

BACKGROUND PAPER - RESEARCH WORK

Strategies for Harmonizing Standards and Conformity Assessment on Electronic Household Appliances in the APEC Region

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Executive Summary

The harmonization of standards and conformity assessment for Electronic Household Appliances (EHA) in the APEC region is a strategic initiative aimed at enhancing trade facilitation and ensuring product safety. The findings from this background document highlights the rapid growth of the electrical and electronics (EE) sector within APEC economies and the challenges posed by discrepancies in the recognition of conformity assessment results across different economies. These differences create technical barriers to trade, increase compliance costs, and delay market access, particularly for small and medium-sized enterprises (SMEs).

One of the key challenges in harmonization is the regulatory divergence among APEC economies, since there were variations in domestic standards and conformity assessment procedures that complicate compliance for manufacturers. Additionally, the lack of mutual recognition arrangements (MRAs) between economies further impedes the seamless acceptance of test results and certifications. Capacity constraints and infrastructure gaps in testing and certification facilities also pose a significant hurdle, particularly in economies with limited resources. Moreover, market-specific requirements related to product safety, energy efficiency, and environmental regulations add another layer of complexity, leading to redundant testing and certification processes.

To address these challenges, this document proposes several strategic approaches. Leveraging existing MRAs and adopting a risk-based categorization framework for EHA products can facilitate a more structured approach to conformity assessment. Enhancing transparency through the development of a publicly accessible database that consolidates information on standards, regulations, and accredited conformity assessment bodies across APEC economies will improve regulatory clarity and trust. Capacity-building initiatives and technical assistance programs should be strengthened to support economies with limited testing and certification infrastructure. Additionally, fostering public-private dialogue (PPD) will create a collaborative platform where policymakers, regulatory authorities, industry stakeholders, and conformity assessment bodies can engage in discussions to align best practices and develop actionable strategies for harmonization.

By implementing these strategies, the APEC region can establish a more integrated and efficient regulatory framework for EHA products, facilitating smoother trade flows, reducing technical barriers, and ensuring consumer confidence in product safety and quality. Ultimately, these efforts will contribute to the overall economic growth and competitiveness of the APEC economies.

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Introduction

The electrical and electronics (EE) sector is a cornerstone of the global economy, significantly influencing trade dynamics, technological advancement, and consumer safety. In the context of the Asia-Pacific Economic Cooperation (APEC) region, the harmonization of standards and conformity assessment for electronic household appliances is essential for facilitating trade and ensuring product safety. Recent trade data from the U.S. APEC Trade Facts (2023) indicate that the EE sector has been experiencing robust growth, with APEC member economies accounting for a substantial share of global exports in this domain. For instance, U.S. goods exports to APEC in the electrical machinery category reached approximately USD 142 billion in 2023, reflecting a 25 percent increase from 2013 levels. Similarly, the EE sector in Indonesia and the broader ASEAN region has recorded strong growth over the past decade, driven by increasing domestic consumption and exports. From 2013 to 2023, trade in electrical and electronic products within the ASEAN region showed a consistent upward trajectory, with total trade value reaching approximately USD 300 billion in 2023, representing a 30 percent increase over the decade. This sustained growth, fuelled by rising consumer demand and rapid technological innovation, underscores the importance of effective trade facilitation mechanisms and regulatory cooperation across the region.

In the context of international trade and standardization discussions, the term of the Standards, Technical Regulations and Conformance Assessment Procedures (STRACAP) is widely used to collectively describe standards, technical regulations, and conformity assessment procedures, which are essential components of the technical infrastructure that support global trade. STRACAP aims to strengthen regional cooperation in standards, technical regulations, and conformity assessment to reduce technical barriers to trade and promote regulatory alignment across APEC economies. It plays a vital role in enhancing trade by streamlining conformity assessment processes through information exchange and the development of mutual recognition arrangements. By facilitating the mutual recognition of conformity assessment results, STRACAP reduces the need for duplicate testing and certification, thereby lowering costs and expediting time-to-market for manufacturers. This is particularly beneficial for small and medium-sized enterprises (SMEs), which often lack the resources to navigate complex regulatory environments. However, despite the advantages offered by STRACAP, several challenges impede the effective implementation of Mutual Recognition Arrangements (MRAs) within the APEC region. A significant challenge arises from the differences in STRACAP among APEC economies. Variations in the editions and modification of international standards referenced by different economies can lead to confusion and compliance challenges for manufacturers, creating potential trade barriers. Additionally, the recognition of modifications and specific conformity assessment procedures varies from economy to economy, complicating the acceptance of products across borders. This lack of uniformity not only increases operational costs but also delays product entry into foreign markets, ultimately affecting trade relations. Specific Trade Concerns (STC) raised in international forums further complicate the landscape, as economies seek to address regulatory discrepancies that hinder trade.

Despite these challenges, the benefits of harmonized standards and conformity assessment procedures are substantial. Enhanced consumer confidence is one of the primary advantages, as consumers can trust that products meet consistent safety and quality standards, regardless of their origin. Furthermore, harmonization facilitates easier market access, allowing manufacturers to expand their reach and increase sales. By reducing the need for multiple certifications, manufacturers can lower their operational costs, which can translate into lower prices for consumers.

In light of these considerations, the SCSC 202 2024T project, titled "Public-Private Dialogue (PPD) on Development of Strategies for Harmonizing Standards and Conformity Assessment on Electronic Household Appliances in the APEC Region" is timely. This project aims to address the pressing need for a coordinated approach to standardization in the EE sector. By analysing existing barriers and developing strategic recommendations, the project will provide a platform for stakeholders to collaborate on best practices and foster harmonization. Ultimately, this initiative seeks to enhance economic growth by facilitating trade and ensuring product safety, contributing to the overall development of APEC member economies. The harmonization of standards and conformity assessment in the EE sector is not merely a regulatory necessity but a strategic imperative for enhancing trade, fostering innovation, and ensuring consumer safety in the APEC region. The SCSC 202 2024T project represents a significant step toward achieving these goals, promoting a more integrated and efficient market for electronic household appliances.

Overview

This background paper supports the Project Public-Private Dialogue (PPD) on the development of strategies for harmonizing standards and conformity assessment for Electronic Household Appliances (EHA) in the APEC region. Divergent standards and conformity assessment schemes among APEC economies create technical barriers to trade, often requiring redundant testing and certification. This document provides an analysis of the electrical and electronic (EE) sector, highlighting the importance of facilitating Standards, Technical Regulations, and Conformity Assessment Procedures (STRACAP) in trade. It also examines key challenges, including variations in standard versions and the recognition of conformity assessment outcomes across different economies.

The findings presented in this paper are based on desk studies, preliminary surveys, and focused group discussions (FGD). The research explores several key aspects, including the definition and categorization of EHA products, applicable international and national standards, and best practices in EHA policies from various APEC economies. This document aims to identify challenges and opportunities in harmonizing standards and conformity assessment frameworks. It further proposes strategic recommendations to enhance the mutual acceptance of conformity assessment results among APEC economies. By strengthening quality infrastructure, improving regulatory efficiency, and facilitating trade, these recommendations seek to promote a more integrated and seamless regulatory environment for EHA products within the APEC region.

1. Electronic Household Appliances (EHA) and Standards

Electrical and electronic equipment or 'EEE' means equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1000 volts for alternating current and 1500 volts for direct current.

EEE is an electrical and electronic product that can be used by and is intended for end users because it (already) works properly. Therefore, EEE is always a finished product that has a direct function and that is intended for an end user.

(i) Direct function is defined as any function which fulfils the intended use specified by the manufacturer in the instructions for use for an end user. Products are also considered

to have a direct function even if they require a combination with other equipment or parts;

(ii) End user is a user in a private household or users other than private households. (EWRN, 2019).

Electronic household appliances refer to devices that assist in household functions such as cooking, cleaning, and food preservation. These appliances are generally categorized into:

- 1. Major Appliances ("White Goods") Large household equipment like refrigerators, washing machines, and ovens.
- 2. Small Appliances Portable devices such as toasters, coffee makers, and blenders.

In term of assuring the safety of appliances household, multiple Standards Developing Organizations (SDO), particularly IEC, have published several international standards. The application of those standards is expected to ensure safety of applicant that may be handled by consumers, children, or others who may be unskilled. Having the risk of electric shock, while the need to promote innovation, enhance the interoperability as well as their performance are occurred, the standardization needs to be set.

The IEC standard of small household electrical appliances mainly consists of two parts: the IEC60335-1 standard put forward general requirements for household and similar electrical appliances product safety, and IEC60335-2 series standard is a supplement to the IEC60335-1 standard, respectively, for various types of household electrical appliances. The list of IEC standard that has been stipulated refer to Annex I.

2. Conformity Assessment

According to SNI ISO 17000, a conformity assessment scheme is the rules, procedures, and management for conducting conformity assessment related to a particular conformity assessment object, with the application of the same reference requirements, rules and procedures. Conformity assessment ensures that a product, service, or system meets the required quality and safety levels while also providing information on its characteristics, including compliance with regulatory requirements. Furthermore, it enhances trust by helping businesses substantiate product claims and labelling. Consequently, conformity assessment serves as an essential market communication mechanism for exchanging information.

