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ANNUAL REPORT OF BSMI

NATIONAL QUALITY INFRASTRUCTURE

PUBLISHED
JULY 2024

ISSUER
BUREAU OF
STANDARDS
METROLOGY
AND INSPECTION

METROLOGY
REGULATORY

PRODUCT
INSPECTION
COMMODITY
LABELING
STANDARDS

RENEWABLE ENERGY CERTIFICATION

ACCURACY | RELIABILITY
INNOVATION | QUALITY
SUSTAINABILITY

/2024

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Foreword from the Director General

Director General

As Director General of the Bureau of Standards, Metrology and Inspection (BSMI), I am proud to lead our mission in strengthening Taiwan's national quality infrastructure amid global challenges such as the transition to net-zero emissions, digital transformation, and supply chain realignment. Through robust systems in standardization, conformity assessment, and metrology, BSMI plays an important role in supporting industrial development and building a safer, more resilient, and sustainable society.

In 2024, we developed or revised 228 national standards across key sectors, including net-zero technologies, cybersecurity, environmental management, smart machinery, railway engineering, space applications, and consumer goods. These standards empower industries to innovate, stay globally competitive, and transition toward sustainable business models.

Recognizing emerging risks, we continue to enhance regulatory frameworks to ensure product safety. In response to the growing use of energy storage and charging technologies, we implemented mandatory inspections for stationary lithium energy storage systems, power conversion equipment, and EV chargers. Our adoption of risk-based market surveillance further strengthens consumer protection and public confidence.

To support next-generation infrastructure and clean energy goals, BSMI is advancing testing and certification for 5G smart poles, 6G chips, semiconductors, EV charging systems, photovoltaic installations, and battery storage technologies. We also continue to promote voluntary certification programs and facilitate the green energy certificate market. In 2024, we launched the top-tier global battery safety testing lab and Taiwan's first energy-efficient tyre testing facility, reinforcing our global leadership in testing and certification.

On the international stage, we proudly hosted the 31st Asia Pacific Legal Metrology Forum (APLMF) Annual Meeting and signed a MoU with Indonesia to deepen technical cooperation. These initiatives broaden Taiwan's global engagement and help integrate our industries into international value chains.

Looking ahead, BSMI will remain committed to professionalism, innovation, and international collaboration. By continuously optimizing our regulatory systems and aligning with global benchmarks, we will enhance Taiwan's global competitiveness while safeguarding the well-being of consumers and supporting sustainable growth for future generations.

Yi-Ling Chen

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BSMI OVERVIEW

Who We Are

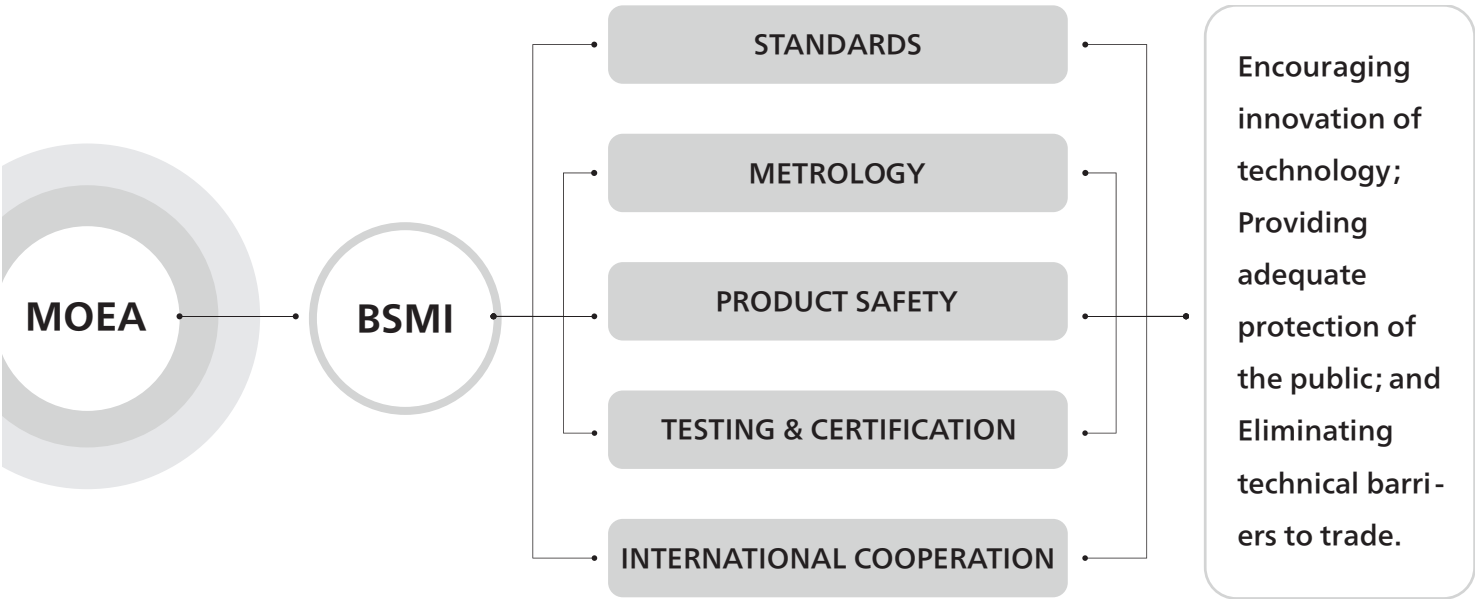
The Bureau of Standards, Metrology and Inspection (BSMI) under the Ministry of Economic Affairs (MOEA) is the authority responsible for standardization, metrology and consumer product safety in Taiwan.

What We Do

Being guided by the principle of "Innovative Thinking, Proactive Service and International Connection," we follow good practices to encourage innovation of technology, provide adequate protection for the public, and facilitate trade by eliminating technical barriers to trade.

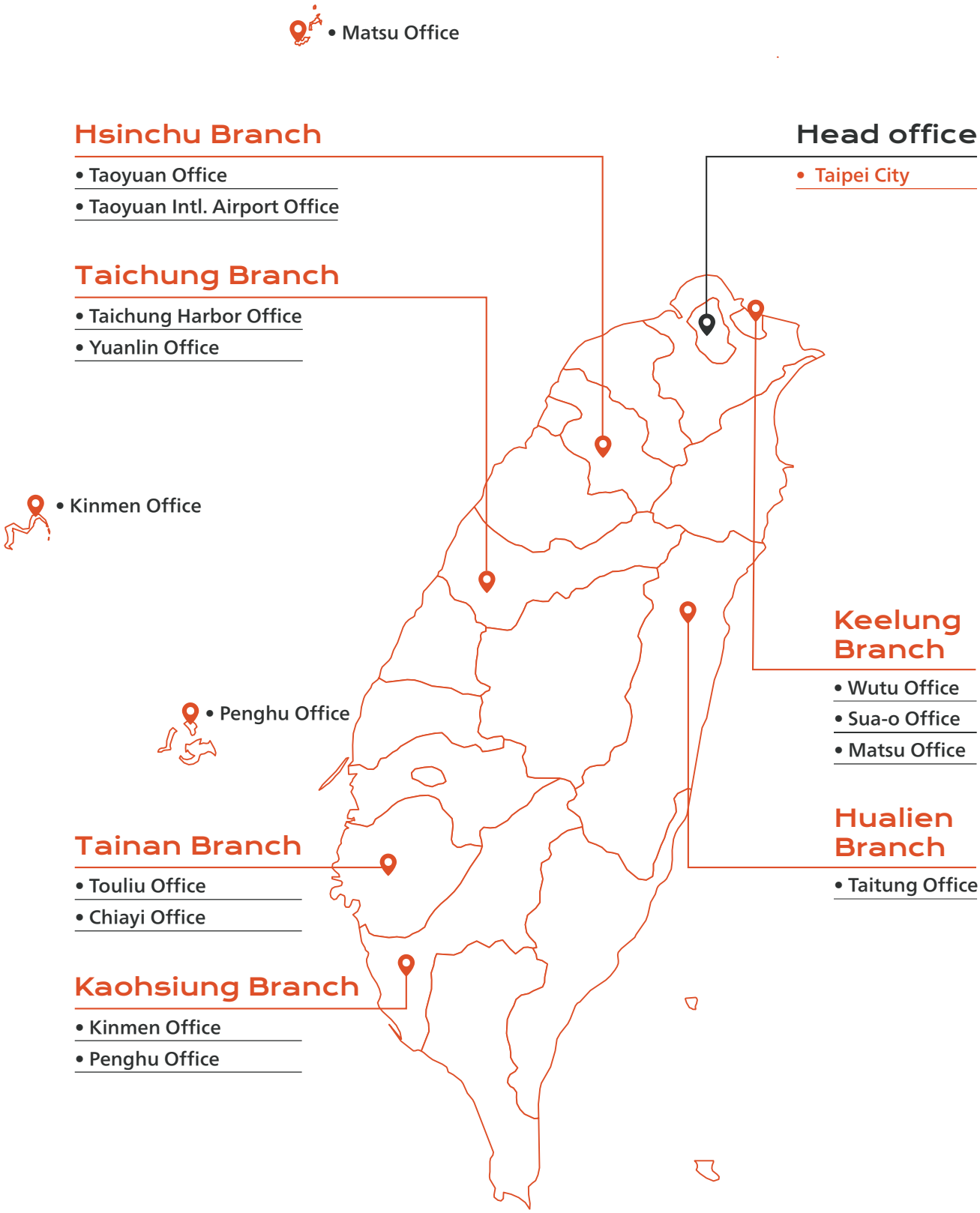
The core functions of BSMI are as follows

- Developing and maintaining national standards;
- Regulating and monitoring safety of products, mainly industrial and consumer products; developing commodity labeling rules and requirements;
- Establishing and maintaining national metrology system, including legal metrology and scientific metrology;
- Developing voluntary certification programs for products of emerging technology, including issuance of Taiwan Renewable Energy Certificates; and
- Engaging with international partners to collaborate on matters involving standardization and conformity assessment activities.



Where We Are

The BSMI has its head office in Taipei City, the capital of Taiwan, and 6 branches located in harbors, airports and major cities, providing a dense network of services nationwide.



Organization Chart by Activities

The BSMI is comprised of 6 divisions and 6 branches, which are entrusted with the administration and implementation of standardization, metrology, and consumer product safety in Taiwan.

