 and 2022, respectively.

## NOTE 6: PENSION AND OTHER POST-RETIREMENT BENEFITS

The Institute sponsors two qualified pension plans and one nonqualified pension plan and other post-retirement benefit plans for its employees. In November 2006, the Board of Directors approved the freezing of its qualified employee benefit plans as of June 30, 2007 and the implementation of a defined contribution plan effective July 1, 2007. Accordingly, as of June 30, 2007, no further benefits will accrue under the qualified employee benefit plans after that date.

The following tables provide a reconciliation of the changes in the plans' benefit obligations and fair value of assets over the two-year period ended December 31, 2023, and a statement of the funded status as of December 31, 2023 and 2022:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
<i>Reconciliation of benefit obligation:</i>				
<b>Obligation at January 1</b>	\$ 62,391,800	\$ 90,534,800	\$ 6,379,500	\$ 8,754,300
Service cost	290,000	290,000	176,400	263,300
Interest cost	2,891,900	1,796,800	301,700	194,300
Actuarial gain	287,900	(24,421,100)	(18,300)	(2,691,400)
Benefit payments	(4,178,200)	(1,777,100)	(132,200)	(141,000)
Settlements	—	(4,031,700)	—	—
<b>Obligation at December 31</b>	\$ 61,683,400	\$ 62,391,700	\$ 6,707,100	\$ 6,379,500
<i>Reconciliation of fair value of plan assets:</i>				
<b>Fair value of plan assets at January 1</b>	\$ 60,486,500	\$ 87,357,600	\$ —	\$ —
Actual return on plan assets	6,110,300	(21,070,500)	—	—
Employer contributions	2,400	8,200	132,200	141,000
Benefit payments	(4,178,200)	(1,777,100)	(132,200)	(141,000)
Settlements	—	(4,031,700)	—	—
<b>Fair value of plan assets at December 31</b>	\$ 62,421,000	\$ 60,486,500	—	—
Funded status at December 31	737,600	(1,905,200)	(6,707,100)	(6,379,500)
Accumulated benefit obligation	\$ 61,683,400	\$ 62,391,700	\$ 6,707,100	\$ 6,379,500

At December 31, 2023 and 2022, the funded status of the plans is included in accrued pension and other employee benefits on the consolidated statements of financial position as follows:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Non-current assets	\$ 750,900	\$ —	\$ —	\$ —
Current liabilities	(6,300)	(4,000)	(340,700)	(328,300)
Non-current liabilities	(7,000)	(1,901,200)	(6,366,400)	(6,051,200)
<b>Net amount recognized</b>	\$ 737,600	\$ (1,905,200)	\$ (6,707,100)	\$ (6,379,500)

Cumulative amounts recognized in changes in net assets without donor restrictions and not yet recognized in net periodic benefit cost as of December 31, 2023 and 2022 consist of:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Net loss (gain)	\$ 5,945,700	\$ 9,201,200	\$ (862,500)	\$ (866,500)

The following table provides the components of net periodic benefit cost for the plans for 2023 and 2022:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Service cost	\$ 290,000	\$ 290,000	\$ 176,400	\$ 263,300
Interest cost	2,891,900	1,796,800	301,700	194,300
Expected return on plan assets	(3,029,100)	(2,105,100)	—	—
Amortization of net loss	462,200	153,500	(22,300)	76,500
Settlement loss	—	594,200	—	—
<b>Net periodic benefit cost</b>	<b>\$ 615,000</b>	<b>\$ 729,400</b>	<b>\$ 455,800</b>	<b>\$ 534,100</b>

Amounts recognized in changes in net assets without donor restrictions for the years ended December 31, 2023 and 2022 consist of:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Net gain	\$ (2,793,300)	\$ (1,245,400)	\$ (18,300)	\$ (2,691,300)
Amortization of net loss	(462,200)	(747,700)	22,300	(76,500)
<b>Pension and related benefits activity other than net periodic benefit cost</b>	<b>\$ (3,255,500)</b>	<b>\$ (1,993,100)</b>	<b>\$ 4,000</b>	<b>\$ (2,767,800)</b>

The prior service costs are amortized on a straight-line basis over the average remaining service period of active participants. Gains and losses in excess of 10% of the greater of the benefit obligation and the fair value of plan assets are amortized over the average remaining service period of active participants.