Conformity assessment includes activities such as testing, inspection, and certification of products, management systems, and personnel. It also encompasses the accreditation of the competence of bodies performing conformity assessment activities. A set of recurring activities applied to specific groups of products, processes, services, systems, personnel, or organizations is referred to as a "conformity assessment scheme" or simply a "scheme."

The selection of conformity assessment procedures for technical regulations must be based on a risk analysis of the regulated products concerning domestic interests, security, public safety, health, and environmental sustainability. Several factors influence the selection of conformity assessment methods in technical regulations, including policies, the need for conformity assessment, market dynamics, product characteristics, the capacity of businesses, and the capability of conformity assessment bodies. Types of conformity assessment schemes in accordance with SNI ISO/IEC 17067 is shown in Table 1.

Tabel 1. Certification Scheme (ISO/IEC 17067)

Con	formity assessment functions and activities within	Тур	oes of	prod	uct ce	rtifica	ation s	chem	es
	product certification schemes	1a 1b 2 3 4 5							N _c ,
I	Selection, including planning and preparation activities, specification of requirements, e.g. normative documents, and sampling, as applicable	х	х	x	х	x	х	х	х
II	Determination of characteristics, as applicable, by: a) testing b) inspection c) design appraisal d) assessment of services or processes e) other determination activities, e.g. verification	х	х	х	х	х	х	х	х
III	Review Examining the evidence of conformity obtained during the determination stage to establish whether the specified requirements have been met	x	x	x	x	х	х	х	x
IV	Decision on certification Granting, maintaining, extending, reducing, suspending, withdrawing certification	х	х	x	х	х	х	х	х
٧	Attestation, licensing								
	a) issuing a certificate of conformity or other statement of conformity (attestation)	х	х	x	х	х	х	х	Х
	b) granting the right to use certificates or other statements of conformity	Х	х	х	х	X	х	х	
	c) issuing a certificate of conformity for a batch of products		х						
	d) granting the right to use marks of conformity (licensing) is based on surveillance (VI) or certification of a batch.		X	x	x	x	х	x	
VI	Surveillance, as applicable (see 5.3.4 to 5.3.8), by:								
	a) testing or inspection of samples from the open market			x		х	х		
	b) testing or inspection of samples from the factory				Х	Х	х		
	c) assessment of the production, the delivery of the service or the operation of the process				х	х	х	х	
	d) management system audits combined with random tests or inspections						х	х	

- a. Where applicable, the activities can be coupled with initial audit and surveillance audit of the applicant's management system (an example is given in ISO/IEC Guide 53) or initial assessment of the production process. The order in which the assessments are performed may vary and will be defined within the scheme.
- An often used and well-tried model for a product certification scheme is described in ISO/IEC Guide 28; it is a product certification scheme corresponding to scheme type 5.
- c. A product certification scheme includes at least the activities I, II, III, IV and V a).
- d. The symbol N has been added to show an undefined numbers of possible other schemes, which can be based on different activities.

The Technical Barriers to Trade (TBT) Agreement of the World Trade Organization (WTO) mandates that conformity assessment procedures prescribed in technical regulations must not create unnecessary obstacles to international trade. This ensures that conformity assessment requirements are justified, proportionate, and do not impose undue burdens on market access while maintaining regulatory objectives related to safety, health, and environmental protection. When selecting conformity assessment procedures, several aspects that should be considered are stakeholder involvement, utilization of Existing Conformity Assessment Procedures, Transparency and Efficiency to determine appropriate assessment procedures that balance trade facilitation with the necessary level of consumer protection.

Several types of conformity assessment procedures can be utilized by the government, as illustrated in the figure below. For low-risk products, a less stringent approach, such as Supplier's Declaration of Conformity (SDoC), may be applied. As the risk level increases, more rigorous procedures may be required, including product registration, approval, and inspection to ensure compliance with safety, health, and regulatory requirements.

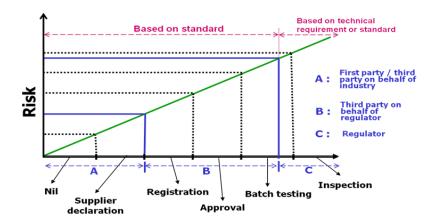


Figure 1: Relationship Between Risk, Standards/Requirements, Conformity Assessment Methods, and Conformity Assessment Bodies (Standard/Regulatory Approach to Risk) - Adaptive from concept APEC (2000)

a) First-Party/Third-Party on behalf of industry

A supplier's declaration does not mean that conformity assessment is entirely absent. Manufacturers or suppliers still conduct conformity assessments to verify product compliance before entering the market.

b) Third-Party on behalf of regulator

- 1. Registration This system does not involve direct verification by regulators before products are marketed. Companies and suppliers submit required documents, including test reports, as proof of compliance.
- 2. Certification Includes initial product testing and ongoing surveillance. In some cases, an initial assessment of company operations and quality management systems is conducted. This method helps regulators optimize oversight by leveraging third-party resources. Certification is often chosen when regulatory resources for supervision or registration are insufficient.
- 3. Approval The most common form of pre-market conformity assessment, typically involving sample-based assessment. In some economies, regulators conduct assessments themselves, while in others, competent third-party bodies perform the evaluations. However, the final approval decision remains with the regulator.
- 4. Batch Testing Involves testing samples from each batch or shipment of massproduced goods. This method falls between full product inspections and type approval, which assesses only a single sample for subsequent production batches.

c) Regulator

Inspection – Involves evaluating products individually. For products that degrade over time, inspections may be conducted multiple times throughout the product's lifecycle.

3. Mutual Recognition Arrangement (MRA)

The use of standards and conformity assessment should be carefully considered in regulatory development. ISO/IEC standards serve as key references in the formulation of technical regulations. Regulators must also take into account international obligations related to conformity assessment, as stated in the WTO TBT Agreement, which ensures

the equivalence of conformity assessment methods to facilitate mutual recognition and acceptance of conformity assessment results.

Regulators consider WTO TBT Agreements on facilitating the acceptance of conformity assessment results through various approaches. These include Mutual Recognition Agreements (MRAs) and Multilateral Recognition Arrangements (MLAs), which establish mutual acceptance of conformity assessment results among accreditation bodies using recognized international standards. Accreditation of Conformity Assessment Bodies (CABs) ensures harmonization with international practices, formally recognizing their competence, independence, and impartiality to facilitate global acceptance. Governments may also designate specific CABs domestically or internationally, recognize conformity assessment results unilaterally, or implement Supplier's Declarations of Conformity (SDoC), where manufacturers or suppliers provide written assurance of compliance. These mechanisms operate under effective market surveillance, sanctions for false declarations, adequate regulations, and sufficient product liability provisions. This approach enhances regulatory trust, reduces trade barriers, and promotes global market access.

3.1. IECEE CB Scheme

The IECEE CB Scheme is an international system that allows for the mutual acceptance of test reports and certifications when it comes to the safety of electronic components, equipment, and products. It is a multilateral agreement among participating economies and certification organizations that aims to facilitate trade by promoting the harmonization of national standards with international standards. The CB scheme helps manufacturers get their products into global markets.

There are 23 categories of electrical equipment covered by the IECEE. These categories include:

- Batteries
- Cables and Cords
- Capacitors as components
- Switches for appliances and automatic controls for electrical household appliances
- Cyber Security
- Energy Efficiency
- Electrical Vehicle
- Electromagnetic Compatibility
- > Household and similar equipment
- Industrial Automation
- Installation accessories and connection devices
- Information Technology Audio Video
- Lighting
- Measurement, Control and Laboratory equipment
- > Electrical equipment for medical use
- Miscellaneous
- > IT and office equipment
- > Low voltage, high power switching equipment
- Installation protective equipment
- Photovoltaics
- Safety transformers and similar equipment

- Portable tools
- > Electronics, entertainment

IECEE operate individual Conformity Assessment Schemes that are complementary to:

- ➤ ISO/IEC Scheme type 1a, according to ISO/IEC 17067;
- > any other individual conformity assessment activities that are complementary to the other IECEE Schemes or services.

Procedure for recognition of IECEE Certificates

The CB Scheme is based on the use of CB Test Certificates (CBTC) which provide evidence that representative specimens of the product have successfully passed tests to show compliance with the requirements of the relevant IEC Standard. A supplementary report providing evidence of compliance with declared domestic differences in order to obtain domestic certification or approval may also be attached to the CB Test Report.