Director General

- **Deputy Director General**
- **Deputy Director General**
- **Chief Secretary**

Integrated Planning Division

Strategic planning, consumer protection, market surveillance, certification management and international affairs

Standards Division

Development and maintenance of national standards

Inspection Administration Division

Planning and management of regulatory inspection of consumer products, chemical engineering products, mechanical products, EE & IT products

Inspection Technology Division

Laboratories for testing and related technology involving areas of physical properties, chemical properties, mechanical and electrical aspects of products, as well as emerging technology in green energy; National Renewable Energy Certification Center

Metrology Administration Division

Policy planning and management of national policy planning and management of national measurement system and legal metrology system for weights & measuring instruments

Metrology Technology Division

Implementation of verification and inspection activities for legal metrology

Logistics

Secretariat ; Budget, Accounting and Statistic Office ; Personnel Office ; Government Ethics Office ; Information Office ; Legal Affairs Office

Branches

Keelung Branch ; Hsinchu Branch ; Taichung Branch ; Tainan Branch ; Kaohsiung Branch ; Hualien Branch

Highlights of 2024

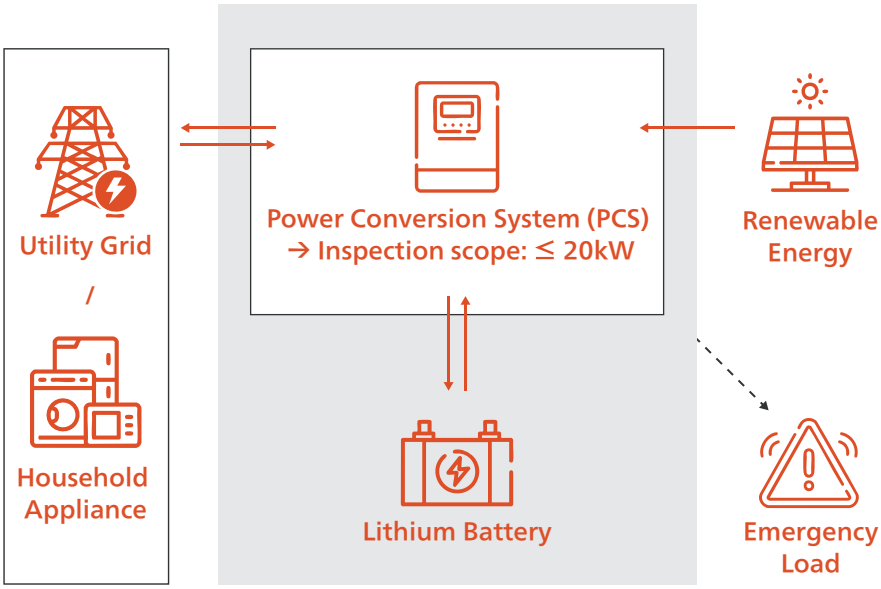
[01_]

Establishing a safer consumer environment through the enhanced management of high-risk products and the utilization of information technology

1) Annual important measures for the mandatory inspection products

To achieve net-zero carbon emissions by 2050, renewable energy generation equipment and energy storage systems will be progressively installed not only at outdoor sites but also in households and communities. In addition, the government is actively promoting the use of electric vehicles. In 2024, the BSMI included power conversion systems (with a capacity no more than 20 kW), stationary lithium battery storage appliances (with a battery capacity not exceeding 20 kWh), and electric vehicle supply equipment (with a power rating of 30 kW or less) within the scope of mandatory inspections to ensure the safety of these devices and safeguard consumer rights.

‖ Residential lithium battery storage appliances



Residential Lithium Battery Storage Appliance
(inspection scope: battery capacity not exceeding 20kWh)

Additionally, BSMI revised 4 inspection standards covering children's bedguards, baby walking frames, strollers and carriages, and automobile tyres to enhance safety and quality.

Children's bedguards

Children's bedguards

Baby walking frames

Strollers and carriages

Automobile tyres

2) Post-market surveillance

After regulated products enter the market, the BSMI closely monitors those sold in both physical stores and online platforms to ensure safety of consumers. We conduct random testing on products purchased from the market, with a focus on high-risk items, including seasonal, festive, and trendy products of public concern. In 2024, a total of 2,811 products were tested, revealing a non-compliance rate of 9.74%. The testing results have been made publicly available, and consumers are encouraged to choose compliant products and use them properly to safeguard their rights and interests.

Furthermore, the BSMI applied web crawler technology to identify and remove listings lacking the Commodity Inspection Mark from major e-commerce platforms, resulting in the removal of 17,077 non-compliant listings in 2024. This initiative targeted products with potential consumer risks. By proactively monitoring high-risk sellers, the BSMI reaffirms its commitment to enhancing regulatory practices, safeguarding consumer safety, and addressing the evolving dynamics of the digital marketplace.

‖ Process for using web crawler to identify non-compliant products sold online

[02_] Developing national standards to drive industry innovation and safeguard consumer safety

1) Establishment of important annual standards

In 2024, the BSMI made strong strides in standardization, aligning its work with key national policies such as the "Forward-Looking Infrastructure Development Program" and the "Six Core Strategic Industries." Efforts also supported care improvements for children, the elderly, and people with disabilities. A total of 228 national standards (CNS) were developed or revised across seven major sectors—driving innovation, strengthening infrastructure, and promoting sustainability.

To support Taiwan's net-zero goals, 31 CNS were issued to accelerate the energy transition, including those related to wind energy generation systems and fuel cell road vehicles. In addition, 7 standards focused on environmental management topics, such as carbon neutrality and carbon dioxide capture, were developed. In the area of cybersecurity, 11 CNS were introduced to help industries adopt stronger, more integrated security systems. The BSMI also contributed to emerging sectors by updating or formulating 10 standards for smart machinery, 11 for railway engineering, and 7 for space technology.

‖ Focus of standardization activities

In line with national policies and consumer needs, the BSMI revised 151 CNS to enhance the safety and quality of everyday products. These updates covered items such as refrigerators and freezers, escalators, trucks and bus tyres, PVC windows, textiles, and children's care products—ensuring a safer and more reliable consumer experience.

2) Promoting the development of user-friendly and innovative assistive products

‖ The award ceremony for the universal design and assistive device campaigns

Promoting accessibility and inclusion remained a top priority. On November 19, the BSMI hosted the award ceremony for the "Universal Design Competition for Assistive Devices for the Elderly and Persons with Disabilities," alongside the "Campaign on User-Friendly Commercial Assistive Devices." These initiatives promote universal design, align with the Convention on the Rights of Persons with Disabilities (CRPD), and recognize innovative products that empower users.

The competition highlighted creative assistive devices integrating technologies such as ergonomics, wireless communication, and advanced materials. Judging criteria focused on safety, ease of use, and thoughtful design—such as lightweight construction, compact storage, and intuitive operation. These efforts showcase industry commitment to user-centered innovation while reinforcing Taiwan's position in the global assistive technology market. At the same time, they reflect the BSMI's mission to foster a more inclusive society—one that supports dignity, independence, and opportunity for all.

[03_] Enhancing the national metrological infrastructure and aligning it with international measurement standards

1) Legal metrology

-A Ongoing monitoring of electric vehicle supply equipment (EVSE): verification, alignment, and promotion

To encourage the use of electric vehicles (EVs) and reduce "range anxiety," the government is expanding the deployment of public EV charging stations. As the number of charging stations increases, accurate measurement of electric energy has become a growing concern. Since January 1, 2023, EV charging equipment (EVSE) has been subject to legal metrology control. A two-year transition period has been granted for stations installed before this requirement took effect.

To help businesses complete the required verification before the deadline, the BSMI has taken proactive steps. In 2024, BSMI held 10 seminars to connect businesses with verification bodies, clarify regulations, and provide guidance on compliance. Additionally, BSMI visited major domestic manufacturers to explain the regulatory requirements and assist them in navigating the verification process.

By 2024, a total of 5,672 charging stations had been verified, ensuring accurate energy measurement, reliable charging, and consumer protection.

‖ On-site electric energy measurement verification

‖ The correction tests performed for type approved diaphragm gas meters

‖ The correction tests for type approved water meters

-B Assisting manufacturers of water meters and diaphragm gas meters in complying with the updated technical specifications for type approval

To ensure that the measurement accuracy of water meters and diaphragm gas meters meets international standards, the BSMI updated the type approval specifications for these instruments in 2022 and 2023, following the requirements of the International Organization of Legal Metrology (OIML). The revised specifications came into effect on July 1, 2023. The new standards of water meters and diaphragm gas meters which have electronic devices will apply starting January 1, 2026. The correction period will remain open until December 31, 2027.

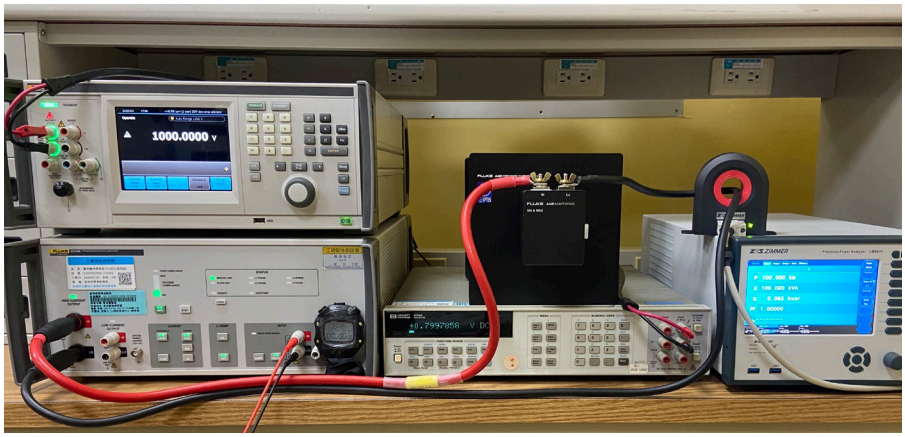
To support manufacturers in meeting the new technical specifications, the BSMI has coordinated testing based on meter caliber and time sequence, allowing series testing of the same caliber to speed up the process. Currently, the correction process is progressing as planned, and the BSMI will continue to monitor progress and adjust testing capacity as needed.

2) Scientific metrology

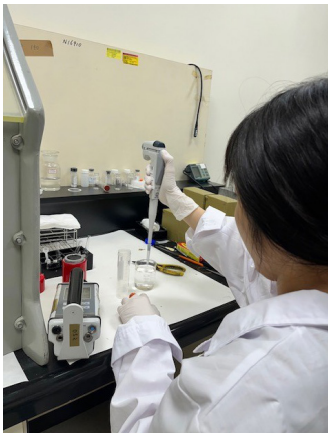
In 2024, BSMI completed an uncertainty assessment of the DC power measurement system to support future traceability services for industries in green energy and smart manufacturing. Additionally, to address the decommissioning needs of Taiwan's nuclear power plants, a Ni-63 activity standard for plant decommissioning has been established.

Moreover, BSMI has developed advanced analytical measurement techniques for organic components in semiconductor electronic-grade reagents, focusing on particle sizes ranging from 10 to 100 nm. This development will improve particle contamination traceability in the semiconductor industry, enhancing process yield and helping to maintain its global competitive edge.

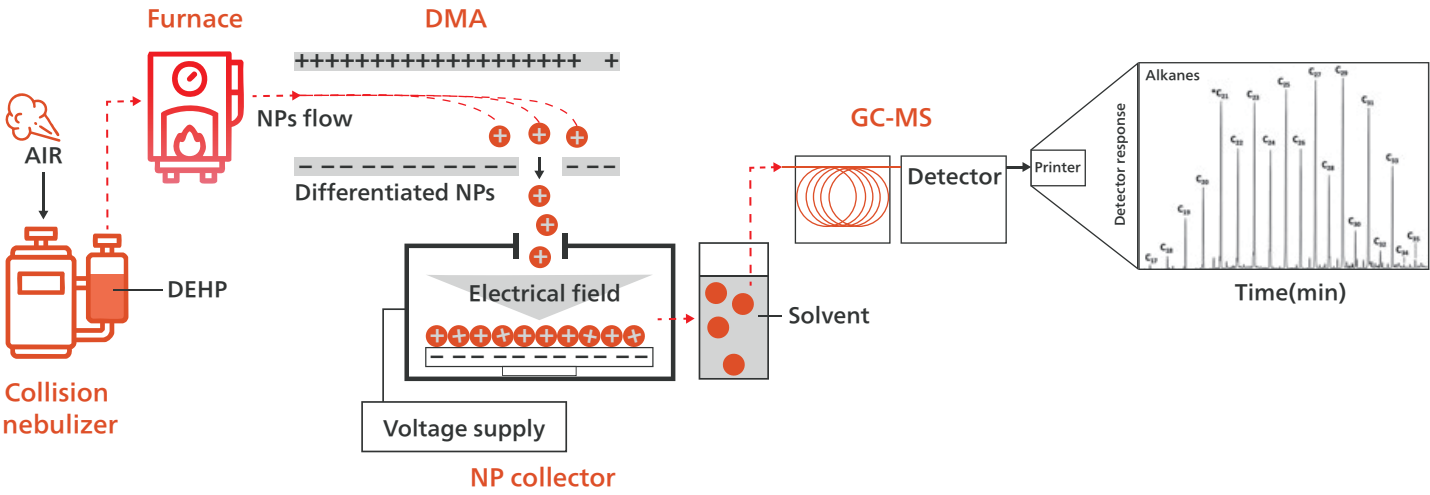
‖ The DC power measurement system



‖ The Ni-63 activity standard



‖ The system architecture diagram of semiconductor impurity analysis techniques



3) 2024 World Metrology Day – symposium on metrology supporting sustainable economic development

To celebrate World Metrology Day, the BSMI hosted the "2024 World Metrology Day - Metrology Supporting Economic Sustainable Development Seminar" on May 17. The event featured leading industry experts who delivered lectures on metrology and sustainability, focusing on three key topics: "Digital Transformation and AI," "Net Zero Transformation and the Semiconductor Industry," and "Future Zero-Carbon Hydrogen Energy." These discussions highlighted the critical role of metrology in promoting sustainable industrial development. The symposium brought together 140 experts from a wide range of industries.