The assumptions used in the measurement of the Institute's benefit obligation are shown in the following table:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
<b>Weighted-average assumptions as of December 31</b>				
Discount rate	4.74%	4.94%	4.79%	4.99%
Rate of compensation increase	N/A	N/A	N/A	N/A

The assumptions used in the measurement of the net periodic benefit cost are shown in the following table:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
<b>Weighted-average assumptions as of December 31</b>				
Discount rate	4.94%	2.59%	4.99%	2.71%
Expected return on plan assets	5.30%	2.50%	N/A	N/A
Rate of compensation increase	N/A	N/A	N/A	N/A

The health care plan benefits are a flat dollar reimbursement to the retirees toward health care premiums. An increase in the reimbursement amount is not assumed.

## Contributions

There are no required contributions due to the qualified pension plans during 2023 under the Internal Revenue Service ("IRS") minimum funding regulations.

IEEE expects to contribute approximately \$6,000 to its nonqualified pension plan and approximately \$341,000 to its other post-retirement benefit plans during 2024.

## Expected Benefit Payments

	Pension Benefits	Other Benefits
2024	\$ 4,898,700	\$ 340,700
2025	4,278,900	347,100
2026	4,175,600	352,700
2027	4,160,700	365,300
2028	3,986,800	378,000
2029 to 2033	20,847,600	2,032,600

## Plan Assets

IEEE determines its assumptions for the expected rate of return on plan assets for its retirement plans based on ranges of anticipated rates of return for each asset class. A weighted range of nominal rates is then determined based on target allocations for each asset class. IEEE considers the expected rate of return to be a longer-term assessment of return expectations and does not anticipate changing this assumption annually unless economic conditions change significantly. The expected rate of return for each plan is based upon its expected asset allocation. Market performance over a period of earlier years is evaluated covering a wide range of economic conditions to determine whether there are reliable reasons for projecting forward any past trends.

IEEE's pension and post-retirement plan asset allocation at the end of 2023 and 2022, and the target asset allocation for 2023 and 2022 by asset category based on asset fair values are as follows:

Asset Category	Target Asset Allocation	Pension Assets at December 31		Post-Retirement Assets at December 31	
		2023	2022	2023	2022
Equity securities	10%	12%	10%	N/A	N/A
Debt securities	90%	87%	89%	N/A	N/A
Cash and cash equivalents	0%	1%	1%	N/A	N/A
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>N/A</b>	<b>N/A</b>

Third-party investment professionals manage IEEE's pension plan assets, rebalancing assets as the Institute deems appropriate. IEEE's investment strategy with respect to its pension plan assets is to maintain a diversified investment portfolio across several asset classes targeting an annual rate of return of 5% in 2023 and 2022. To develop the expected long-term rate of return on assets assumption, the Institute considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocation of the pension portfolio.

IEEE's pension and post-retirement funds' investment strategies are to invest in a prudent manner for the exclusive purpose of providing benefits to participants. The investment strategies are targeted to produce a total return that, when combined with IEEE's contributions to the funds, will maintain the funds' ability to meet all required benefit obligations. Risk is controlled through liability driven investing. The majority of the assets are matched against the pension liability.

The Institute's investment objectives for the pension plans are to minimize the volatility of the pension assets relative to pension liabilities and to offset the required contributions. The current target asset allocations are 10% equity securities and 90% debt securities. The investment guidelines further allow the managers to keep up to 5% in cash and cash equivalents.

Investment strategies and policies for the pension plans reflect a balance of risk-reducing and return seeking considerations. The objective of minimizing the volatility of assets relative to liabilities is addressed primarily through asset-liability matching.

All plan assets are externally managed. Investment managers are not permitted to invest outside of the asset classes or strategy for which they have been appointed. The Institute uses investment guidelines to ensure investment managers invest solely within the investment strategy for which they have been retained.