Generally, the recognition process involves applying the certification to the National Certification Body (NCB), testing the product, issuing CBTC if passed, and then submitting the CBTC to another NCB for domestic recognition and certification. When applying for domestic certification or approval on the basis of an IECEE Certificate, an applicant shall follow the rules of procedure applicable in the economy concerned and shall confirm readiness to comply with all the relevant domestic provisions regarding, for example, retesting, checking, factory surveillance, and payment of fees, as if the equipment had been tested in accordance with the procedures valid in that economy. The process is illustrated below:

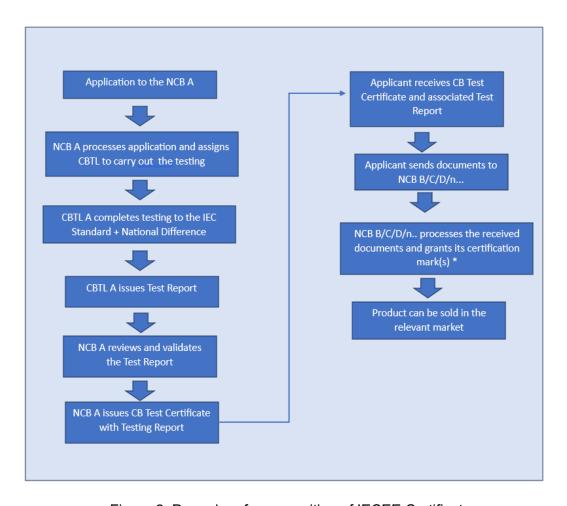


Figure 2. Procedure for recognition of IECEE Certificates

3.2. ASEAN EE MRA

Meanwhile, ASEAN member states also have an agreement on the acceptance of test results and certifications such as the IEC CB Scheme system. The ASEAN Sectoral Mutual Recognition Arrangement on Electrical and Electronic Equipment (ASEAN EE MRA) is an agreement signed by ASEAN member states to facilitate free trade in electrical and electronic equipment (EE) within the region by reducing duplicate testing and certification. The agreement covers new EE products intended to be connected to low voltage power plugs or battery-powered, with voltages between 50 and 1000 V for AC and between 75 and 1500 V for DC. It does not include medical devices and products already covered by the MRA on telecommunication.

There are different conformity assessment regimes in ASEAN, the Agreement stipulates three (3) Types of Conformity Assessment Product Certification Schemes. These schemes are applicable to Electrical and Electronic Equipment (EEE) depending on their level of risk. These Conformity Assessment Product Certification Schemes are Scheme Type 5, Scheme Type 1b and Scheme Type 1a as described in ISO/IEC 17067.

The determination of the EEE applicable Product Certification Scheme Type; Scheme Type 5, Scheme Type 1b and Scheme Type 1a is done through risk assessment. The risk assessment is carried out with reference to the ASEAN EEE Risk Assessment Guidelines. It stipulates the procedures in determining the level of

risk of the EEE as well as the applicable Conformity Assessment Product Certification Scheme Type. The risk calculation to determine the level of risk for EEE can be obtained using the formula:

$$R = C \times P \times N$$

Description:

R = The level of Risk of the product

C = The consequence of non-compliance

P = The probability of non-compliance occurring for a given product

N = The likely population of the product in the marketplace

x = multiplication sign

High risk product shall be subjected to Product Certification Scheme Type 5, while medium risk product shall be subjected to Scheme Type 1b and low risk product shall be subjected to Scheme Type 1a.

3.3. APEC Electrical and Electronic Equipment Mutual Recognition Arrangement (EEMRA)

The APEC Electrical and Electronic Equipment Mutual Recognition Arrangement (EEMRA) is designed to streamline regulatory compliance for electrical and electronic products by recognizing test reports and certifications across member economies. This arrangement applies to both pre-market and post-market activities, ensuring smooth regulatory processes.

For regulators, the EEMRA provides comprehensive information about each member economy's regulatory framework, helping manufacturers better understand and comply with requirements. Additionally, it offers a local contact point for further inquiries.

Manufacturers benefit from reduced 'time to market' and lower testing and certification costs, as they can obtain these services within their own economy. Mutual recognition of test reports and certifications eliminates the need for duplicate testing when exporting to multiple markets.

The EEMRA consists of three parts, reflecting different levels of participation:

- ➤ Part I: Information Interchange Provides standardized information about regulatory requirements for electrical and electronic products, with 17 APEC economies currently participating.
- Part II: Acceptance of Test Reports Ensures mutual acceptance of test reports from designated testing facilities, following ISO/IEC standards, without requiring re-testing.
- Part III: Acceptance of Certification Commits importing economies to accept product certifications from designated certification bodies, removing the need for re-certification and facilitating smoother market access.

Overall, the EEMRA significantly enhances trade efficiency within APEC by fostering trust, reducing technical barriers, and supporting innovation in the electrical and electronic sectors.

Table. 1. Different levels of participation EEMRA

Member Economy	Part I	Part II	Part III	Previous Updates (Part I)	Latest Updates (Part I)
Australia	1999	2002	2002	<u>2013</u>	-
Brunei	2003	2007	2007	2007	-
Darussalam					
Canada	-	-	-	-	-
Chile	2000	-	-	2007	<u>2021</u>
China	1999	-	-	<u>2009</u>	<u>2021</u>
Hong Kong, China	2000	•	ı	<u>2009</u>	<u>2021</u>
Indonesia	1999	-	-	<u>2014</u>	-
Japan	1999	-	-	<u>2015</u>	-
Korea	1999	-	-	<u>2015</u>	-
Malaysia	1999	2006	-	<u>2009</u>	-
Mexico	-	-	-	1	-
New Zealand	1999	2003	2003	2006	-
Papua New Guinea	2009	-	-	2009	-
Peru	2011	-	-	2009	<u>2021</u>
The Philippines	1999	-	-	<u>2015</u>	<u>2021</u>
Russia	2000	-	-	<u>2009</u>	-
Singapore	1999	2002	2002	<u>2015</u>	<u>2021</u>
Chinese Taipei	1999	-	-	<u>2015</u>	<u>2021</u>
Thailand	1999	-	-	<u>2008</u>	<u>2021</u>
United States	-	-	-	-	-
Viet Nam	2000	-	-	2006	-

4. Challenges in harmonizing standards and conformity assessment

One of the key challenges in harmonizing Standards and Conformity Assessment (SCA) is the relationship between product compliance systems and intergovernmental arrangements. These two components must align effectively to ensure regulatory consistency, facilitate market access, and promote mutual recognition of conformity assessment results. Without proper alignment, discrepancies in domestic regulations may lead to redundant testing, increased compliance costs, and delays in market entry.

Further, some challenges in harmonizing the SCA in APEC region are identified as follow:

- a. Regulatory Divergence Different APEC economies have varying regulatory frameworks, making it difficult to establish uniform compliance requirements. Member economies maintain different legal bases, technical regulations, and enforcement approaches. In some cases, a single product must satisfy overlapping ministerial rules.
- b. Mutual Recognition and Equivalence Achieving mutual recognition of conformity assessment results requires trust and alignment of technical regulations. Without

- confidence in each other's regulatory systems and CAB competence, MRAs deliver only partial benefits.
- c. Capacity and Infrastructure Gaps Some economies may lack the necessary testing, certification, and accreditation infrastructure to implement harmonized conformity assessment procedures.
- d. Market-Specific Requirements Differences in product safety, energy efficiency, and environmental regulations create additional compliance burdens.
- e. Intergovernmental Coordination Effective collaboration between governments, regulatory bodies, and industry stakeholders is essential but often complex.

5. Strategies for harmonizing standards and conformity assessment

The following strategies are proposed to support alignment efforts among APEC economies:

a) Leveraging existing EEE MRA and Risk-Based Product Categorization

This recommendation includes the following activities:

- ➤ Identify and classifies products based on risk levels to determine the appropriate conformity assessment scheme. This classification follows the principles outlined in ISO/IEC 17067, which provides a structured framework for product certification.
- > Identify the IEC standard editions currently adopted by different member economies and establish a common reference list to reduce discrepancies.
- Develop a consolidated listing of Conformity Assessment Bodies (CABs) that have accreditation for these standards, ensuring mutual recognition of test results and certification across economies.
- Identify the conformity assessment regime to be applied on the product based on the level of risk, i.e.: Products requiring inspection; Products requiring licensing; Products requiring batch testing (Scheme Type 1b); Products requiring approval (or certification Scheme Type 5); Products requiring approval (or certification Scheme Type 4); Products requiring approval (or certification Scheme Type 3); Products requiring approval (or certification Scheme Type 2); Products requiring approval (or certification Scheme Type 1a); Products requiring listing or registration; Supplier declarations (SDoC) and Essential safety requirements.
- ➤ To strengthen harmonization, APEC economies should update on EEMRA participation levels periodically, including Part I: Information interchange; Part II: Acceptance of test reports and Part III: Acceptance of certification
- b) Enhancing Information Sharing on Standards, Regulations, and MRA Implementation
 - A significant barrier to harmonization is the lack of accessible and transparent information regarding standards, regulations, and conformity assessment procedures. To address this, APEC economies should provide public-access database containing:
 - ➤ List of Domestic standards and their alignment with IEC standards.
 - ➤ Regulatory frameworks governing electronic household appliances in each economy.