‖ Symposium on “2024 World Metrology Day- Metrology Supporting Sustainable Economic Development” on May 17, 2024

[04_] Certification system for emerging technological products

1) Testing and certification for next-generation communication products

-A 5G smart poles

To speed up the deployment of 5G smart poles across Taiwan and ensure alignment with international standards and certification, the BSMI has introduced new technical specifications for smart pole-mounted equipment, including video surveillance systems and digital signage. These specifications cover critical aspects such as cybersecurity, interoperability, and 5G O-RAN. Additionally, the technical specifications for the 5G smart pole system have been updated to include 27 requirements, addressing information interoperability, communication interfaces, electrical and structural safety, environmental reliability, and more.

By continuously collaborating with industrial alliances to refine technical standards and requirements, the BSMI is driving the growth of Taiwan's smart pole industry. We also showcased our efforts at the 2024 Smart City Summit & Expo in Taipei, featuring interactive displays that highlighted Taiwan's progress in 5G smart pole development. Committed to advancing the testing and certification system for 5G smart poles, the BSMI is playing a key role in facilitating Taiwan's transition to smart, connected urban environments.

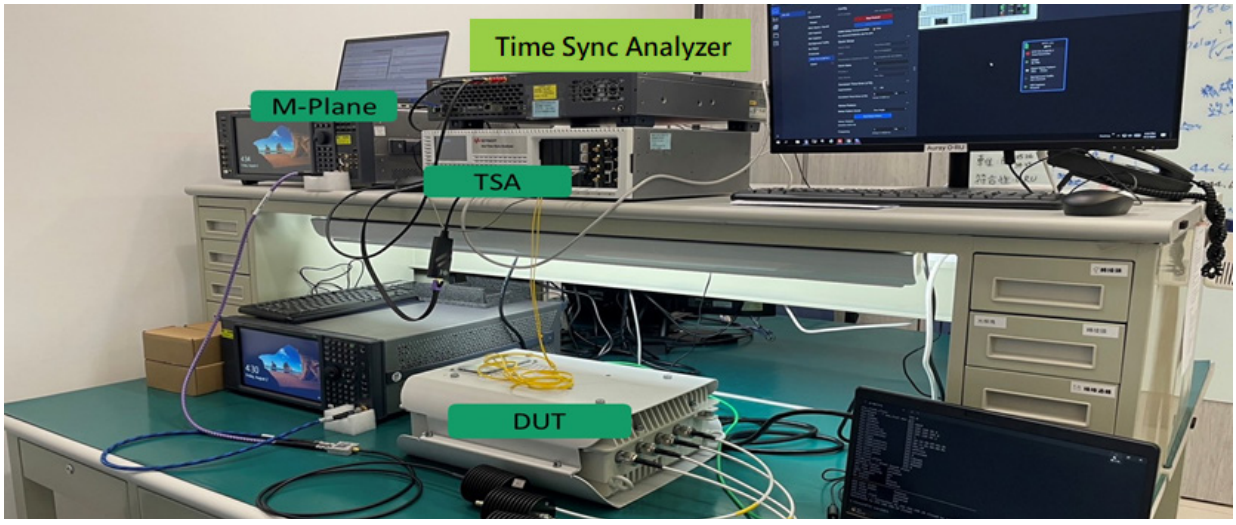
‖ The 2024 Smart City Summit & Expo

-B Standards, testing, and certification for 6G chip integration systems

In response to the challenges presented by the emergence of 6G telecommunications systems and the Artificial Intelligence of Things (AIoT), the BSMI has launched the 6G Chip Integration System Project to support domestic industries in seamlessly integrating with international 6G technologies. Building on the progress made with 5G and the development of international 6G standards, this initiative aims to establish Taiwan's 6G testing and certification environment.

In 2024, the BSMI completed the draft testing standards and specifications for 6G-related telecommunications systems, effectively facilitating the early deployment of 6G networks in Taiwan. Moving forward, the BSMI will continue to advance the development of 6G product testing and certification environments, boosting international trust and visibility for Taiwan's ICT products and increasing the value of related industries.

‖ The schematic diagram of the 6G O-RAN micro base station testing system



2) Outdoor battery energy storage system certification

On November 14, 2022, the BSMI launched the Voluntary Product Certification (VPC) Program for Battery Energy Storage Systems (BESS). This initiative has since been adopted by the Energy Administration and TaiPower Company. To better align with Taiwan's environmental conditions, the technical specifications for outdoor BESS certification were updated on June 17, 2023, and October 15, 2024.

The VPC program for BESS follows a three-stage process: (1) Design Review, which ensures the safety of components; (2) Site Review, which tests and confirms installation conditions; and (3) Periodic Testing, which evaluates the system's operational status every two years. These VPC certifications are conducted by BSMI-recognized bodies to ensure the safety and reliability of BESS installations in Taiwan. By December 2024, 33 VPC certificates had been issued.

Additionally, the BSMI is dedicated to improving the safety of operational or under-construction sites that were approved by TaiPower Company before the VPC program's implementation. To achieve this, risk management measures were put in place to enhance safety and control fire risks. The BSMI also assisted site operators in refining their designs and ensuring fire safety upgrades through certified fire equipment reviews, ultimately enhancing overall site safety.

‖ Energy storage system site

3) Inauguration of Taiwan's first energy-efficient tyre testing laboratory

In September 2024, the BSMI proudly unveiled Taiwan's first energy-efficient tyre testing laboratory at the Automotive Research & Testing Center (ARTC). This state-of-the-art facility marks a significant milestone in advancing sustainability within the automotive sector. By testing tyres for energy-saving features such as reduced rolling resistance and improved fuel efficiency, the lab plays a key role in promoting lower carbon emissions and greener transportation.

As countries worldwide adopt stricter energy-efficiency regulations for tyres, key factors such as rolling resistance, wet grip, and noise reduction are becoming essential in enhancing fuel efficiency, reducing CO2 emissions, and improving road safety. Once Taiwan's tyre energy efficiency standards become mandatory on July 1, 2026, the lab is expected to test up to 10 million tyres each year. This could lead to an annual fuel savings of 160,000 kiloliters and a reduction of 370,000 metric tons of carbon emissions. This initiative marks a crucial step in supporting Taiwan's 2050 net-zero policy goal and promoting a greener future for the automotive industry.

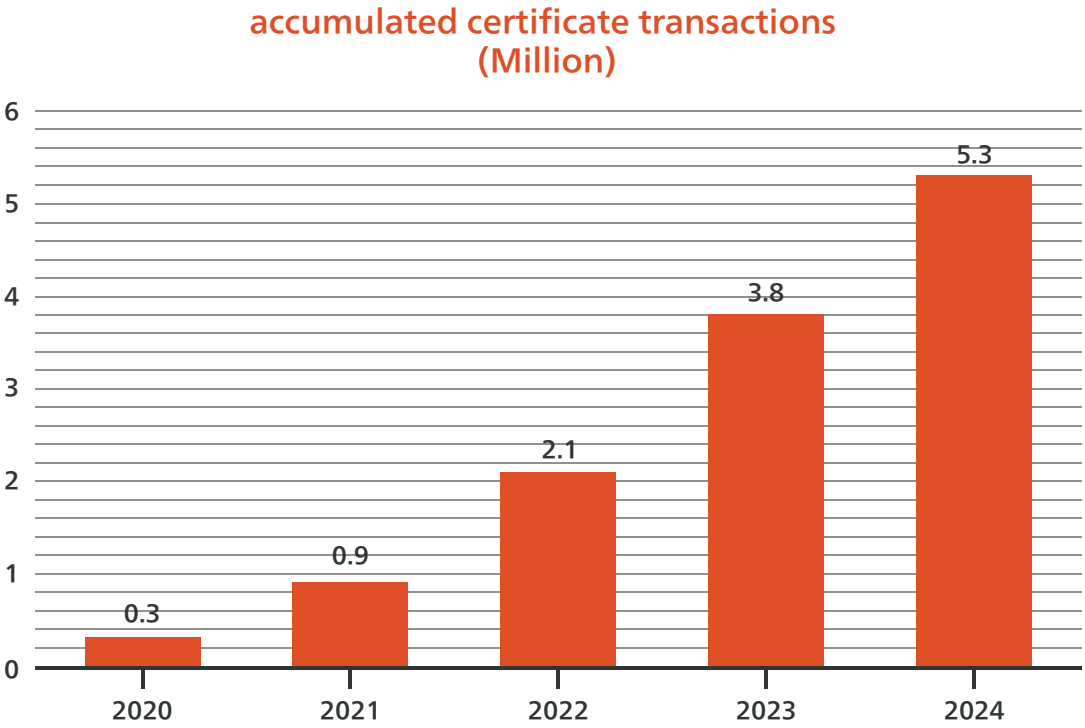
‖ Energy-efficient tyre testing laboratory opening ceremony

[05_]

Advancing green energy testing technologies to support Taiwan's industrial transition to net-zero emissions

1) Expanding green electricity transactions and assisting businesses in obtaining renewable energy certificate (T-RECs)

In 2024, the Taiwan Renewable Energy Certification (T-REC) Center, under BSMI, continued to promote renewable energy growth in Taiwan. A total of 7.3 million T-RECs were issued, with a trading volume reaching 6.74 million. These certificates are vital for businesses to demonstrate their commitment to green energy, driving the expansion of renewable energy across Taiwan.



‖ Cumulative trade volume

To support the MOEA's key renewable energy strategies—"Guiding green electricity into the free trade market" and "Encouraging diverse renewable energy matchmaking"—BSMI is advancing the Corporate Power Purchase Guarantee (CPPG) Scheme and hosting briefings. These initiatives assist offshore wind developers and buyers in understanding the CPPG operational model, ensuring that offshore wind bidding projects enter the free market in a timely manner.

Recent policy changes easing restrictions on small-scale PV projects have led to a surge in T-REC applications. In response, BSMI is developing streamlined mechanisms for on-site inspections to make the process more efficient.
BSMI also continues to promote the Green Lease Program, which allows property owners to provide green energy and T-RECs to their tenants. This program offers a more flexible way for tenants to meet their renewable energy goals. As of 2024, nearly 100 users have participated, with a total of 100,000 T-RECs issued.

At international level, T-REC collaborates with key global partners, including the U.S. Environmental Protection Agency (USEPA), Renewable Energy 100 (RE100), and the U.S. Green Building Council (USGBC). These partnerships facilitate knowledge-sharing and best practices in renewable energy policies and technologies, strengthening Taiwan's role in the global renewable energy landscape.

Additionally, T-REC has signed an MOU with EnergyTag. A task force will be established to explore collaboration opportunities, including expanding Taiwan's voluntary renewable energy market and integrating it with EnergyTag's 24/7 carbon-free electricity initiative. EnergyTag has also featured T-REC on its website as a global example, recognizing it as Taiwan's first national system that tracks renewable energy use hour by hour.

2) Voluntary certification for large-size high-efficiency solar photovoltaic modules

BSMI has been dedicated to improving the VPC certification program for solar photovoltaic (PV) modules and related technical specifications, with the goal of driving the growth of Taiwan's solar energy industry and supporting its expansion into global markets.

Starting in 2022, the updated "Technical Specifications for Taiwan High-Efficiency Solar Photovoltaic (PV) Modules" (PV Taiwan+) introduced an annual increase of 10W in the module's maximum output power. This change accelerates the advancement of domestic solar PV technology and strengthens the industry's competitiveness.

As the industry moves toward larger module sizes, several companies have already introduced solar modules using M6 (166×166mm) and M10 (188×188mm) solar cells. By the end of 2024, BSMI had approved a total of 259 VPC certificates, including 56 for M6 modules and 62 for M10 modules.