The following table prioritizes the inputs used to measure and report the fair value of the Institute's pension plan assets at December 31:

<b>December 31, 2023</b>				
	<b>Level 1</b>	<b>Level 2</b>	<b>Net Asset Value</b>	<b>Total</b>
<i>Common stock</i>				
Consumer	\$ 878,500	\$ —	\$ —	\$ 878,500
Technology	1,468,200	—	—	1,468,200
Industrials	267,500	—	—	267,500
Healthcare	355,400	—	—	355,400
Financial services	303,200	—	—	303,200
Materials	149,800	—	—	149,800
Energy	157,200	—	—	157,200
Other	132,100	—	—	132,100
<b>Total common stock</b>	<b>3,711,900</b>	<b>—</b>	<b>—</b>	<b>3,711,900</b>
Equity mutual funds	3,549,600	—	—	3,549,600
Corporate bonds	—	37,080,200	—	37,080,200
U.S. government securities	15,004,900	—	—	15,004,900
Municipal bonds	—	1,536,300	—	1,536,300
Foreign bonds	—	548,200	—	548,200
Collective trust fund	—	—	333,100	333,100
	<b>\$ 22,266,400</b>	<b>\$ 39,164,700</b>	<b>\$ 333,100</b>	<b>61,764,200</b>
Cash held for investment				—
Add: receivables for securities sold and accrued interest				656,800
<b>Total pension plan investments</b>				<b>\$ 62,421,000</b>

<b>December 31, 2022</b>				
	<b>Level 1</b>	<b>Level 2</b>	<b>Net Asset Value</b>	<b>Total</b>
<i>Common stock</i>				
Consumer	\$ 676,400	\$ —	\$ —	\$ 676,400
Technology	897,700	—	—	897,700
Industrials	246,900	—	—	246,900
Healthcare	401,100	—	—	401,100
Financial services	277,000	—	—	277,000
Materials	120,400	—	—	120,400
Energy	140,300	—	—	140,300
Other	65,200	—	—	65,200
<b>Total common stock</b>	<b>2,825,000</b>	<b>—</b>	<b>—</b>	<b>2,825,000</b>
Equity mutual funds	3,021,300	—	—	3,021,300
Corporate bonds	—	37,482,400	—	37,482,400
U.S. government securities	13,425,000	—	—	13,425,000
Municipal bonds	—	1,792,300	—	1,792,300
Foreign bonds	—	524,500	—	524,500
Collective trust fund	—	—	745,500	745,500
	<b>\$ 19,271,300</b>	<b>\$ 39,799,200</b>	<b>\$ 745,500</b>	<b>59,816,000</b>
Cash held for investment				1,400
Add: receivables for securities sold and accrued interest				669,100
<b>Total pension plan investments</b>				<b>\$ 60,486,500</b>

The Institute's policy is to recognize transfers in and transfers out of levels at the end of the respective reporting period.

The Institute uses, as a practical expedient for fair value, a NAV per share or its equivalent for purposes of valuing certain investments which: (a) do not have a readily determinable fair value and (b) prepare their financial statements consistent with the measurement principles of an investment company or have the attributes of an investment company. The following table lists such investments by major category as of December 31, 2023 and 2022:

**December 31, 2023**

Type	Strategy	NAV in Funds	# of Funds	Remaining Life	\$ Amount of Unfunded Commitments	Redemption Terms	Redemption Restrictions
Collective trust fund	Seeks the highest level of current income possible consistent with the preservation of capital and maintenance of liquidity.	\$333,100	1	Subject to the determination of the respective fund manager.	N/A	Daily redemption, upon notice.	N/A

**December 31, 2022**

Type	Strategy	NAV in Funds	# of Funds	Remaining Life	\$ Amount of Unfunded Commitments	Redemption Terms	Redemption Restrictions
Collective trust fund	Seeks the highest level of current income possible consistent with the preservation of capital and maintenance of liquidity.	\$745,500	1	Subject to the determination of the respective fund manager.	N/A	Daily redemption, upon notice.	N/A

The Institute also has a defined contribution 401(k) Savings and Investment Plan (the "Plan") for employees, who are eligible to participate after the start of the next pay period following 30 days of employment. Under the Plan, employees may generally contribute between 2% to 16% of their salary; however, not in excess of IRS limitations. The Institute provides a 100% matching contribution up to 4% of each employee's salary. The Institute contributed \$5,684,800 and \$5,299,900 on behalf of eligible employees to the Plan in 2023 and 2022, respectively. Amounts payable at December 31, 2023 and 2022 totaled \$98,100 and \$87,100, respectively, and are included in the current portion of accrued pension and other benefits in the accompanying consolidated statements of financial position.