- Nominate a single contact point to coordinate requirements across ministries, publish consolidated checklists, and clarify sequencing (testing, certification, and market surveillance).
- ➤ List of Designated Conformity Assessment Bodies (CABs), and their scope of accreditation
- Certificate that has been issued by the Designated CABs under the MRA
- ➤ Government ministries/agencies/bodies responsible for setting standards, technical regulations and overseeing EEMRA implementation.
- c) Capacity Building and Technical Assistance.
 - Support economies with limited testing and certification infrastructure. Encourage laboratories to participate in proficiency testing (PT) and inter-laboratory comparisons; promote regulator-to-regulator and accreditation-body dialogues focused on surveillance, non-conformity handling, and edition transitions.
- d) Promote public private dialogues initiatives to ensure all economies have equal access to up-to-date information on conformity assessment schemes and regulatory practices, including related to lose testing, certification, and accreditation gaps convene structured PPDs so regulators, CABs, and industry share timelines, editionupgrade plans, and surveillance expectations helping all economies keep pace with evolving safety, energy efficiency, and environmental objectives.

6. Conclusion

Harmonizing standards and conformity assessment procedures for electronic household appliances in the APEC region is essential to fostering regulatory coherence, reducing technical barriers to trade, and enhancing market access. However, achieving this goal requires overcoming significant challenges, including regulatory divergence, infrastructure gaps, and the need for stronger mutual recognition agreements. Addressing these barriers through capacity building, regulatory alignment, and enhanced transparency will ensure a more seamless and efficient product compliance framework across economies.

To support these efforts, the implementation of a Public-Private Dialogue (PPD) on Development of Strategies for harmonizing standards and conformity assessment on Electronic Household Appliances in The APEC region are crucial. The PPD will provide a collaborative platform for policymakers, regulatory authorities, industry representatives, and conformity assessment bodies and relevant stakeholders to discuss key challenges, exchange best practices, and develop actionable strategies. Through this dialogue, APEC economies can strengthen intergovernmental coordination, enhance regulatory trust, and promote industry-driven solutions that align with international standards. Ultimately, these initiatives will contribute to a more integrated and sustainable regulatory environment that ensures product safety, facilitates trade, and supports economic growth in the region.

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ANNEX I. EHA Standards

No.	IEC Standard	Standard Title
1.	IEC 60335-1	Household and similar electrical appliances - Safety - Part 1: General requirements Particular requirements
2.	IEC 60335-2-2	Household and similar electrical appliances - Safety - Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances
3.	IEC 60335-2-3	Household and similar electrical appliances - Safety - Part 2-3: Particular requirements for electric irons
4.	IEC 60335-2-4	Household and similar electrical appliances - Safety - Part 2-4: Particular requirements for spin extractors
5.	IEC 60335-2-5	Household and similar electrical appliances - Safety - Part 2-5: Particular requirements for Dishwashers
6.	IEC 60335-2-6	Household and similar electrical appliances - Safety - Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances
7.	IEC 60335-2-7	Household and similar electrical appliances – Safety – Part 2-7: Particular requirements washing machines
8.	IEC 60335-2-8	Household and similar electrical appliances – Safety – Part 2-8: Particular requirements for shavers, hair clippers and similar appliances
9.	IEC 60335-2-9	Household and similar electrical appliances - Safety - Part 2-9: Particular requirements for grills, toasters and similar portable cooking appliances
10.	IEC 60335-2- 10	Household and similar electrical appliances - Safety - Part 2-10: Particular requirements for Floor treatment machines and wet scrubbing machines
11.	IEC 60335-2- 11	Household and similar electrical appliances - Safety - Part 2-11: Particular requirements for tumble dryers
12.	IEC 60335-2- 12	Household and similar electrical appliances - Safety - Part 2-12: Particular requirements for warming plates and similar appliances
13.	IEC 60335-2- 13	Household and similar electrical appliances - Safety - Part 2-13: Particular requirements for deep fat fryers, frying pans and similar appliances
14.	IEC 60335-2- 14	Household and similar electrical appliances - Safety - Part 2-14: Particular requirements for kitchen machines
15.	IEC 60335-2- 15	Safety of household and similar electrical appliances - Part 2-15: Particular requirements for appliances for heating liquids

No.	IEC Standard	Standard Title
16.	IEC 60335-2- 16	Household and similar electrical appliances - Safety - Part 2-16: Particular requirements for Food waste disposers
17.	IEC 60335-2- 17	Household and similar electrical appliances - Safety - Part 2-17: Particular requirements for Blankets, pads, clothing and similar flexible heating appliances
18.	IEC 60335-2- 21	Household and similar electrical appliances - Safety - Part 2-21: Particular requirements for storage water heaters
19.	IEC 60335-2- 23	Household and similar electrical appliances - Safety - Part 2-23: Particular requirements for appliances for skin or hair care
20.	IEC 60335-2- 24	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers
21.	IEC 60335-2- 25	Household and similar electrical appliances - Safety - Part 2-25: Particular requirements for microwave ovens, including combination microwave ovens
22.	IEC 60335-2- 26	Household and similar electrical appliances - Safety - Part 2-26: Particular requirements for clocks
23.	IEC 60335-2- 27	Household and similar electrical appliances - Safety - Part 2-27: Particular requirements for Appliances for skin exposure to ultraviolet and infrared radiation
24.	IEC 60335-2- 28	Household and similar electrical appliances - Safety - Part 2-28: Particular requirements for sewing machines
25.	IEC 60335-2- 29	Household and similar electrical appliances - Safety - Part 2-29: Particular requirements for battery chargers
26.	IEC 60335-2- 30	Household and similar electrical appliances - Safety - Part 2-30: Particular requirements for Room heaters
27.	IEC 60335-2- 31	Household and similar electrical appliances - Safety - Part 2-31: Particular requirements for range hoods and other cooking fume extractors
28.	IEC 60335-2- 32	Household and similar electrical appliances - Safety - Part 2-32: Particular requirements for Massage appliances
29.	IEC 60335-2- 34	Household and similar electrical appliances - Safety - Part 2-34: Particular requirements for Motor-compressors
30.	IEC 60335-2- 35	Household and similar electrical appliances - Safety - Part 2-35: Particular requirements for instantaneous water heaters
31.	IEC 60335-2- 36	Household and similar electrical appliances - Safety - Part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements

No.	IEC S	Standard	Standard Title
32.	IEC 37	60335-2-	Household and similar electrical appliances - Safety - Part 2-37: Particular requirements for Commercial electric deep fat fryers
33.	IEC 38	60335-2-	Household and similar electrical appliances - Safety - Part 2-38: Particular requirements for Commercial electric griddles and griddle grills
34.	IEC 39	60335-2-	Household and similar electrical appliances - Safety - Part 2-39: Particular requirements for Commercial electric multi-purpose cooking pans
35.	IEC 40	60335-2-	Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
36.	IEC 41	60335-2-	Household and similar electrical appliances - Safety - Part 2-41: Particular requirements for Pump
37.	IEC 42	60335-2-	Household and similar electrical appliances - Safety - Part 2-42: Particular requirements for Commercial electric forced convection ovens, steam cookers and steam-convection ovens
38.	IEC 43	60335-2-	Household and similar electrical appliances - Safety - Part 2-43: Particular requirements for clothes dryers and towel rails
39.	IEC 44	60335-2-	Household and similar electrical appliances - Safety - Part 2-44: Particular requirements for ironers
40.	IEC 45	60335-2-	Household and similar electrical appliances - Safety - Part 2-45: Particular requirements for portable heating tools and similar appliances
41.	IEC 47	60335-2-	Household and similar electrical appliances - Safety - Part 2-47: Particular requirements for Commercial electric boiling pans
42.	IEC 48	60335-2-	Household and similar electrical appliances - Safety - Part 2-48: Particular requirements for Commercial electric grillers and toasters
43.	IEC 49	60335-2-	Household and similar electrical appliances - Safety - Part 2-49: Particular requirements for Commercial electric appliances for keeping food and crockery warm
44.	IEC 50	60335-2-	Household and similar electrical appliances - Safety - Part 2-50: Particular requirements for Commercial electric bains-marie
45.	IEC 51	60335-2-	Household and similar electrical appliances - Safety - Part 2-51: Particular requirements for Stationary circulation pumps for heating and service water installations
46.	IEC 52	60335-2-	Household and similar electrical appliances - Safety - Part 2-52: Particular requirements for Oral hygiene appliances