‖ The National center for energy storage system technology

‖ The opening and inauguration ceremony of NEST

3) Establishing the top-tier global energy storage battery safety testing laboratory

In 2024, a major milestone for BSMI was the establishment of the National Center for Energy Storage System Technology (NEST) at Tongluo Science Park. NEST is now Taiwan's largest energy storage system safety testing laboratory and one of the world's leading facilities in this field. Equipped with advanced testing facilities for fire, combustion, vibration, and environmental testing, NEST has a 360 kW/360 kWh energy storage system safety testing capacity, offering comprehensive capabilities.

Scheduled to officially begin operations in 2025, the center will allow Taiwanese manufacturers to conduct testing locally, eliminating the need to send products abroad. This will enhance Taiwan's competitiveness within the global green energy supply chain. Given the critical role of energy storage systems in stabilizing renewable energy, NEST will prioritize safety evaluations for energy storage systems and electric bus batteries, addressing key safety challenges and safeguarding public welfare.

On December 16, BSMI held a grand opening ceremony to mark this important achievement. The event also featured an international seminar on energy storage system safety, bringing together experts and industry leaders to discuss international standards, safety certification, and emerging trends in energy storage systems.

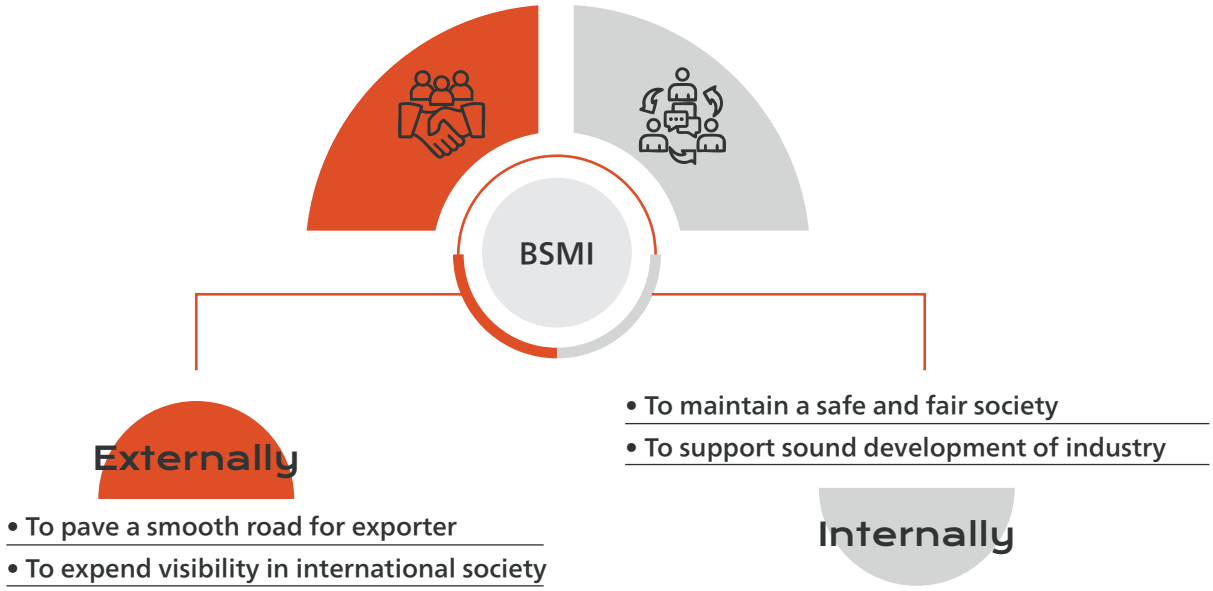
International Cooperation

4

The different roles that BSMI takes in our national quality infrastructure have yielded a variety of international cooperation activities, which help us to achieve goals both internally and externally.

Internally, we engage our partner countries in exchanges of information, practices and experts to maintain a safety and fair society, as well as to support sound development of industry. Externally, we spare no efforts to facilitate export of our products by reducing unnecessary conformity assessment costs. We also participate actively in the limited number of international organizations of which we are a member to enhance our visibility in the international community in this area.

‖ BSMI's visions to promote safety, fairness, and global engagement



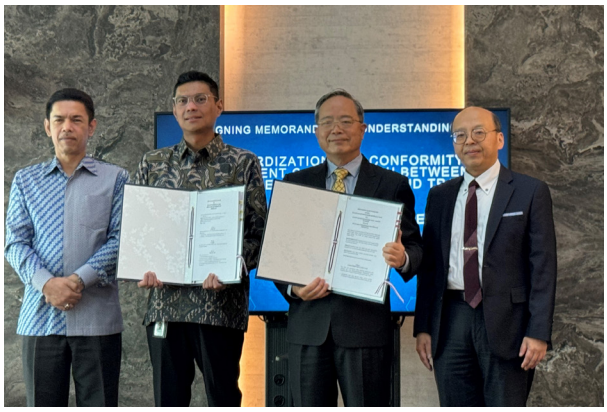
In 2024, the BSMI made the following key achievements.

[01_]

Taiwan-Indonesia MoU on standardization and conformity assessment cooperation signed to deepen bilateral economic cooperation

To strengthen economic ties between Taiwan and Indonesia, a Memorandum of Understanding (MoU) on Standardization and Conformity Assessment Cooperation was finalized on May 3, 2024, after more than seven years of discussions. Building on the 2018 MoU on Metrology Cooperation, this new MoU marks the second collaboration between the BSMI and Indonesian counterparts.

The MoU aims to enhance bilateral cooperation in standardization and conformity assessment through personnel exchanges, technical collaboration, and knowledge sharing. Both sides are committed to strengthening industrial competitiveness and advancing joint initiatives by engaging experts and sharing technical expertise to fully realize the benefits of the MoU.



‖ MoU signing ceremony

[02_]

The 31st APLMF annual meeting held in Taipei, strengthening Asia-Pacific metrological cooperation

The BSMI hosted the 31st Asia-Pacific Legal Metrology Forum (APLMF) Annual Meeting in Taipei from November 6 to 8, 2024. As a founding member of APLMF, BSMI was honored to host this significant event in Taiwan once again after 24 years, welcoming 66 metrology experts from 19 APEC member economies.

The meeting focused on key issues impacting international trade and consumer safety, including regulations for prepackaged goods, utility metering standards, agricultural product quality measurement, digital and medical metrology, and innovations in hydrogen energy measurement. Experts and government representatives from across the region shared progress, successful case studies, and ongoing challenges.

The success of the meeting highlighted BSMI's commitment to metrological excellence and its role in supporting the economic growth of the Asia-Pacific region. BSMI remains dedicated to aligning Taiwan's metrological standards with global developments and strengthening relationships with regional economies.

‖ 31st APLMF annual meeting

[03_]

The 5th ANZTEC TBT committee meeting held in Taipei

The BSMI and the Ministry of Business, Innovation and Employment (MBIE) of New Zealand hold the TBT Committee Meeting every two years in accordance with the TBT Chapter under the Economic Cooperation Agreement between Taiwan and New Zealand. The 5th TBT Committee Meeting took place in Taipei in October 2024, where both sides discussed cooperation on the APEC Sub-Committee on Standards and Conformance (SCSC), low-carbon hydrogen, and cybersecurity requirements for EVSE. A revised forward work program was agreed upon, providing a framework for future discussions and collaboration.

Additionally, three expert meetings were held to address important topics, including critical mineral supply chains, energy storage equipment, and the safety of lithium batteries and gas appliances.

‖ BSMI hosted the 5th ANZTEC TBT committee meeting

‖ The 5th ANZTEC TBT committee meeting

[04_]

The 8th regular meeting between BSMI, METI and NITE held in Taipe

Under the Memorandum of Understanding (MoU) signed in 2016, BSMI, the Ministry of Economy, Trade and Industry (METI), and the National Institute of Technology and Evaluation (NITE) held their 8th Regular Meeting on Consumer Product Safety in December 2024.

The meeting addressed key topics such as policies for ensuring the safety of online-sold products, product incidents and recalls, newly regulated products, public awareness initiatives, and METI's plans for revising the Consumer Product Safety Act.

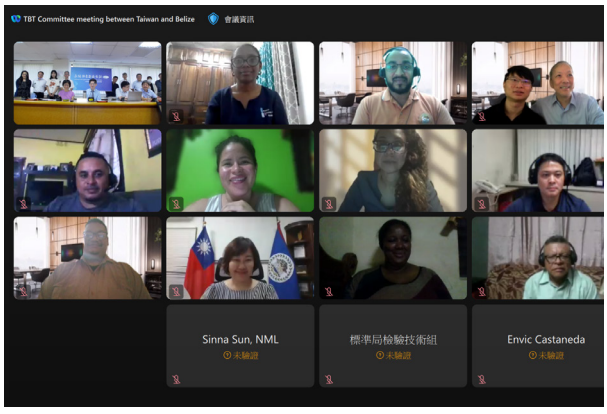
‖ BSMI hosted the 8th regular meeting

‖ Lab tour after the 8th regular meeting

[05_]

The 1st TBT committee meeting under the Taiwan-Belize ECA

BSMI and the Belize Bureau of Standards (BBS) held their first TBT Committee Meeting virtually on August 7, 2024. At the meeting, both sides exchanged information about their roles in the National Quality Infrastructure, fostering greater mutual understanding. BSMI agreed to offer capacity-building assistance to BBS in areas such as standardization, technical regulations, conformity assessment, and metrology, on a case-by-case basis.



‖ Taiwan-Belize Held 1st TBT Meeting under ECA

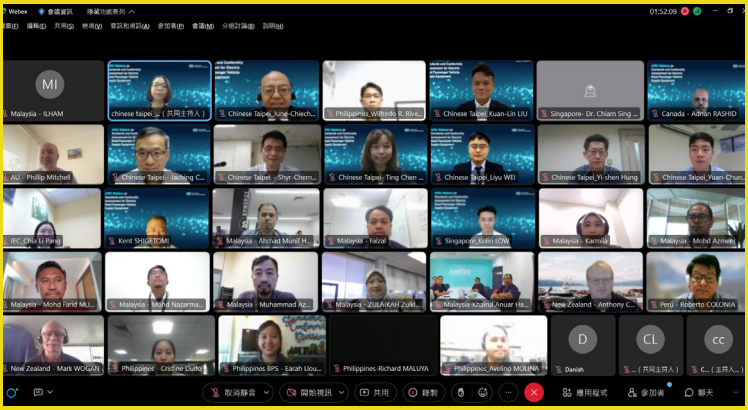
[06_]

APEC EVSE project

In September 2023, BSMI proposed an APEC project on Electric Vehicle Supply Equipment (EVSE), co-sponsored by 6 APEC member economies. The project included a survey, completed by 15 out of 21 APEC economies, and an online seminar held in April 2024.

The seminar brought together experts from APEC fora, standards organizations (CHAdeMO, IEC, ULSE), and regulatory authorities from Canada, New Zealand, the Philippines, Korea, and Taiwan. Discussions highlighted the importance of harmonization and interoperability in advancing EVSE development and trade.

Moving forward, BSMI remains committed to exploring APEC projects that benefit the region and contributing to freer trade and economic cooperation.