Effective September 1, 2002, the Institute implemented a 457(b) plan for those highly compensated employees who have reached the IRS maximum 401(k) contribution for the year. These employees have the option of continuing their contributions up to the maximum dollar amount under section 457(e)(15) of the Internal Revenue Code of 1986, as amended. All other criteria for eligibility follow the same guidelines as the 401(k) plan. The amounts of \$7,783,100 and \$6,677,000 pertaining to obligations due under the 457(b) plan are accrued and included in accrued pension and other employee benefits at December 31, 2023 and 2022, respectively, and the related 457(b) plan assets are included in investments on the accompanying consolidated statements of financial position.

The Institute has established a Defined Contribution Retirement Plan under which it makes contributions to accounts established for each employee according to a predetermined schedule of contributions. The employee's retirement benefit is the value of the account. All contributions under the Defined Contribution Retirement Plan are made by the Institute and are not funded through salary deductions (employee contributions). Vesting occurs at the completion of each year of service at a rate of 25% per year until 100% after four years. The Institute contributed \$13,210,000 and \$11,846,100 to this plan in 2023 and 2022, respectively. Amounts payable at December 31, 2023 and 2022 totaled \$231,800 and \$214,600, respectively, and are included in the current portion of accrued pension and other benefits in the accompanying consolidated statements of financial position.



## NOTE 7: FUNCTIONAL EXPENSES

The following table summarizes the Institute's functional expense classification presented below for the years ended December 31, 2023 and 2022:

	<b>December 31, 2023</b>								
	<b>Program Services</b>					<b>Supporting Services</b>			<b>Total</b>
	<b>Memberships</b>	<b>Periodicals</b>	<b>Conferences</b>	<b>Standards</b>	<b>Public Imperatives</b>	<b>In-Kind Contribution</b>	<b>General and Administrative</b>		
People costs and related expense	\$ 49,967,900	\$ 77,047,100	\$ 47,897,500	\$ 23,745,800	\$ 4,221,400	\$ 1,202,000	\$ 3,514,300	\$ 207,596,000	
Conference event related expense	–	62,600	59,534,400	1,812,300	11,300	–	8,800	61,429,400	
Travel, meetings and accommodation	17,210,600	9,273,500	21,893,300	3,634,900	993,800	47,500	1,002,100	54,055,700	
Consultants and contractors	4,468,100	7,381,800	11,182,100	8,891,700	721,900	86,600	845,800	33,578,000	
Commission, licensing and royalty	1,170,900	29,096,400	656,200	106,300	–	–	–	31,029,800	
Printing and publishing expense	3,624,600	18,220,800	3,125,700	388,200	94,500	20,300	73,500	25,547,600	
Computer software and related expense	3,268,800	4,972,200	3,431,900	2,251,600	36,500	56,200	184,600	14,201,800	
Marketing and promotions	3,098,800	5,102,500	3,859,000	942,900	249,300	29,700	76,400	13,358,600	
Grants, awards, scholarships and others	1,871,500	550,100	706,800	12,400	7,433,500	–	–	10,574,300	
General office expense	3,348,800	3,880,800	859,700	591,600	97,100	50,900	297,900	9,126,800	
Depreciation and amortization	1,701,100	2,059,400	2,107,100	1,040,900	23,300	1,800	1,403,000	8,336,600	
Operating leases and related expense	863,600	164,000	1,995,600	41,700	404,300	–	3,814,600	7,283,800	
Professional fees	1,301,000	2,962,300	2,470,400	305,900	–	–	9,000	7,048,600	
Maintenance expense	871,900	2,797,300	1,623,900	376,600	6,400	–	1,080,500	6,756,600	
Insurance	292,600	371,000	1,263,300	309,700	2,000	900	185,900	2,425,400	
Credit loss expenses	26,100	18,300	564,200	–	–	–	512,800	1,121,400	
Communication services	95,500	15,600	91,500	121,800	3,100	400	1,800	329,700	
Various other	11,472,800	9,320,200	14,832,400	5,177,300	236,100	107,100	222,100	41,368,000	
<b>Total</b>	<b>\$ 104,654,600</b>	<b>\$ 173,295,900</b>	<b>\$ 178,095,000</b>	<b>\$ 49,751,600</b>	<b>\$ 14,534,500</b>	<b>\$ 1,603,400</b>	<b>\$ 13,233,100</b>	<b>\$ 535,168,100</b>	