No.	IEC S	tandard	Standard Title				
47.	IEC 53	60335-2-	Household and similar electrical appliances - Safety - Part 2-53: Particular requirements for Sauna heating appliances and infrared cabins				
48.	IEC 54	60335-2-	Household and similar electrical appliances - Safety - Part 2-54: Particular requirements for Surface-cleaning appliances for household use employing liquids or steam				
49.	IEC 55	60335-2-	Household and similar electrical appliances - Safety - Part 2-55: Particular requirements for Electrical appliances for use with aquariums and garden ponds				
50.	IEC 56	60335-2-	Household and similar electrical appliances - Safety - Part 2-56: Particular requirements for Projectors and similar appliances				
51.	IEC 58	60335-2-	Household and similar electrical appliances - Safety - Part 2-58: Particular requirements for Commercial electric dishwashing machines				
52.	IEC 59	60335-2-	Household and similar electrical appliances - Safety - Part 2-59: Particular requirements for Insect killers				
53.	IEC 60	60335-2-	Household and similar electrical appliances - Safety - Part 2-60: Particular requirements for Whirlpool baths and whirlpool spas				
54.	IEC 61	60335-2-	Household and similar electrical appliances - Safety - Part 2-61: Particular requirements for Thermal-storage room heaters				
55.	IEC 62	60335-2-	Household and similar electrical appliances - Safety - Part 2-62: Particular requirements for Commercial electric rinsing sinks				
56.	IEC 63	60335-2-	Household and similar electrical appliances - Safety - Part 2-56: Particular requirements for Commercial electric water boilers and liquid heaters (superseded by 60335-2-75 as of 2007-03-01)				
57.	IEC 64	60335-2-	Household and similar electrical appliances - Safety - Part 2-64: Particular requirements for Commercial electric kitchen machines				
58.	IEC 65	60335-2-	Household and similar electrical appliances - Safety - Part 2-65: Particular requirements for Air-cleaning appliances				
59.	IEC 66	60335-2-	Household and similar electrical appliances - Safety - Part 2-66: Particular requirements for Water-bed heaters				
60.	IEC 67	60335-2-	Household and similar electrical appliances - Safety - Part 2-56: Particular requirements for Floor treatment machines for commercial use				
61.	IEC 68	60335-2-	Household and similar electrical appliances - Safety - Part 2-68: Particular requirements for Spray extraction machines for commercial use				

No.	IEC :	Standard	Standard Title
62.	IEC 69	60335-2-	Household and similar electrical appliances - Safety - Part 2-69: Particular requirements for Wet and dry vacuum cleaners, including power brush, for commercial use
63.	IEC 70	60335-2-	Household and similar electrical appliances - Safety - Part 2-70: Particular requirements for Milking machines
64.	IEC 71	60335-2-	Household and similar electrical appliances - Safety - Part 2-71: Particular requirements for Electrical heating appliances for breeding and rearing animals
65.	IEC 72	60335-2-	Household and similar electrical appliances - Safety - Part 2-72: Particular requirements for Automatic machines for floor treatment for commercial and industrial use
66.	IEC 73	60335-2-	Household and similar electrical appliances - Safety - Part 2-73: Particular requirements for fixed immersion heaters
67.	IEC 74	60335-2-	Household and similar electrical appliances - Safety - Part 2-74: Particular requirements for portable immersion heaters
68.	IEC 75	60335-2-	Household and similar electrical appliances - Safety - Part 2-75: Particular requirements for Commercial dispensing appliances and vending machines
69.	IEC 76	60335-2-	Household and similar electrical appliances - Safety - Part 2-76: Particular requirements for Electric fence energizers
70.	IEC 77	60335-2-	Household and similar electrical appliances - Safety - Part 2-77: Particular requirements for Pedestrian-controlled walk-behind electrically powered lawn mowers
71.	IEC 78	60335-2-	Household and similar electrical appliances - Safety - Part 2-78: Particular requirements for Outdoor barbecues
72.	IEC 79	60335-2-	Household and similar electrical appliances - Safety - Part 2-79: Particular requirements for High pressure cleaners and steam cleaners.
73.	IEC 80	60335-2-	Household and similar electrical appliances - Safety - Part 2-80: Particular requirements for fans
74.	IEC 81	60335-2-	Household and similar electrical appliances - Safety - Part 2-81: Particular requirements for Foot warmers and heating mats
75.	IEC 82	60335-2-	Household and similar electrical appliances - Safety - Part 2-82: Particular requirements for Amusement machines and personal service machines
76.	IEC 83	60335-2-	Household and similar electrical appliances - Safety - Part 2-83: Particular requirements for Heated gullies for roof drainage
77.	IEC 84	60335-2-	Household and similar electrical appliances - Safety - Part 2-84: Particular requirements for Toilets

No.	IEC S	Standard	Standard Title
78.	IEC 85	60335-2-	Household and similar electrical appliances - Safety - Part 2-85: Particular requirements for Fabric steamers
79.	IEC 86	60335-2-	Household and similar electrical appliances - Safety - Part 2-86: Particular requirements for Electric fishing machines
80.	IEC 87	60335-2-	Household and similar electrical appliances - Safety - Part 2-87: Particular requirements for Electrical animal-stunning equipment
81.	IEC 88	60335-2-	Household and similar electrical appliances - Safety - Part 2-88: Particular requirements for Humidifiers intended for use with heating, ventilation, or air-conditioning systems
82.	IEC 89	60335-2-	Household and similar electrical appliances - Safety - Part 2-89: Particular requirements for Commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor
83.	IEC 90	60335-2-	Household and similar electrical appliances - Safety - Part 2-90: Particular requirements for Commercial microwave ovens
84.	IEC 91	60335-2-	Household and similar electrical appliances - Safety - Part 2-91: Particular requirements for Walk-behind and handheld lawn trimmers and lawn edge trimmers
85.	IEC 92	60335-2-	Household and similar electrical appliances - Safety - Part 2-92: Particular requirements for Pedestrian-controlled mains-operated lawn scarifiers and aerators
86.	IEC 94	60335-2-	Household and similar electrical appliances - Safety - Part 2-94: Particular requirements for Scissor type grass shears
87.	IEC 95	60335-2-	Household and similar electrical appliances - Safety - Part 2-95: Particular requirements for Drives for vertically moving garage doors for residential use
88.	IEC 96	60335-2-	Household and similar electrical appliances - Safety - Part 2-96: Particular requirements for Flexible sheet heating elements for room heating
89.	IEC 97	60335-2-	Household and similar electrical appliances - Safety - Part 2-97: Particular requirements for Drives for rolling shutters, awnings, blinds and similar equipment
90.	IEC 98	60335-2-	Household and similar electrical appliances - Safety - Part 2-98: Particular requirements for humidifiers
91.	IEC 99	60335-2-	Household and similar electrical appliances - Safety - Part 2-99: Particular requirements for Commercial electric hoods
92.	IEC 100	60335-2-	Household and similar electrical appliances - Safety - Part 2-85: Particular requirements for Hand-held mains-operated garden blowers, vacuums and blower vacuums (in IEC-version only, not EN)

No.	IEC S	Standard	Standard Title
93.	IEC 101	60335-2-	Household and similar electrical appliances - Safety - Part 2-101: Particular requirements for vaporizers
94.	IEC 102	60335-2-	Household and similar electrical appliances - Safety - Part 2-102: Particular requirements for Gas, oil, and solid-fuel burning appliances having electrical connections
95.	IEC 103	60335-2-	Household and similar electrical appliances - Safety - Part 2-103: Particular requirements for Drivers for gates, doors and windows
96.	IEC 104	60335-2-	Household and similar electrical appliances - Safety - Part 2-104: Particular requirements for Recover and/or recycle refrigerant from air conditioning and refrigeration equipment
97.	IEC 105	60335-2-	Household and similar electrical appliances - Safety - Part 2-105: Particular requirements for Multifunctional shower cabinets
98.	IEC 106	60335-2-	Household and similar electrical appliances - Safety - Part 2-106: Particular requirements for Heated carpets and for heating units for room heating installed under removable floor coverings
99.	IEC 108	60335-2-	Household and similar electrical appliances - Safety - Part 2-108: Particular requirements for Electrolysers
100.	IEC 109	60335-2-	Household and similar electrical appliances - Safety - Part 2-109: Particular requirements for UV radiation water treatment appliances
101.	IEC 110	60335-2-	Household and similar electrical appliances - Safety - Part 2-110: Particular requirements for Commercial microwave appliances with insertion or contacting applicators
102.	IEC 111	60335-2-	Household and similar electrical appliances - Safety - Part 2-111: Particular requirements for Electric ondol matters with a non-flexible heated part
103.	IEC 113	60335-2-	Household and similar electrical appliances - Safety - Part 2-113: Particular requirements for Cosmetic and beauty care appliances incorporating lasers and intense light sources
104.	IEC 114	60335-2-	Household and similar electrical appliances - Safety - Part 2-114: Particular requirements for Self-balancing personal transport devices for use with batteries containing alkaline or other non-acid electrolytes (in IEC-version only, not EN)
105.	IEC 116	60335-2-	Household and similar electrical appliances - Safety - Part 2-116: Particular requirements for Furniture with electrically motorized parts (currently under draft)
106.	IEC 115	60335-2-	Household and similar electrical appliances - Safety - Part 2-115: Particular requirements for skin beauty care appliances
107.	IEC 118	60335-2-	Household and similar electrical appliances - Safety - Part 2-118: Particular requirements for professional ice-cream makers

No.	IEC Standar	d Standard Title
108.	IEC 60335- 119	2- Household and similar electrical appliances - Safety - Part 2-119: Particular requirements for commercial vacuum packaging appliances
109.	IEC 60335- 120	2- Household and similar electrical appliances - Safety - Part 2-120: Particular requirements for the safety of appliances for the generation of directly inhalable aerosols
110.	IEC 60335- 122	2- Household and similar electrical appliances - Safety - Part 2-122: Particular requirements for commercial washing machines
111.	IEC 60335- 124	2- Household and similar electrical appliances - Safety - Part 2-124: Particular requirements for commercial dry ice blasting machines

Notes: Refer to the IEC website for updated IEC standards.