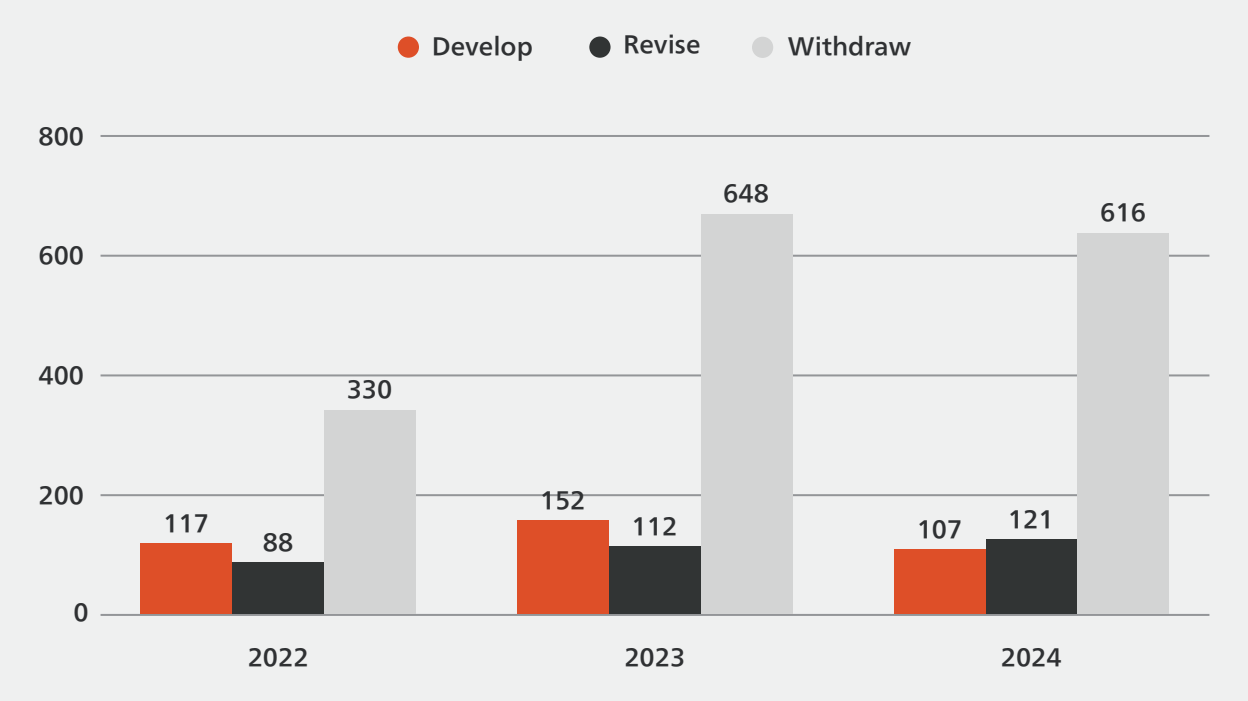
‖ Participants in the EVSE webinar

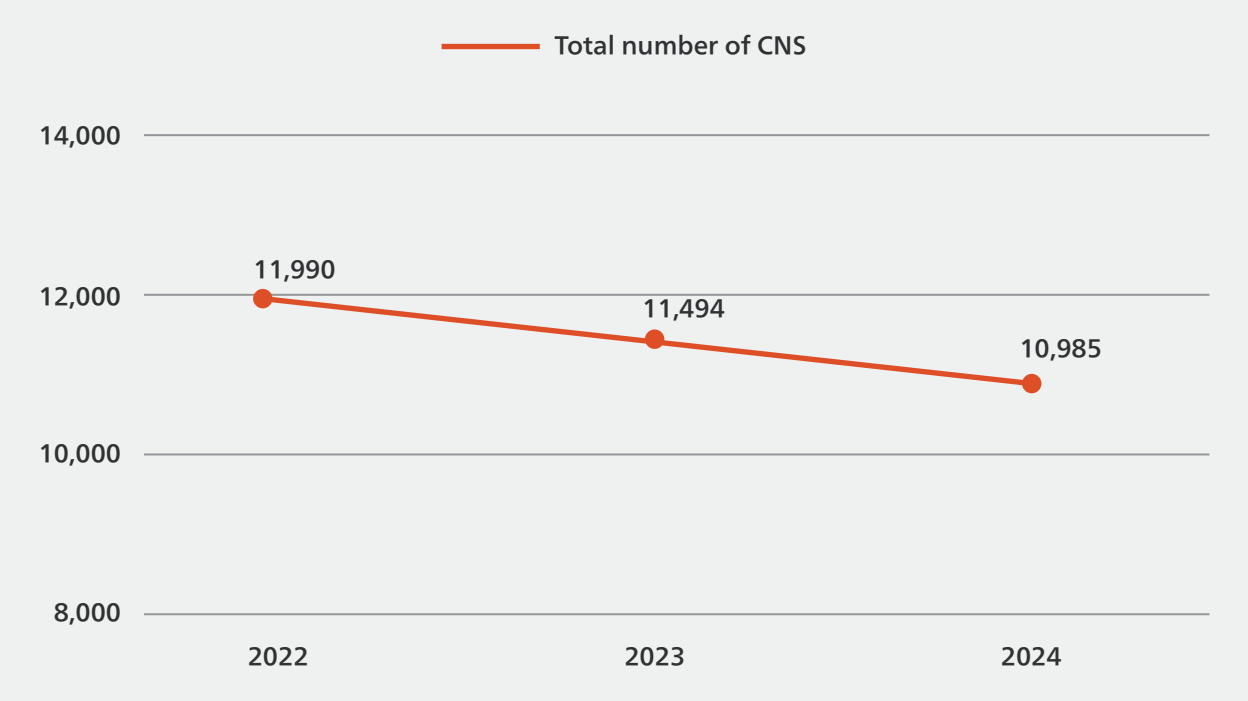
Statistics

[01_]

CNS standards

1) Status of CNS

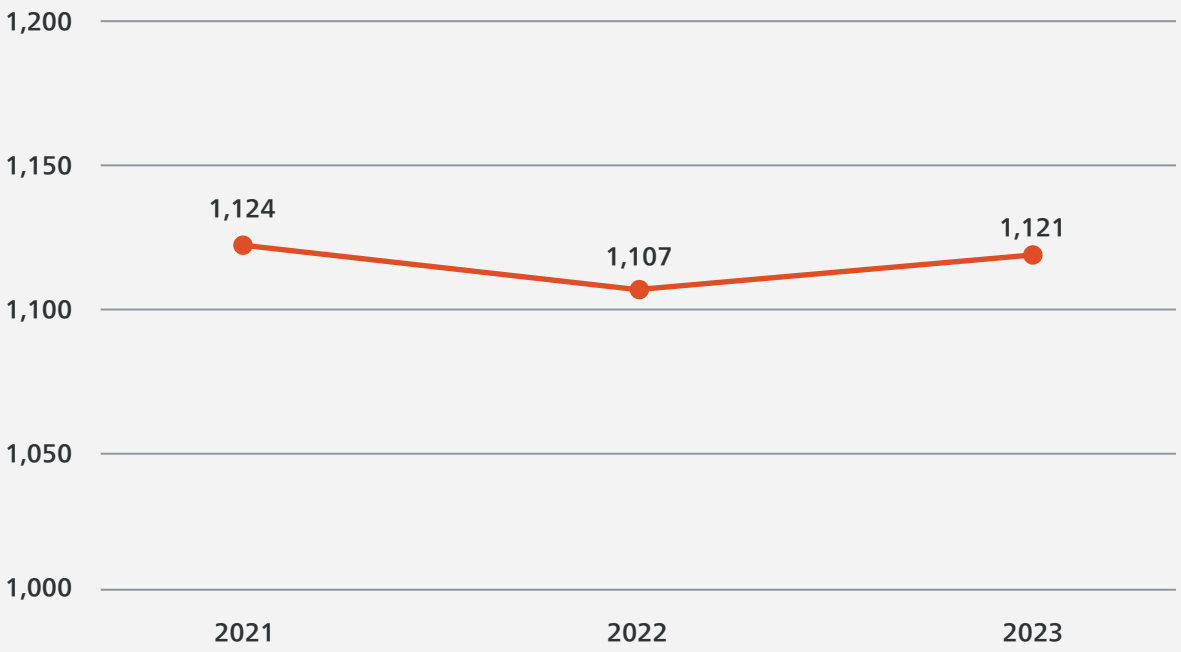




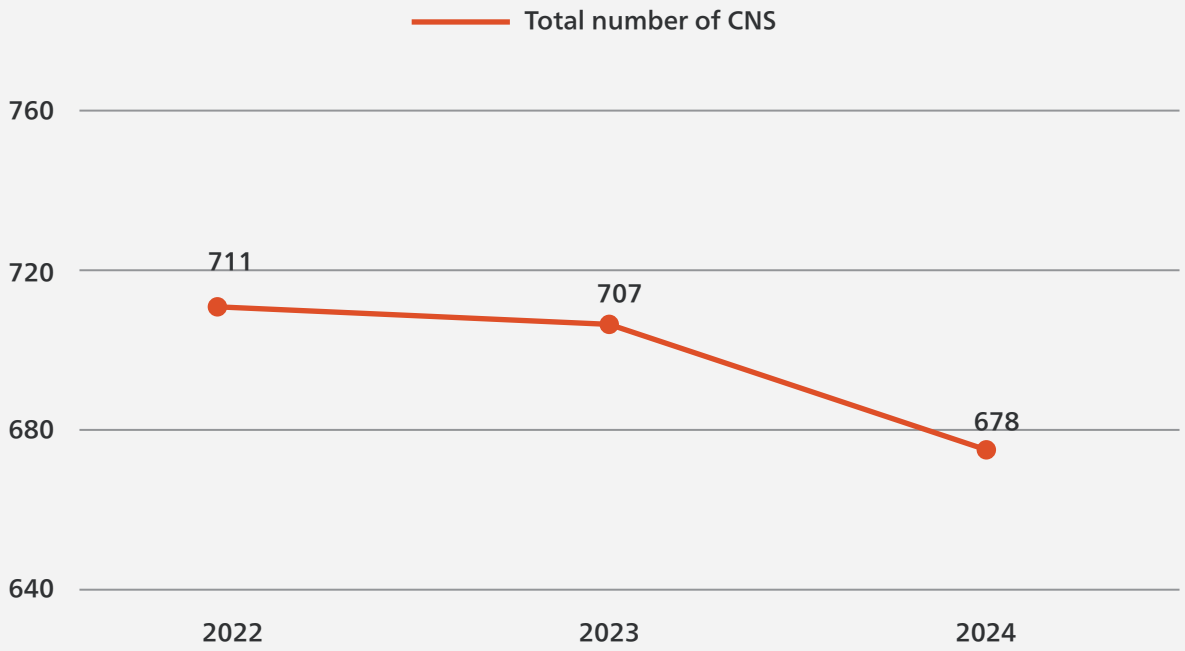
2) Alignment of CNS with international standards

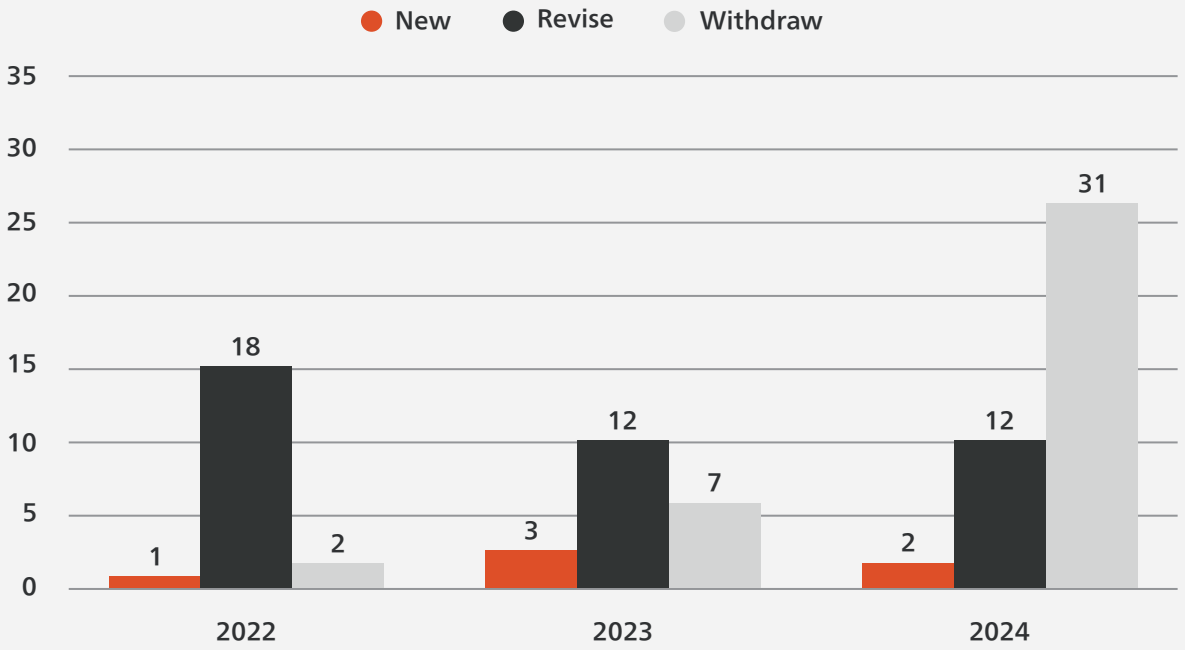
Existence of international Standards (A)	Number of domestic Standards aligning with international standards (B)	Rate of alignment (%) (B/A)
4,379	4,350	99.34 %