**December 31, 2022**

	<b>Program Services</b>					<b>Supporting Services</b>		
	Memberships	Periodicals	Conferences	Standards	Public Imperatives	In-Kind Contribution	General and Administrative	Total
People costs and related expense	\$ 45,537,200	\$ 72,582,100	\$ 44,086,500	\$ 21,990,300	\$ 4,880,700	\$ 1,130,300	\$ 3,252,700	\$ 193,459,800
Conference event related expense	234,500	51,400	44,833,000	891,000	13,400	—	21,700	46,045,000
Travel, meetings and accommodation	9,483,200	5,151,100	16,189,200	1,855,800	630,300	46,700	575,000	33,931,300
Commission, licensing and royalty	1,610,100	29,625,400	752,200	110,900	—	—	—	32,098,600
Consultants and contractors	3,576,300	6,036,300	12,219,200	7,446,600	676,500	47,200	336,400	30,338,500
Printing and publishing expense	4,387,200	15,399,500	2,403,200	250,800	102,600	9,200	31,500	22,584,000
Computer software and related expense	2,478,400	5,134,900	3,078,800	1,678,900	94,900	46,600	59,700	12,572,200
Marketing and promotions	2,837,700	4,384,900	2,750,700	977,300	155,400	30,500	86,600	11,223,100
Depreciation and amortization	1,587,400	2,444,300	2,253,900	3,126,300	23,000	—	1,505,400	10,940,300
Maintenance expense	1,597,000	3,934,700	2,813,700	710,200	—	—	654,300	9,709,900
General office expense	3,018,500	4,389,300	1,202,400	549,600	268,500	54,600	256,600	9,739,500
Grants, awards, scholarships and others	2,034,000	592,500	1,308,600	51,300	3,904,500	—	234,300	8,125,200
Professional fees	1,041,300	3,118,100	3,162,200	236,500	—	—	97,900	7,656,000
Operating leases and related expense	836,500	117,300	1,752,300	28,600	339,000	—	3,546,300	6,620,000
Insurance	152,700	320,100	724,700	278,800	2,000	—	165,200	1,643,500
Communication services	124,900	94,500	108,700	101,500	4,300	400	4,600	438,900
Bad debt expense (recovery)	98,000	75,600	243,100	100	—	—	(474,400)	(57,600)
Various other	13,431,500	6,678,600	7,205,500	4,462,500	574,400	118,200	542,600	33,013,300
<b>Total</b>	<b>\$ 94,066,400</b>	<b>\$ 160,130,600</b>	<b>\$ 147,087,900</b>	<b>\$ 44,747,000</b>	<b>\$ 11,669,500</b>	<b>\$ 1,483,700</b>	<b>\$ 10,896,400</b>	<b>\$ 470,081,500</b>

Management has reviewed all overhead costs and determined that it is appropriate to allocate the majority of these costs to the program services. There are a number of allocation methodologies that are used focusing on the location where the costs are incurred along with staffing levels and program service cost incurred prior to allocations. Included in these allocations are approximately \$74 million and \$61 million of society administrative, committee, and executive expenses and approximately \$58 million and \$57 million of indirect corporate overhead charges in 2023 and 2022, respectively.

**NOTE 8: ADDITIONAL INFORMATION PRESENTED BY ACTIVITY**

The following presents the Institute's consolidated financial results presented in a traditional surplus or loss format for the years ended December 31, 2023 and 2022. This format differs from the accompanying consolidated statements of activities, which present the financial results by the types of products and services sold. The surplus and loss presents the same data pertaining to the nature of activities.