ANNEX II APEC ECONOMIES BEST PRACTICES STRACAP IMPLEMENTATION FOR EHA

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking					
People's Republic	of China									
standards (GB : CNCA (Certification)	 SAC (Standardization Administration of China) is the primary authority responsible for developing, approving, and managing domestic standards [mandatory standards (GB standards), recommended standards (GB/T standards)], https://www.sac.gov.cn/ CNCA (Certification and Accreditation Administration of China) is CNCA oversees mandatory product certifications, https://www.cnca.gov.cn/ SAMR (State Administration for Market Regulation) is the overarching regulatory body that supervises SAC and CNCA. It is responsible for market regulation, 									
•	ion, and enforcement of standar	,		от сели не не не претисионе н	a,					
Voluntary Certification (not mandatory).	At present, there are 165 certification bodies authorized in China to carry out voluntary certification in the field of mechanical equipment and components. Each certification body can conduct product voluntary certification activities within the scope of authorization. Purpose: Consistency, efficiency, and interoperability.	Most EHA products are based on recommended standards (GB /T standard). e.g. GB/T 4706.48-2024 "Safety of household and similar electrical appliances—Part 48: Particular requirements for humidifiers" (IEC 60335-2-98:2008,IDT)	Often voluntarily adopted by industries.	China participates in several Mutual Recognition Arrangements (MRAs) for conformity assessment, primarily through the China National Accreditation Service for Conformity Assessment (CNAS). • APEC EE MRA • APAC, ILAC, IAF signatory MRA	CQC (China Quality Certification) is a domestic voluntary product certification. Note: CQC voluntary certification is one of the typical examples.					
Compulsory Certification (Mandatory)	20 EHA products in CCC compulsory product catalogue list	General Safety Standards This is the foundational standard for the safety of household electrical	Required for mandatory certifications (e.g., CCC).	China Government allow for a free trade	China Compulsory Certification (CCC) system.					

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
	Safety & EMC standard for household electrical appliances. Purpose: Safety, health, environmental protection, and consumer protection.	appliances. using for almost all EHA Product which is included in the CCC list: GB/T 4706.1-2024 "Safety of Household and Similar Electrical Appliances - Part 1: General Requirements" (It is based on the international IEC 60335-1:2016 and replaces the former version GB 4706.1-2005 on August 1, 2026). Note: Mandatory national standard GB 44246-2024 and its supporting standards GB/T 4706 series (2024 version) will replace the former version of mandatory standards GB 4706 series on August 1, 2026). GB 4343.1-2024 "Electromagnetic Compatibility - Requirements for Household Appliances, Electric Tools and Similar Apparatus - Part 1: Emission". (It is based on the international CISPR 14-1:2020 and will replace the	CNCA-C07-01: Implementation Rules for Household and Similar electrical Appliances. This document outlines the scope, testing	agreement (FTA) between the two economies.	

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
Energy Efficiency Label (Mandatory)	15 EHA products in compulsory product catalogue list	former version GB 4343.1- 2018 on June 1, 2026). GB 4943.1-2022 - Audio, video, information technology, and communication technology equipment - Part 1: Safety Requirements replaces the former version GB 4943.1- 2011 and GB 8898 -2011 - Audio, video, and similar electronic apparatus - Safety requirements. 22 Specific Appliance Standards, were released by the Chinese authority SAMR on their standard platform. Mandatory GB standards. e.g. GB 12021.2 "The maximum allowable values of the energy consumption and energy efficiency grade for household refrigerators".	Base on "Measures for Administration of Energy Efficiency Labels"	China Energy Label Center of China National Institute of Standardization is the management institution for energy efficiency labels	THE SECOND LAND AND AND AND AND AND AND AND AND AND

JAPAN

• The Ministry of Economy, Trade, and Industry (METI) oversees the implementation of the Electrical Appliances and Materials Safety Act, which regulates the production and sale of these products to prevent potential hazards.

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
Two groups of Electrical and electronic products	 Specified Electrical Appliances and Materials (Category A; 116 items): Products with a history of market accidents or a high potential to cause injury are classified as "Specified Electrical Products." Non-Specified Electrical Appliances and Materials (Category B; 341 items): Lower-risk products are classified as "Non-Specified Electrical Products". Most household electrical products fall into this category and follow the self-declaration procedure. 	Standard under category A and B	Category A: These products require PSE certification through a Registered Conformity Assessment Body (RCAB) under METI The government registers conformity assessment bodies that conduct safety evaluations based on international standards (ISO/IEC 17065). These bodies: Conduct product testing and factory inspections. Issue certificates of conformity valid for 3, 5, or 7 years Maintain neutrality and are prohibited from providing consulting services Category B: While certification by an RCAB is not required, manufacturers or suppliers must ensure compliance with the established	 The purpose of Act for Mutual Recognition Between Japan and Foreign States on the Results of Conformity Assessments for Specified Equipment to facilitate manufacturing, import, export, sales, and other business activities related to specified equipment by establishing necessary provisions for conducting export conformity assessments based on Mutual Recognition Agreements (MRAs). The Household Goods Quality Labelling Act aims to make the labelling of household goods relating to their 	diamond-shaped PSE mark Category B: These products must display a circular PSE mark. voluntary certification with the S-JQA mark, can be displayed alongside the circular PSE mark The name (full name or trade name) of the labeller shall be added to the label,

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
			technical requirements (self-declaration procedure.)	quality fair and appropriate so that the interests of general consumers can be protected	
INDONESIA					
Regulation of the Minister of Industry No. 7 of 2025 on the Mandatory Implementation of Indonesian National Standards for Household Electronics	Specified Electrical Appliances and Materials for: Air Conditioner; Washing machine; Refrigerator and electric freezer; Water Pump; Submersible water pump; Electric and steam iron; Electric blender - electric juicer - electric mixer - chopper, and food processor; Rice cooker; Electric kettle; Water heater; Water dispenser;	 SNI IEC 60335-1:2020, SNI IEC 60335-2-40:2009 SNI IEC 60335-2-7:2010 60335-2-7:2010 SNI IEC 60335-2-24:2020 SNI IEC 60335-2-24:2020 SNI IEC 60335-2-41:2010 SNI IEC 60335-2-3:2022 SNI IEC 60335-2-74:2010 SNI IEC 60335-2-14:2011 SNI IEC 60335-2-14:2011 SNI IEC 60335-2-15:2011 SNI IEC 60335-2-15:2011 SNI IEC 60335-2-89:2015 	1. Type 5 Certification System, through: • Audit of the production process and implementation of a Quality Management System in accordance with ISO 9001:2015 • Quality conformity testing based on SNI requirements 2. The audit is conducted by an LSPro accredited by KAN in accordance with the SNI scope for household electronics and appointed by the Minister as stated in Minister of Industry	Minister of Industry Regulation No. 51/M- IND/PER/3/2012 on the Procedures for Recognition of Certification Product of Electrical and Electronic Equipment Issued by Conformity Assessment Bodies Listed in ASEAN	Household electronic products that comply with SNI requirements and have obtained an SNI certificate must be affixed with the SNI mark and electronic mark after receiving approval for the use of the SNI mark from the Head of the Agency

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
			Decree No. 4057 of 2023 3. Quality conformity testing is conducted by: Domestic Testing Laboratory and Overseas Testing Laboratory		
Regulation of the Minister of Industry No. 75 of 2024		SNI IEC 62368-1:2014, Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements (IEC 62368- 1:2014, + COR1:2015, IDT)	1. Compliance is achieved through conformity assessment activities using the certification system: • Type 5; and • Type 1n 2. The audit is conducted by an LSPro accredited by KAN in accordance with the SNI scope for household electronics and appointed by the Minister as stated in Minister of Industry Decree No. 4057 of 2023 3. Quality conformity testing is conducted by: Domestic Testing Laboratory and	Minister of Industry Regulation No. 51/M- IND/PER/3/2012 on the Procedures for Recognition of Certification Product of Electrical and Electronic Equipment Issued by Conformity Assessment Bodies Listed in ASEAN	Audio and video products that comply with SNI requirements and have obtained an SNI certificate must be affixed with the SNI mark and electronic mark after receiving approval for the use of the SNI mark from the Head of the Agency.