3) Number of CNS referenced in mandatory technical regulations

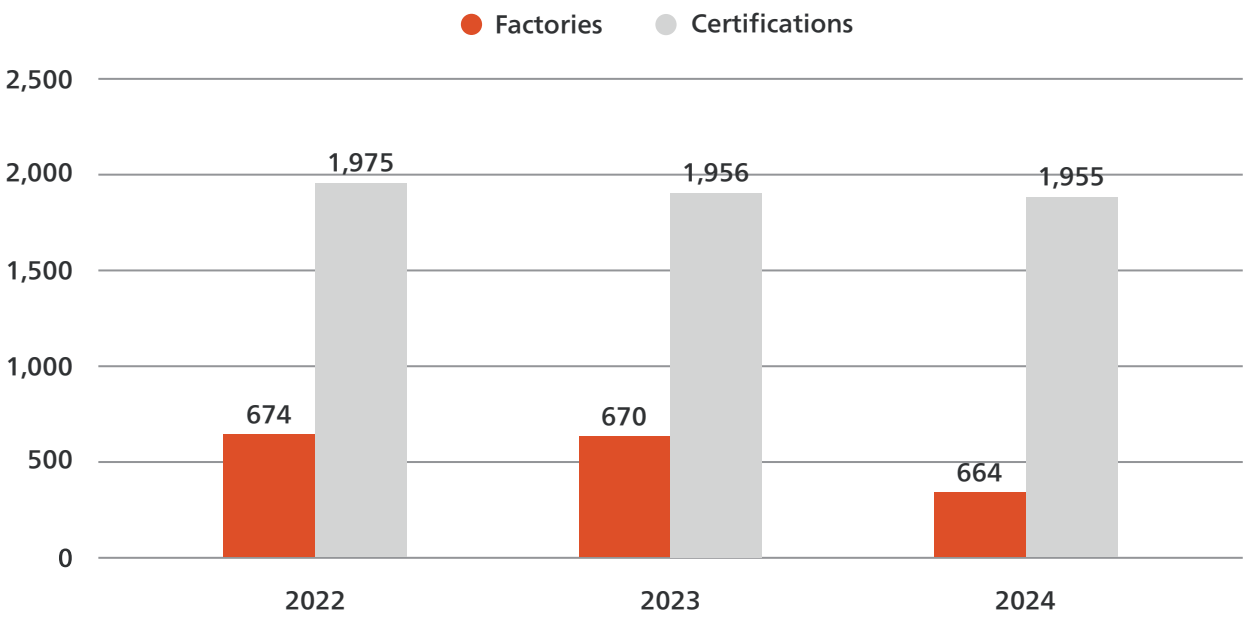


4) Status of CNS Mark





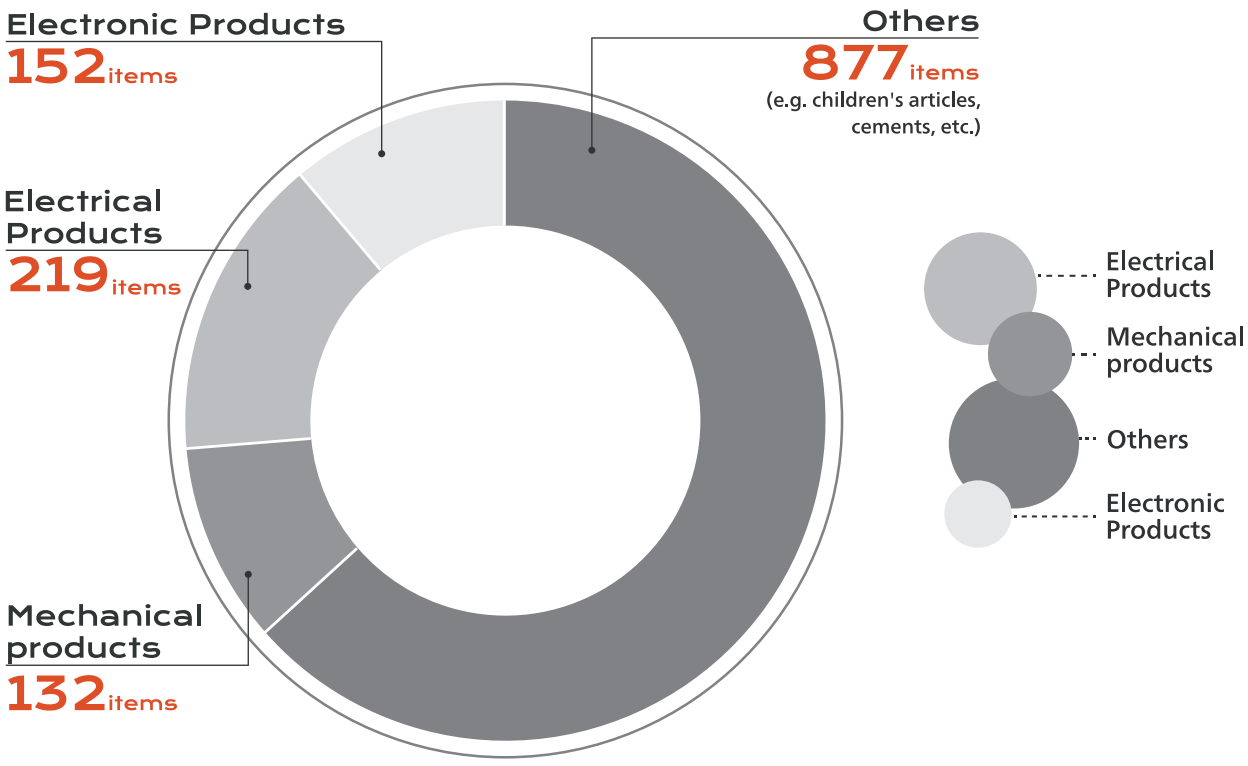
5) Numbers of CNS mark factories & certificates



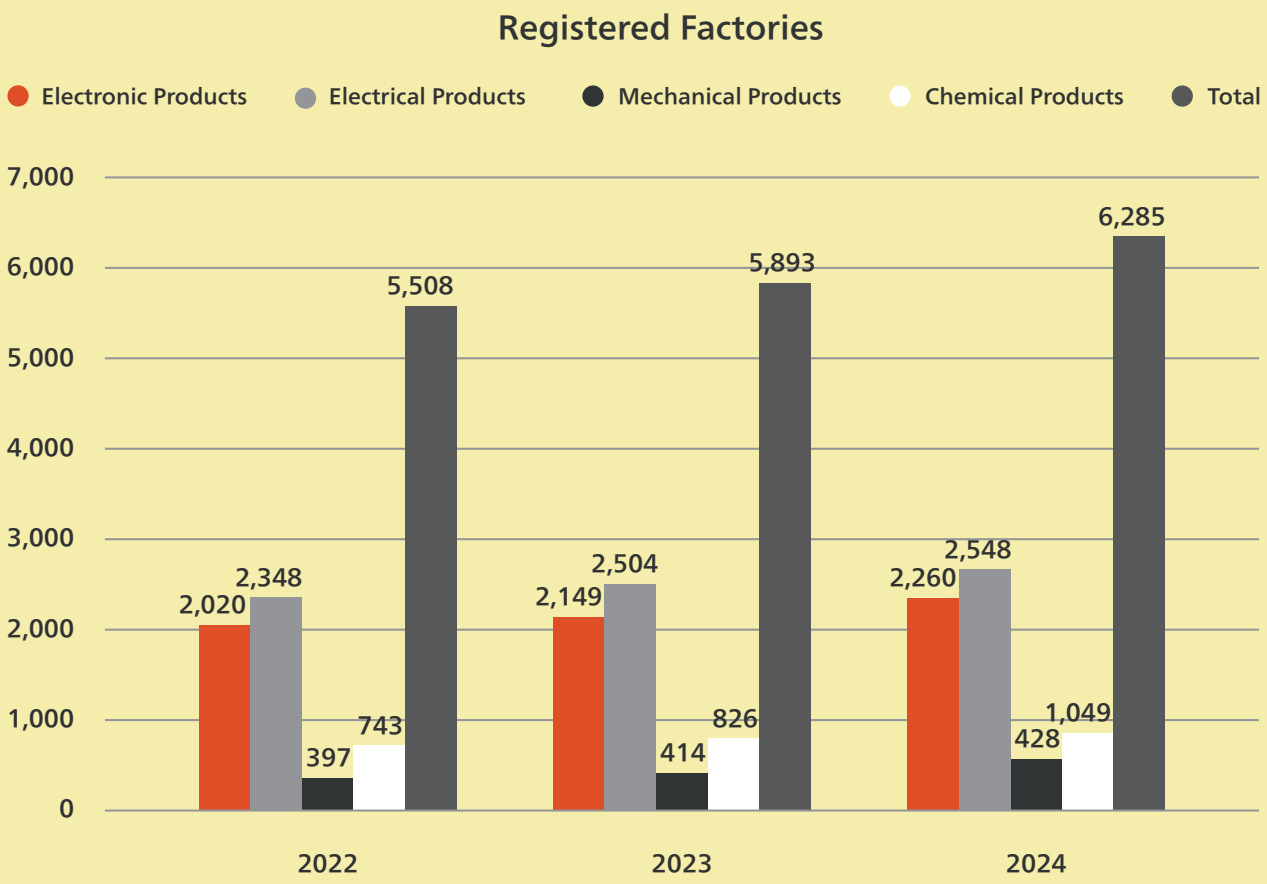
[02_]