	<b>2023</b>	<b>2022</b>
Net revenues	\$ 580,102,700	\$ 539,092,400
Less: cost of revenues	238,688,300	209,465,400
<b>Direct contribution to surplus</b>	<b>341,414,400</b>	<b>329,627,000</b>
Expenses		
Selling	35,866,000	35,577,300
Marketing	33,310,700	28,716,600
Development and design	17,620,600	13,962,400
Supporting services	193,558,300	169,206,600
<b>Contribution to surplus</b>	<b>61,058,800</b>	<b>82,164,100</b>
Public imperatives, net	10,636,000	8,599,400
In-Kind contribution	1,603,400	1,483,700
<b>Subtotal before non-operating activities</b>	<b>48,819,400</b>	<b>72,081,000</b>
Non-operating activities		
Investment gain (loss), net	106,833,500	(102,662,400)
Gain on insurance recoveries	2,500,000	1,879,900
Pension benefit	3,251,500	4,760,900
<b>Surplus (deficit) before tax</b>	<b>161,404,400</b>	<b>(23,940,600)</b>
<b>Benefit (expense) for income taxes</b>	<b>73,300</b>	<b>(851,200)</b>
<b>Net surplus (loss) after tax</b>	<b>\$ 161,477,700</b>	<b>\$ (24,791,800)</b>

A description of each line item is discussed below:

**Revenues**

Net earnings from the sales of products and services.

**Cost of Revenues**

Direct costs incurred in producing or providing products and services that are sold and generate revenue.

**Selling**

Expenses incurred in the effort to sell products or services, includes commissions and other related expenses.

**Marketing**

Expenses incurred to generate additional sales of existing products or services, including brand awareness, promotions, displays, and media.

**Development and Design**

Expenses incurred in relation to developing new products and services to be sold in the future.

**Supporting Services**

This caption includes operational support and shared services. Operational support includes operational expenses that are indirectly related to the sale of products and services which generate revenue (e.g., costs associated with conference and event management, volunteer engagement and executive or governance functions). Shared services include general overhead such as Human Resources, Finance, Information Technology, Facilities and other related expenses. The presentation of supporting services, as reported on the accompanying consolidated statements of activities, reflects an allocation of such costs amongst the lines of operation specifically benefited.

**Public Imperatives**

Public imperatives are outreach and public awareness efforts to inform the public and members about technology and the engineering profession.

**NOTE 9: LIQUIDITY RESOURCES**

The Institute's primary source of operating funds is derived from the sale of products and services for its memberships, periodicals, conferences, and standards. These activities are intended to advance technology for humanity. The Institute has various sources of liquidity at its disposal, including cash and cash equivalents, and investments.

The following table reflects the Institute's financial assets as of December 31, 2023 and 2022 reduced by amounts that are not available to meet general expenditures within one year of the statement of financial position date because of contractual restrictions or donor restrictions.

	<b>2023</b>	<b>2022</b>
Cash and cash equivalents	\$ 20,019,700	\$ 19,359,500
Accounts receivable, less allowance for credit losses	64,220,400	37,219,000
Investments, at fair value	1,142,975,300	981,250,000
Investments – other	3,779,900	3,751,800
<b>Total financial assets available within one year</b>	<b>1,230,995,300</b>	<b>1,041,580,300</b>
Less:		
IEEE Board-designated net assets	6,032,500	8,538,300
Amounts held on behalf of IEEE Foundation, Incorporated	65,109,000	54,106,400
Amounts subject to expenditure for specified donor purposes	1,940,100	1,752,100
Amounts relating to endowment funds with donor restrictions	654,600	600,200
<b>Total amounts unavailable for general expenditures within one year</b>	<b>73,736,200</b>	<b>64,997,000</b>
<b>Total financial assets available within one year after Board designations</b>	<b>\$ 1,157,259,100</b>	<b>\$ 976,583,300</b>

**NOTE 10: NET ASSETS WITH DONOR RESTRICTIONS AND ENDOWMENT FUNDS**

Net assets with donor restrictions are available for the following purposes at December 31, 2023 and 2022:

	<b>2023</b>	<b>2022</b>
Grant funds held for specific purposes	\$ 1,204,300	\$ 1,044,100
Fund held for awards, medals, and other specific purposes	735,800	708,000
Donor-restricted endowment funds, including accumulated unspent appreciation of \$463,200 and \$408,800	654,600	600,200
	<b>\$ 2,594,700</b>	<b>\$ 2,352,300</b>

Net assets were released from donor restrictions by incurring expenses satisfying the restricted purposes for the years ended December 31, 2023 and 2022 as follows:

	<b>2023</b>	<b>2022</b>
Grant funds held for specific purposes	\$ 29,700	\$ 11,500
Funds released for awards, medals, and other specific purposes	9,000	8,700
	<b>\$ 38,700</b>	<b>\$ 20,200</b>

Donor-imposed endowment net assets at December 31, 2023 and 2022 consist of assets that have been restricted by donors to be invested in perpetuity to provide a permanent source of income. The Institute's donor-restricted endowment consists of eleven (11) individual funds established principally for awards.