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
Regulation of the Minister of Energy, Resources, and Minerals No. 7 of 2021 on Standardization in the Electricity Sector and the Affixing of the SNI Mark and/or Safety Mark	covered by mandatory SNI implementation: 1. Circuit breakers 2. Residual current circuit breakers without integrated overcurrent protection 3. Switches	 SNI 8528-1:2018 SNI IEC 61008-1:2017 SNI 04-6956.2.1-2005 SNI IEC 61008-2-2:2014 SNI IEC 60669-1:202 SNI IEC 60884-1:2014 SNI O4-3892.1.1-2003 SNI IEC 61347-1:2011 SNI IEC 61347-2-3:2011 SNI IEC 60598-1:2016 SNI IEC 60598-2-2:2016 SNI IEC 60598-2-3:2016 SNI IEC 60598-2-3:2016 SNI IEC 60598-2-3:2016 SNI IEC 60598-2-5:2016 SNI IEC 60598-2-5:2016 SNI IEC 60598-2-5:2016 SNI IEC 60598-2-5:2011 SNI IEC 60598-2-12:2016 SNI IEC 60670-1:2015 SNI IEC 60670-22:2017 SNI IEC 60838-1:2017 SNI IEC 60838-2-3:2016 SNI IEC 60838-2-3:2016 SNI IEC 60838-2-3:2016 SNI IEC 60838-2-3:2016 	Overseas Testing Laboratory The applied certification scheme is Type 5. Specifically for electrical power equipment and electrical utilization products manufactured in ASEAN economies.	Minister of Energy and Mineral Resources Regulation No. 7/2021 on Standardization in Electricity Sector and Affix SNI Mark and/or Safety Mark	Electrical power equipment and electrical utilization products that have obtained a Product Certificate registration number must be affixed with the SNI Mark and/or Safety Mark on the product's physical body and packaging.

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
Regulation of the Minister of Energy, Resources, and Minerals No. 14 of 2021 on the Implementation of Minimum Energy Performance Standards for Energy-Utilizing Equipment.	Energy-Utilizing Equipment (devices, appliances, or facilities that utilize energy or energy sources in their operation).		To include the SKEM mark or Energy Efficiency Label, manufacturers must have an Energy Efficiency Certificate (SHE) issued by a KAN-accredited and Minister-appointed Product Certification Body. Product Certification Body must use a KAN-accredited testing lab. The SHE, obtained through Type 5b certification based on SNI ISO/IEC 17067:2013, is valid for four years.	Minister of Energy and Mineral Resources Regulation No. 7/2021 on Standardization in Electricity Sector and Affix SNI Mark and/or Safety Mark	
Decree of Ministry of ESDM about Minimum Energy Performance Standards (SKEM) and Energy Efficiency Label (LTHE)	Specified Electrical Appliances and Materials for:		 Product certification scheme Type 1a based on SNI ISO/IEC 17067:2013. The requirements and testing procedures performance refer to: AC (SNI ISO 5151:2015 and SNI 8560-1:2018 ISO 16358-1:2013) Rice cooker and Fan (SNI IEC 60879:2013) 	Minister of Energy and Mineral Resources Regulation No. 7/2021 on Standardization in Electricity Sector and Affix SNI Mark and/or Safety Mark	Tingkat Henat SEMAN BAYNA BATKUS SEMACE NIMAY MODE VOLUME PRICEMA DOA PROCEMA NO. SHE

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
			 LED (SNI IEC 62612:2016) Refrigerator (SNI 8557-1:2018 IEC 62552-1:2015; SNI 8557-2:2018 IEC 62552-2:2015; and SNI 8557-3:2018 IEC 62552-3:2015) RDC (ISO 22044:2021) 		
REPUBLIC OF KOR	REA				
The Government of Korea regulates 172 EEE (172 types of electrical appliances) based on Electrical Appliances Safety Control Act, which are equally applied to both domestic and imported products		KC 60335-1	 Korean Technical regulations (KC) on EEE under the Electrical Appliances Safety Control Act are established based on the International Standards (IEC) fulfil the safety standard (KC requirements) by product testing and shall affix the KC mark on the products, 	An approval regime requires the assessment (testing) of a sample or samples for compliance with a standard or specification by a "Regulator" or assessment agency recognised by a regulator. when CB report of the electrical appliance 6 tested by	KC mark and certification number should be labelled on product and/or package Instruction manual of product should be written by Korean.

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
Australia/New Zeala	and		packages and/or label of their products before the release of the electrical appliances (customs clearance) • Korea has 12 testing laboratories and 3 safety certification bodies for electronic and electrical equipment.	the international standard (IEC) equal to Korea's safety standard at the testing agency authorized by IEC system for conformity testing and certification of electrical equipment (IECEE/CB) is submitted, the product testing and the parts testing can be exempted Products cannot be sold, or imported, until an "approval" is issued for that product. Products are generally required to be marked or labelled to indicate that they are covered by an approval.	
	Electronic household	AS/NZS 60335.2.17; AS/NZS	Implement a	Test certificates from	AS- RCM : Indicates
	appliances	60335.2.9; AS/NZS 60335.2.11;	Declaration of	international	that the product has

Description	Scope of Product	Standard	Technical Regulation (conformity assessment)	Mutual Recognition Arrangement	Marking
		AS/NZS 60335.2.43; AS/NZS 60335.2.9 AS/NZS 60335.2.12 AS/NZS 60335.2.13; AS/NZS 60335.2.78; AS/NZS 60335.2.5 ; AS/NZS 60335.2.5 or AS/NZS 60335.2.74 AS/NZS 60335.2.73; etc.	Conformity (DoC) system, where manufacturers or importers must declare that their products have been tested and meet applicable standards. For certain "high-risk" products or those with specific requirements (e.g., energy rating labels), testing must be conducted by an accredited laboratory Mandatory certification must be conducted by JAS-ANZ accredited bodies (e.g., SAA Approvals). Test certificates from foreign laboratories (LPK) are accepted if	laboratories are accepted if they comply with AS/NZS standards. Note: CE (Conformité Européenne) certification is not recognized in Australia and New Zealand.	been tested and complies with safety, EMC, and radiofrequency requirements (if applicable). Energy rating label: Certain products must display an energy efficiency label indicating their performance. NZ: Marking system is similar to Australia, electrical safety and energy efficiency compliance are enforced through declaration of conformity and the use of standardized energy labels.

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THAILAND			they comply with AS/NZS standards and are verified by a Responsible Supplier		
Thai Industrial Standards Institute (TISI), under the Ministry of Industry, develops domestic standards for electronic household appliances based on IEC standards. Regulated products require mandatory certification.	Electronic Household Appliances	TIS 1375-2563 (2020), TIS 1509-2547 (2004), TIS 1039-2547 (2004), TIS 1389-2559 (2016), and TIS 1463-2556 (2013), etc. TIS Standards generally adopted from IEC 60335 series	Thai Industrial Standards Institute, Ministry of Industry - INDUSTRIAL PRODUCT STANDARDS ACT B.E. 2511 (1968) together with Ministerial Regulations Thailand recognized domestic and international testing agencies with the approval of the IPC (Industrial Product Council). For more details on the list of accredited laboratories, available on www.tisi.go.th	The approval must be issued by the Thai Industrial standards Institute. Thailand participates in Mutual Recognition Arrangements (MRAs) such as ASEAN EE MRA and APEC EE MRA, etc.	Thailand's approved products are required to be marked

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MALAYSIA The Government of Malaysia through the Energy Commission as the regulator regulates the Electricity Regulations 1994 and other subsidiary legislations made	There are 34 categories of regulated electrical equipment under this Guideline. Most of Electrical Household Appliance (EHA) are included under the list of regulated electrical equipment. Details scope of product is included in List of Harmonised Standards EHA	Details of standard is included in List of Harmonised Standards EHA (Excel File)	Requirement for Manufacturer: An electrical equipment that has been approved for manufacturing shall participate in SIRIM's Product Certification Scheme (PCS) – Type 5 Requirement for	Type Test Reports that are recognised by the Commission shall be produced by any accredited ISO/IEC 17025 test laboratories as follows: - (a) SIRIM QAS	All regulated electrical equipment approved by the Commission shall be labelled or marked in accordance with regulation 98 of the Electricity Regulations 1994 and shall be done in
under the Act 447 (Electricity Supply Act) specifically in relation to the electrical equipment. Any manufacturer,	(Excel File)		Importer: (1) An electrical equipment that has been approved for import into Malaysia shall comply with the consignment test conducted by SIRIM for	(a) SIRIM QAS International Sdn. Bhd. (SIRIM), Malaysia – National CAB (b) Laboratories under Laboratory Accreditation Scheme	the manner which has been determined by the Commission as below: 1) ST-SIRIM label
importer, exhibitor, seller and advertiser shall comply with the provisions under the Act.			each batch (Type 1b) or participate in SIRIM's PCS (Type 5) within the validity period of the CoA. (2) An electrical equipment which failed the	of Malaysia (SAMM) by Department of Standards Malaysia (DSM) recognised by the Commission; (c) Laboratories under	(BATCH) Importer who has passed Consignment Test (Batch shipment) shall purchase ST- SIRIM label and
In exercise of the powers conferred by section 50c of the Electricity			Consignment Test need to be sent back to the economies of origin or the Commission may direct	the IECEE CB Scheme. The list of the laboratories is available from the	shall affix the label on each of equipment.