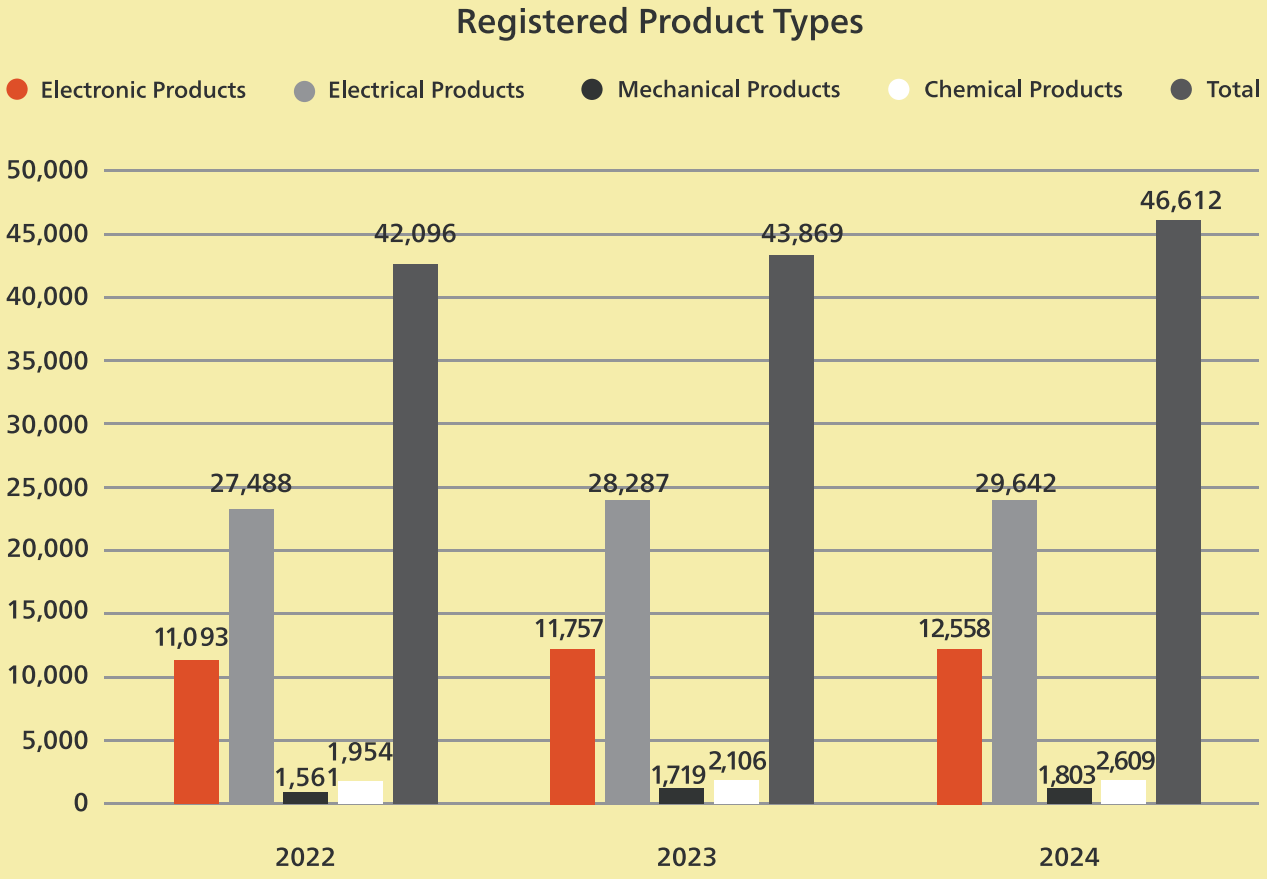
Consumer product policy activities

1) Regulated products of BSMI

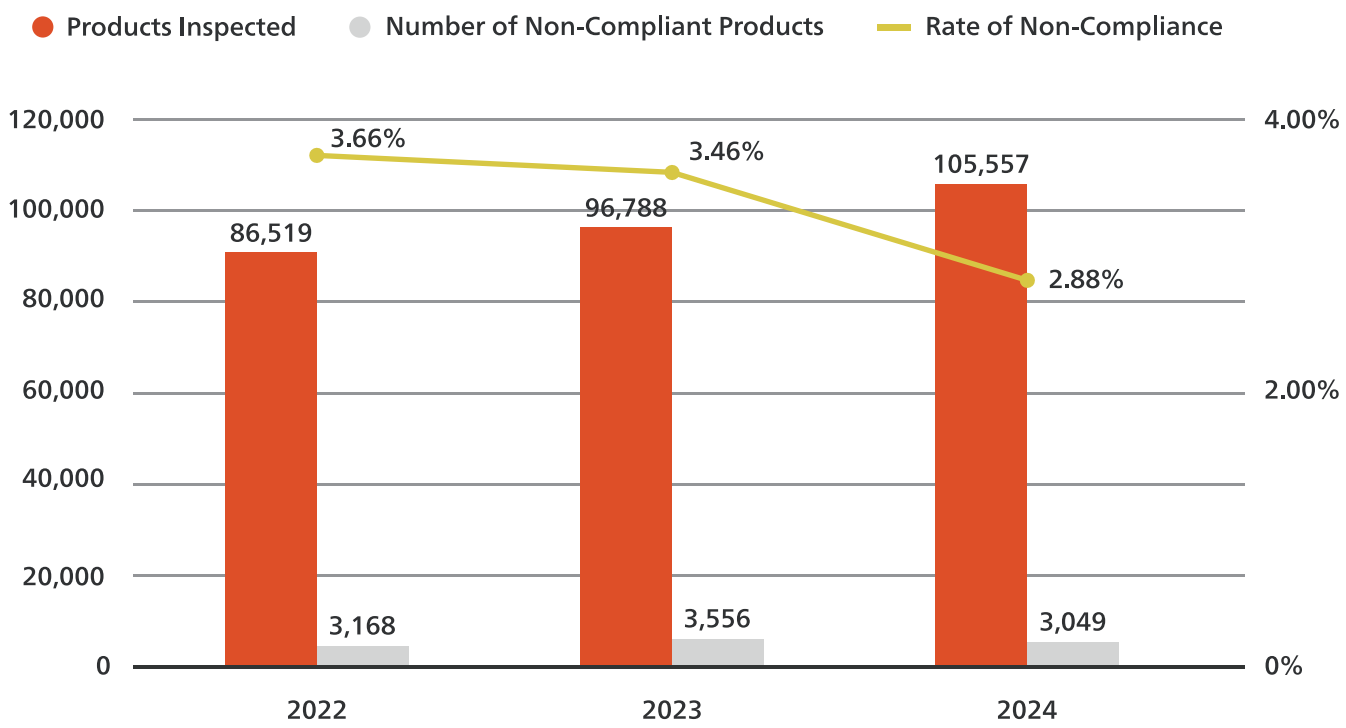


2) Numbers for the registration of product certification





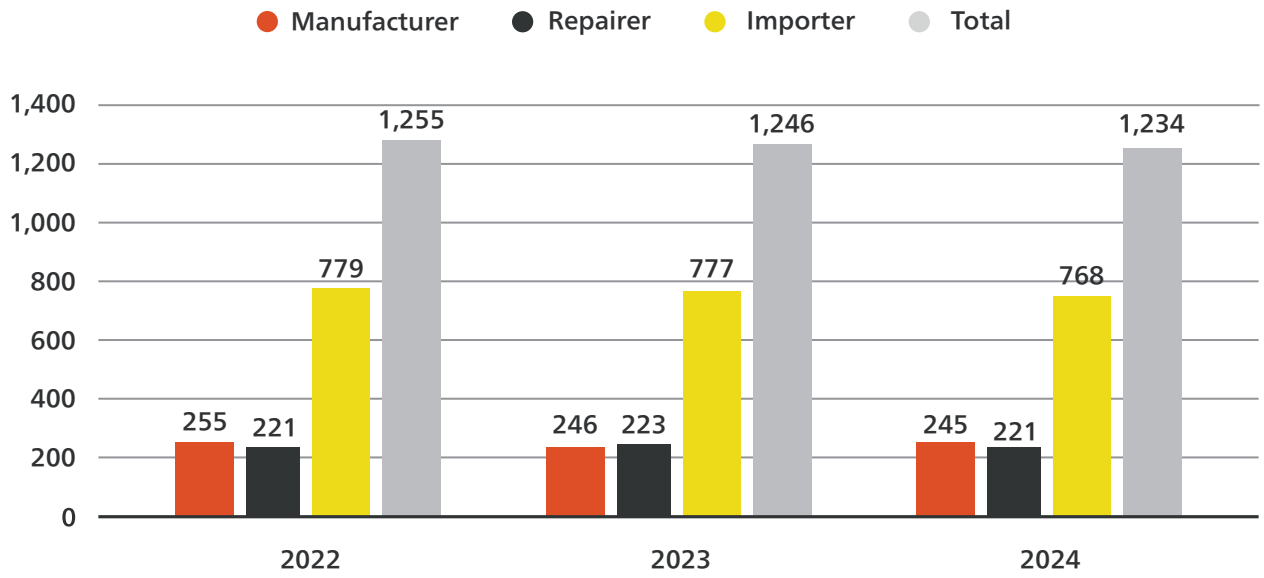
3) Number of commodities under market inspection



[03_] Metrology

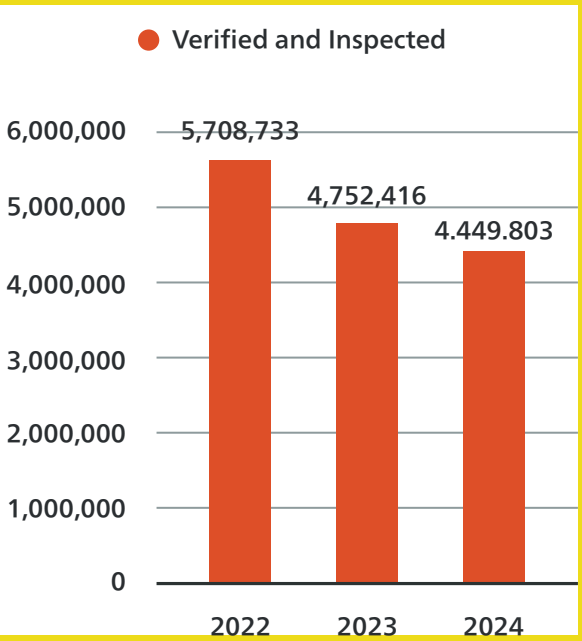
1) Licensing of measuring instrument businesses

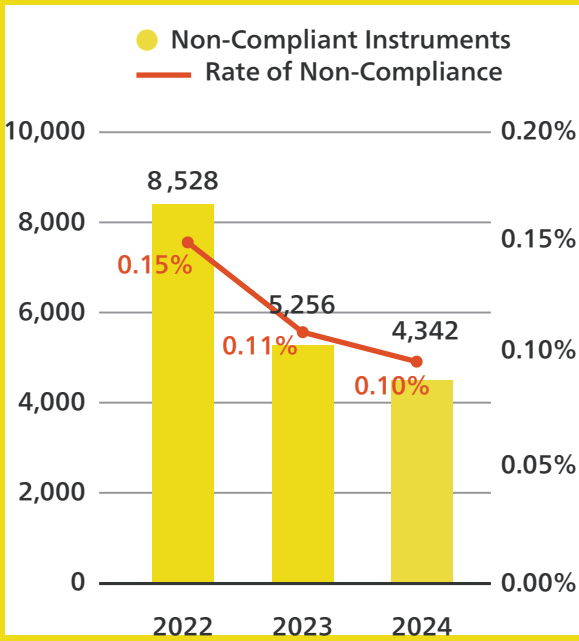
The BSMI requires that a license be obtained for any person to be engaged in activities of manufacturing, repairing or importing measuring instruments.



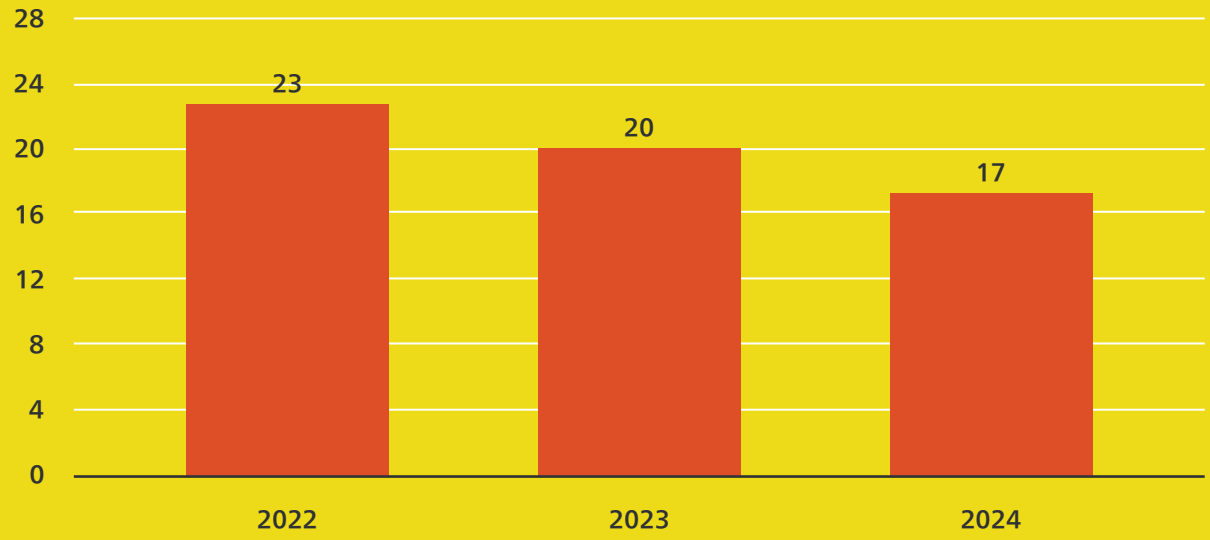
2) Verification and inspection of measurement instruments

81% of instruments verified and inspected are water meters and watt hour meters.