On September 17, 2010, the State of New York passed the NYPMIFA, its version of the Uniform Prudent Management of Institutional Funds Act. All not-for-profit organizations formed in New York must apply this law. The Institute classifies as net assets with donor restrictions, unless otherwise stipulated by the donor: (a) the original value of gifts donated to its donor-restricted endowment, (b) the original value of subsequent gifts to its donor-restricted endowment and (c) accumulations to its donor-restricted endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the funds.

In accordance with NYPMIFA, the Institute considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds: the purpose, duration, and preservation of the endowment fund; expected total return on endowment investments; general economic conditions; the possible effects of inflation and deflation; other resources of the Institute; and the investment policy of the Institute.

The Institute has adopted investment management and spending policies for its donor-restricted endowment assets which totaled \$654,600 and \$600,200 as of December 31, 2023 and 2022, respectively. This supports the objective of providing a sustainable and increasing level of donor-restricted endowment income distribution to support the Institute's activities while seeking to maintain the purchasing power of the endowment assets. The Institute's primary investment objective is to maximize total return within reasonable and prudent levels of risk while maintaining sufficient liquidity to meet disbursement needs and ensure preservation of capital.

To satisfy its long-term rate-of-return objectives, the Institute relies on a total return strategy, the objective of which is to achieve a return consisting of a combination of current income and capital appreciation, without regard to an emphasis on either, recognizing that changes in market conditions and interest rates will result in varying strategies in an attempt to optimize results. The endowment portfolio is diversified among various investment classes and strategies to help reduce risk.

The following table summarizes the Institute's total return on donor-restricted endowment investments and the changes in donor-restricted endowment net assets for the years ended December 31, 2023 and 2022:

	<b>2023</b>			
	<b>Without Donor Restrictions</b>		<b>With Donor Restrictions</b>	<b>Total</b>
Donor-restricted endowment funds	\$	—	\$ 654,600	\$ 654,600
Endowment assets, beginning of year	\$	—	\$ 600,200	\$ 600,200
Dividends and interest		—	19,200	19,200
Net realized and unrealized appreciation in fair value of endowment assets		—	43,600	43,600
Endowment return used for operations		—	(8,400)	(8,400)
<b>Endowment assets, end of year</b>	<b>\$</b>	<b>—</b>	<b>\$ 654,600</b>	<b>\$ 654,600</b>

	<b>2022</b>			
	<b>Without Donor Restrictions</b>		<b>With Donor Restrictions</b>	<b>Total</b>
Donor-restricted endowment funds	\$	—	\$ 600,200	\$ 600,200
Endowment assets, beginning of year	\$	—	\$ 676,000	\$ 676,000
Dividends and interest		—	12,500	12,500
Net realized and unrealized appreciation in fair value of endowment assets		—	(80,000)	(80,000)
Endowment return used for operations		—	(8,300)	(8,300)
<b>Endowment assets, end of year</b>	<b>\$</b>	<b>—</b>	<b>\$ 600,200</b>	<b>\$ 600,200</b>

## NOTE 11: LEASES

The Institute leases office space and certain equipment from third-party lessors under noncancellable leases. The following table summarizes the details for the Institute's operating and finance leases recorded on the consolidated statements of financial position as of December 31, 2023.

	Operating	Finance
Right-of-use lease assets	\$ 6,681,000	\$ 34,600
Lease liabilities	\$ 6,614,000	\$ 34,600
Weighted average remaining lease term	22 months	72 months
Weighted average discount rate	3.58%	3.49%

The Institute's lease agreements do not provide an implicit rate, as such the Institute uses an estimated incremental borrowing rate, which is derived from third-party information available at the adoption date in determining the present value of lease payments. The rate used is the risk-free rate.

Fixed lease payments are recognized as operating lease cost on a straight-line basis over the lease term. ROU assets are periodically evaluated for impairment.