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Supply Act 1990 [Act 447], the Energy Commission has issued the Guidelines for Approval of Electrical Equipment. These Guidelines serves as a guide on the procedure in the application for any electrical equipment prescribed under regulation 97 of the Electricity Regulations 1994.			the importer to withdraw immediately and where necessary may seize or remove such electrical equipment. (3) An electrical equipment constructed with power supply cord and power plug shall comply with Malaysian requirements and standards.	website https://www.iecee.org . The CB Test Report needs to be accompanied with a CB Test Certificate; (d) Laboratories (in the scope of its accreditation) which are accredited by the accreditation body* that have signed the Asia Pacific Accreditation Cooperation (APAC) MRA – https://www.apac- accreditation.org; (e) Laboratories (in the scope of its accreditation) which are accredited by the accreditation body that have signed the International Laboratory Accreditation Cooperation (ILAC)	New ST-SIRIM label Local manufacturer and importer who have entered the Product Certification Scheme shall purchase ST-SIRIM label and shall affix the label on each equipment. New ST-SIRIM Label (effective February 2022) The product Certification Scheme shall purchase ST-SIRIM label and shall affix the label on each equipment. New ST-SIRIM Label (effective February 2022) The product Certification Scheme shall purchase ST-SIRIM label and shall affix the label on each equipment.

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			MRA – https://ilac.org ; (f) Laboratories (in the scope of its accreditation) listed as Designated Testing Laboratory (DTL) under ASEAN Sectoral Mutual Recognition Agreement for Electrical and Electronic Equipment (ASEAN EEE MRA); Note: All testing shall include the domestic deviation in Malaysia. The requirements of domestic deviation stated in guidelines.	ST-SIRIM Label Licensing Programme, they may use the SIRIM Certification Mark as shown below. SIRIM CERTIFIED TO YY: XXXX CERTIFICATION NO: XXXXXXXX SIRIM-ST Label Licensing Programme b) For small regulated electrical equipment such as lampholder, starterholder, glow starter and cable, the SIRIM Certification Mark shall be marked on their products.		
The Ministry of Energy establishes the mandatory certification of electrical products and Superintendency Electricity and Fuel through technical regulations, establishes guidelines for product testing and certification methods.						
t covers various categories of electrical products (safety and energy efficiency) that the Ministry declares mandatory:	IEC 60335-1 Standard "Household and similar electrical appliances - Safety - Part 1: General requirements" and its Part 2, depending on the	Certification Bodies authorized by the Superintendency of Electricity and Fuels (SEC), duly accredited	According to Supreme Decree 298 of 2005 certification systems, to date there are not Mutual Recognitions in	Every approved product must include a certificate number that confirms its compliance. This		
f t of ar	or product testing and certific covers various categories electrical products (safety nd energy efficiency) that e Ministry declares	or product testing and certification methods. covers various categories IEC 60335-1 Standard "Household and similar electrical appliances - Safety - Part 1: General requirements"	or product testing and certification methods. covers various categories electrical products (safety and energy efficiency) that e Ministry declares and atory: IEC 60335-1 Standard authorized by the superintendency of Electricity and Fuels (SEC), duly accredited	include the domestic deviation in Malaysia. The requirements of domestic deviation stated in guidelines. establishes the mandatory certification of electrical products and Superintendency Electricity and Fuel through technical or product testing and certification methods. covers various categories electrical products (safety and energy efficiency) that e Ministry declares and its Part 2, depending on the include the domestic deviation in Malaysia. The requirements of domestic deviation stated in guidelines. Certification Bodies authorized by the Superintendency of Electricity and Fuels (SEC), duly accredited Mutual Recognitions in		

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certification of electrical and fuel products prior to their commercialization in Chile.	- Household appliances; and others such as, for example	IEC 23-50:2008 or IEC 23-34:1990 (EN 50075:1990) "Verification of the dimensions of the power plug or connector"	17065 standard, apply the certification systems established in Supreme Decree No. 298. These bodies are responsible for managing the shipment of products to domestic laboratories accredited according to the ISO/IEC 17025 for the corresponding testing. National Certification Bodies may issue approval certificates based on reports issued by foreign Inspection Bodies or Testing Laboratories, provided that these bodies are signatories to the Mutual Recognition Arrangement of the International Laboratory Accreditation Cooperation (ILAC). In the case of foreign certifications, the certification bodies must belong to the International	certification matters of electrical and fuel products between the Government of Chile and one economy or group of economies.	identifies the approved product, can be replaced by a QR code attached to both the product and its packaging. The authorized certification body is responsible for issuing this number.

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			Accreditation Forum (IAF).		
PERU					
INACAL (Quality Na	tional Institute of Peru) is Peru's	focal point for quality - technical st	tandardisation, accreditation a	and metrology - and mana	ges the National
Quality System, http	s://www.gob.pe/inacal/				•
INACAL approves	Technical standards for:	NTP-IEC 60335-2-15	Only technical regulation	Peru by INACAL	Only the marking for
Peruvian technical	Air conditioner	NTP-IEC 60335-2-68	for energy efficiency (D.S	recognizes conformity	energy efficient is
standards, which	Washing machine	NTP-IEC 60335-2-32	009-20217-EM). In this	assessment results	mandatory
are voluntary	Refrigerator	NTP-IEC 60335-2-13	case, the manufacturers	issued by accredited	•
standards	Dryer	NTP-IEC 60335-2-23	or importers need to	conformity assessment	
		NTP-IEC 60335-2-28	present a certificate of	bodies by another	
The Ministry of		NTP-IEC 60335-2-3	conformity issued by a	accreditation body	
Energy and Mines		NTP-IEC 60335-2-5	certification body	member signatory of	
is the competent		NTP-IEC 60335-2-12	accredited by INACAL or	Multilateral	
authority in Peru for		NTP-IEC 60335-2-29	by another accreditation	Recognition	
overseeing mining		NTP-IEC 60335-2-54	body member signatory	Arrangement (MLA) of	
and energy		NTP-IEC 60335-2-81	of Multilateral	the International	
activities.		NTP-IEC 60335-2-85	Recognition	Accreditation Forum	
		NTP-IEC 60335-2-17	Arrangement (MLA) of	(IAF)	
The Ministry of		NTP-IEC 60335-2-75	the International		
Production		NTP-IEC 60335-2-21	Accreditation Forum	INACAL accredits	
(PRODUCE) is the		NTP-IEC 60335-2-53	(IAF)	testing laboratories	
competent		NTP-IEC 60335-2-16		that shall comply with	
authority in Peru		NTP-IEC 60335-2-41		ISO/IEC 17025	
for the regulation		NTP-IEC 60335-2-45		standards to perform	
and management		NTP-IEC 60335-2-61		technical tests and	
of production		NTP-IEC 60335-2-65		also certification	
across various		NTP-IEC 60335-2-98		bodies that shall	
sectors, including		NTP-IEC 60335-2-2		comply with ISO/IEC	
industry, micro and		NTP-IEC 60335-2-6		17065 standards	
small enterprises,		NTP-IEC 60335-2-11		according to scope	

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domestic trade, among others.		NTP-IEC 60335-2-14 NTP-IEC 60335-2-43 NTP-IEC 60335-2-80 NTP-IEC 60335-1 NTP-IEC 60335-2-4 NTP-IEC 60335-2-31 NTP-IEC 60335-2-30 NTP-IEC 60335-2-35 NTP-IEC 60335-2-10 NTP-IEC 60335-2-24 NTP-IEC 60335-2-25 NTP-IEC 60335-2-9 NTP-IEC 60335-2-7 NTP-IEC 60335-2-7 NTP-IEC 60335-2-44 NTP-IEC 60335-2-49 NTP-IEC 60335-2-59 NTP-IEC 60335-2-55 NTP-IEC 60335-2-60 NTP-IEC 60335-2-60 NTP-IEC 60335-2-40			required by the conformity assessment bodies.	
SINGAPORE	T	\ -	1		10: (: :)	
The Consumer Product Safety Office (CPSO) regulates 33 categories of household electrical, electronic and gas appliances and accessories under	The list of Controlled Goods can be found here.	The applicable safety standards can be found here.	•	Test certificates from overseas Conformity assessment bodies are accepted if they are issued under the IECEE CB scheme or one of Singapore's MRA schemes. Mandatory certification is required for	Singapore participates in several Mutual Recognition Arrangements (MRAs) for conformity assessment, primarily through the: • ASEAN EE MRA • APEC EE MRA	Once a CG has been registered with the CPSO, they need to be affixed with a SAFETY MARK before they are allowed to be supplied or advertised for supply.

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the Consumer Protection (Safety Requirements) Regulations (CPSR). These are also known as Controlled Goods which require pre- market approval before they can be supplied in the market.			regulated products classified as high risk or medium risk. Mandatory certification is conducted by Designated third party Conformity Assessment Bodies (CABs) in Singapore or in Singapore's Mutual Recognition Agreement (MRA) partners Regulated products classified as low risk only require a self- declaration in the form of Supplier's Declaration of Conformity (SDoC).	ILAC, IAF signatory MRA	SAFETY MARK 123456-00