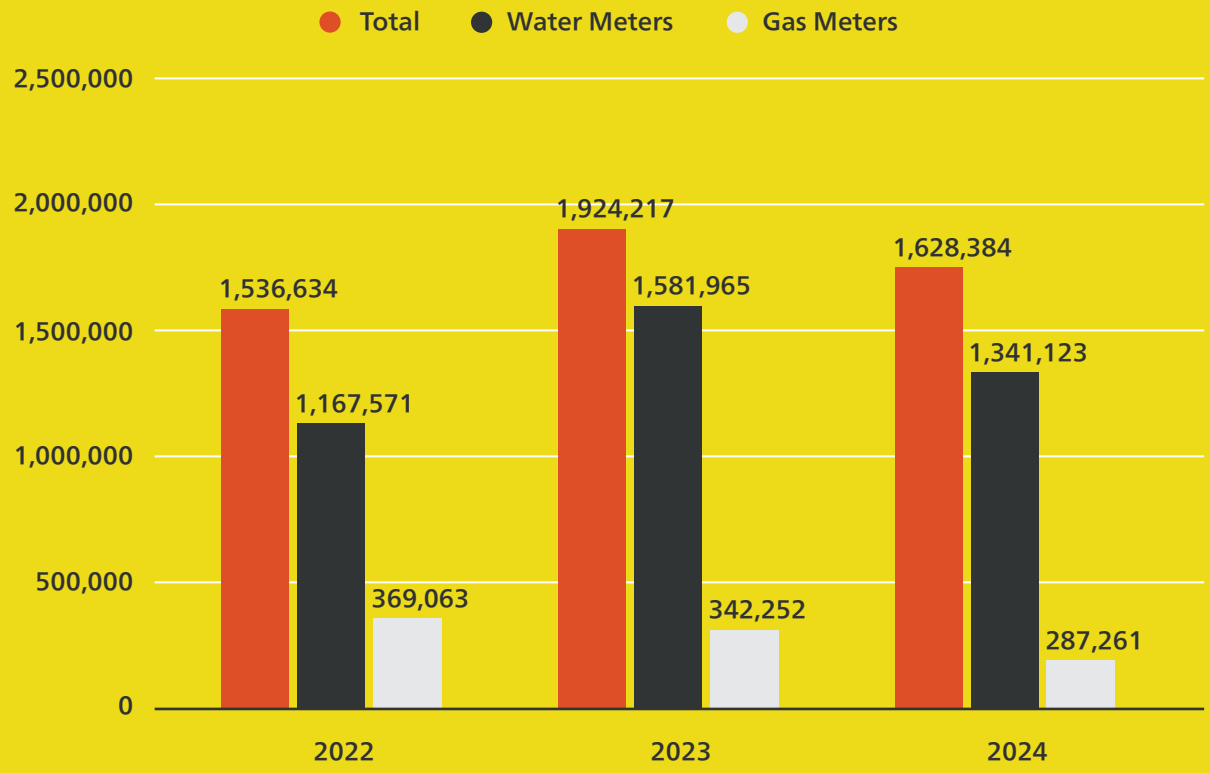




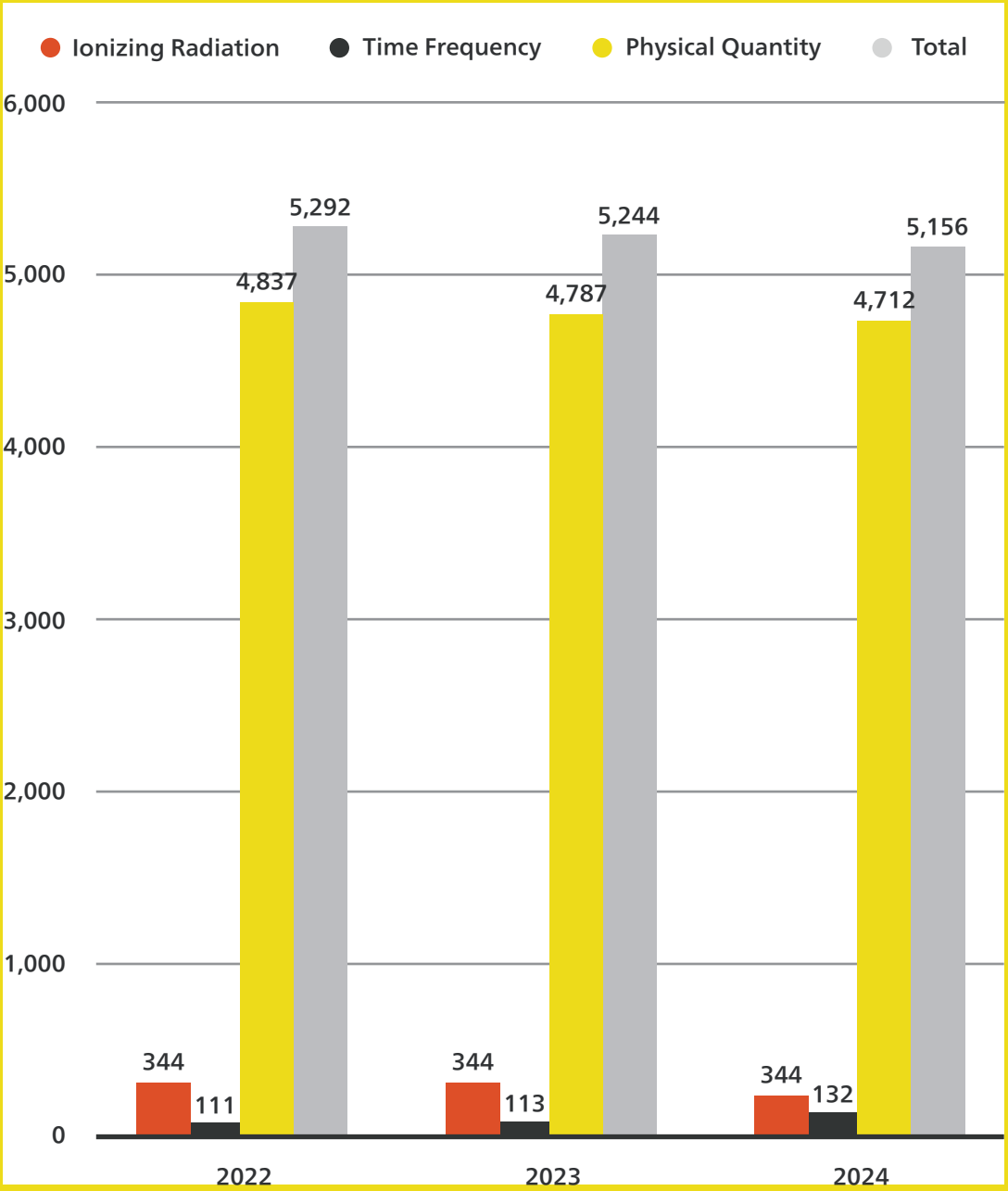
3) Numbers of type approval of legal measuring instruments



4) Status of self-verification of legal measuring instruments



5) Numbers of calibration services provided to primary laboratories by the National Measurement Standards Laboratory (NML)



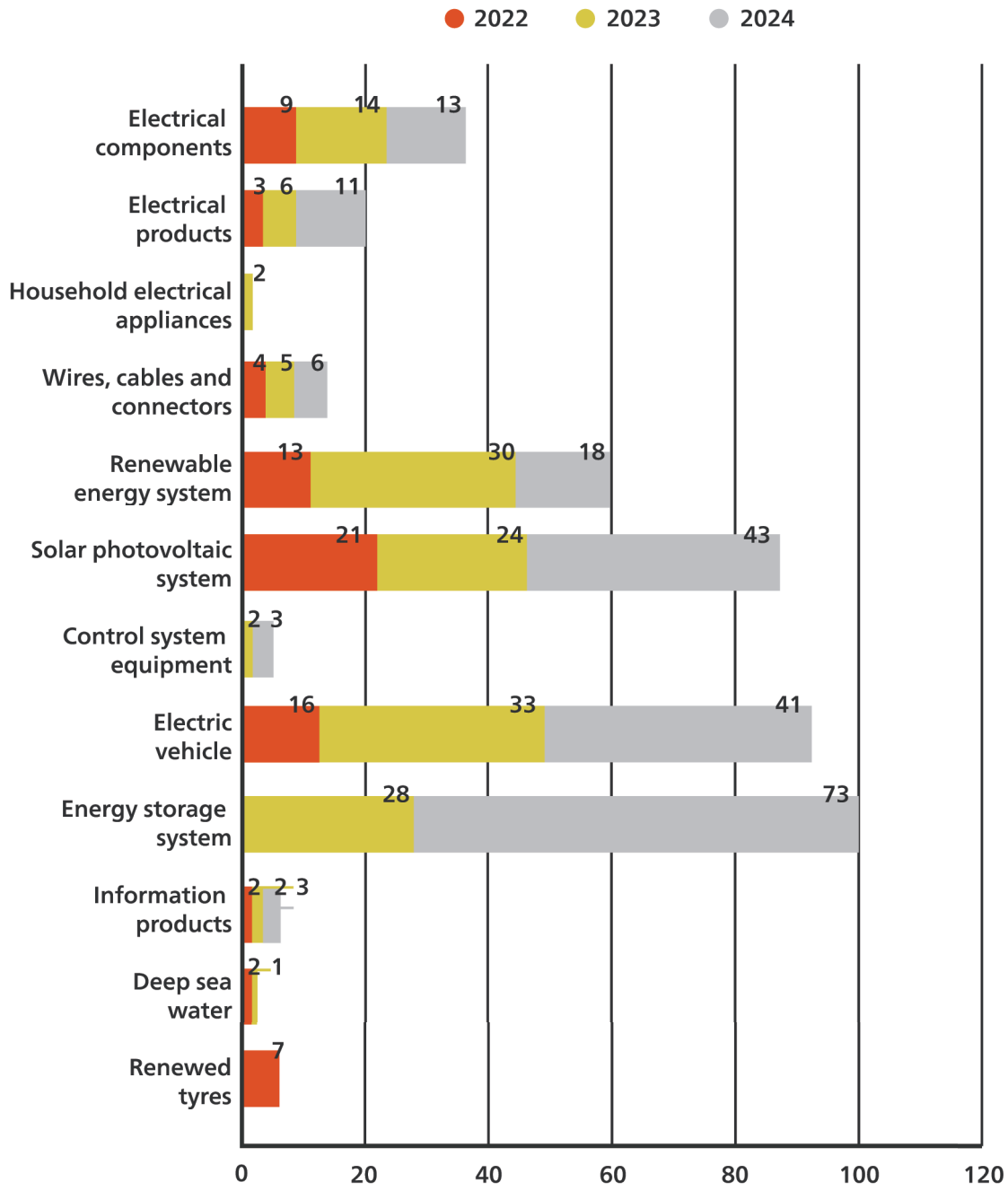
- Center for Measurement Standards / Industrial Technology Research Institute (CMS/ITRI): physical quantity
- National Radiation Standard Laboratory (NRSL)：ionizing radiation
- National Time and Frequency Standard Laboratory (NTFSL)：time frequency

[04_] Voluntary certification scheme

1) Product scope of voluntary product certification

Categories	Items
• Electrical components	20
• Electrical products	1
• Household electrical appliances	2
• Wires, cables and connectors	1
• Renewable energy system	1
• Solar photovoltaic system	1
• Components electrical and electronic products	1
• Sports and fitness equipment	3
• Gas equipment	1
• Control system equipment	1
• Charging equipment	4
• Vehicle components	1
• Energy storage system	4
• Information products	4
• Power supply equipment	1
• Deep sea water	1
• Renewed tyres	1
• Children's articles	4

2) Number of voluntary product certificates



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