The following table is a summary of the Institute's components of net lease cost, which is included in the operating leases and related expenses and depreciation and amortization within the consolidated statements of activities for the year ended December 31, 2023 and 2022:

Operating lease cost	\$ 2,175,500
Finance lease cost	
Amortization of leased assets	11,300
Interest on lease liabilities	1,400
Variable lease cost	769,200
<b>Total net lease costs</b>	<b>\$ 2,957,400</b>

The following table summarizes maturities of the Institute's operating and finance lease liabilities as of December 31, 2023, which reconciles to total lease liabilities included on the Institute's consolidated statement of financial position.

Year ending December 31	Operating	Finance	Total
2024	\$ 2,290,900	\$ 12,600	\$ 2,303,500
2025	2,119,600	12,100	2,131,700
2026	834,400	6,100	840,500
2027	685,800	5,600	691,400
2028	701,300	–	701,300
Thereafter	477,200	–	477,200
Total lease payments	7,109,200	36,400	7,145,600
Less: imputed interest	495,200	1,900	497,100
Total lease liabilities	6,614,000	34,500	6,648,500
Less: current lease liabilities	2,087,000	11,700	2,098,700
<b>Long-term lease liabilities</b>	<b>\$ 4,527,000</b>	<b>\$ 22,900</b>	<b>\$ 4,549,900</b>

## NOTE 12: COMMITMENTS AND CONTINGENCIES

### Letters of Credit

At December 31, 2023 and 2022, the Institute had irrevocable standby letters of credit with Wells Fargo Bank, N.A., in the amount of \$583,000, which serve as security deposits as required by the terms of its lease agreements with Three Park Avenue Building Company, LP and 2001 L Street, LLC, respectively.

At December 31, 2023 and 2022, the Institute had issued standby letters of credit in relation to certain dealers' agreements and VAT tax payments totaling \$1,063,100 and \$903,100, respectively, with HSBC Bank USA, N.A. The Institute is charged 2% of the face amount, upon issuance, of the standby letters of credit.

### Litigation

The Institute, in the normal course of its operations, is a party to various legal proceedings and complaints, some of which are covered by insurance. While it is not feasible to predict the ultimate outcomes of such matters, management of the Institute is not aware of any claims or contingencies, which are not covered by insurance, that would have a material adverse effect on the Institute's consolidated financial position, changes in net assets or cash flows.

## NOTE 13: RELATED — PARTY TRANSACTIONS

The Institute has transactions with IEEE Foundation. The Institute made cash contributions of \$469,000 and \$454,000 in 2023 and 2022, respectively, to the IEEE Foundation.

The IEEE Foundation has no staff and thus, receives certain accounting and administrative services from IEEE. The IEEE Foundation reimbursed IEEE for the cost of such services, which amounted to approximately \$1,043,400 and \$996,500 during 2023 and 2022, respectively. The Institute provided In-Kind fundraising administrative services (contributed services) during 2023 and 2022 that were not reimbursed by the IEEE Foundation, valued at In-Kind approximately \$1,603,400 and \$1,483,700 during 2023 and 2022, respectively.

Contributed services are recognized as revenue by the IEEE Foundation if the services create or enhance nonfinancial assets or require specialized skills, are provided by individuals possessing those skills and typically would need to be purchased if not otherwise provided by donation. Contributed services are valued and are reported at the estimated fair value in the financial statements based on actual salary of the IEEE employee, allocated to the Foundation, based on time spent working on Foundation related activities.

The Institute held on deposit approximately \$65,109,000 and \$54,106,400 from the IEEE Foundation at December 31, 2023 and 2022, respectively, and is separately reported on the accompanying consolidated statements of financial position. The Institute invests these amounts on behalf of the IEEE Foundation. Receivables due from the IEEE Foundation include grants receivable of \$1,528,500 and \$1,505,000 at December 31, 2023 and 2022, respectively, and other receivables of approximately \$137,900 and \$76,900 at December 31, 2023 and 2022, respectively, and are included in accounts receivable on the accompanying consolidated statements of financial position. Amounts due to the IEEE Foundation of approximately \$157,100 and \$224,700 at December 31, 2023 and 2022, respectively, are included in accounts payable and accrued expenses on the accompanying consolidated statements of financial position.

# IEEE Office Locations

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