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## **ENTERPRISE SINGAPORE CALLS FOR PUBLIC COMMENTS – 1 November 2024**

Under the National Standardisation Programme, the public comment period is an important stage of standards development. Members of the public are invited to provide feedback on draft Singapore Standards for publication and work item proposals for development and review of Singapore Standards and Technical References. The establishment of Singapore Standards is done in accordance with the World Trade Organisation's requirements for the development of national standards.

### **A) Notification of Draft Singapore Standard for Publication**

Members of the public are invited to comment on the following Singapore Standards:

Biomedical and Health – [medical device software, healthcare products, cosmetics](#)

Electrical and Electronic – [semiconductor devices](#) (3 standards)

Environment and Resources – [circular economy](#) (3 standards)

Manufacturing – [data exchange between robots, lifts and automated doorways](#)

Closing date for comments: **2 January 2025**

For more information on viewing the document, [click here](#).

Please submit comments to: [standards@enterprisesg.gov.sg](mailto:standards@enterprisesg.gov.sg).

### **B) Notification of Work Item Proposals**

#### **B.1 Proposal for New Work Items**

New Work Items (NWIs) are approved proposals to develop new Singapore Standards, or pre-standards like Technical References and Workshop Agreements.

Members of the public are invited to comment on the scope of the new standards and contents that can be included into the following proposals:

Electrical and Electronic – [power utility automation](#) (3 standards), [energy management system](#) (5 standards)

The NWIs are work-in-progress, and the drafts are not available at this juncture.

Closing date for comments: **2 December 2024**

## **B.2 Proposal for the Review of Singapore Standards**

Published Singapore Standards and Technical References are reviewed to determine if they should be updated, confirmed or withdrawn (if they no longer serve the industry's needs) or classified as mature standards (no foreseeable changes; to be reviewed only upon request).

Members of the public are invited to comment on the following standards to be reviewed:

Electrical and Electronic – [generating system](#), [electrical energy storage systems](#), [plugs and socket outlet](#)

Food – [good agriculture practice](#)

The reviews are ongoing, and the new version/drafts are not available at this juncture. Users can refer to the current standards to provide feedback. [Click here](#) to view or purchase the standards.

Closing date for comments: **2 December 2024**

Members of the public are invited to join as standards partners, co-opted members or resource members subject to the approval of relevant committees and working groups.

To comment or to join in the development of these standards, please write to [standards@enterprisesg.gov.sg](mailto:standards@enterprisesg.gov.sg).

### **A) Notification of Draft Singapore Standard for Publication**

#### **(I) Biomedical and Health**

##### **New**

- 1. Medical device software – Software life cycle processes** (Identical adoption of IEC 62304:2006+AMD1:2015)

This standard defines the life cycle requirements for medical device software. The set of processes, activities, and tasks described in this standard establishes a common framework for medical device software life cycle processes.

Users of the standard include medical device manufacturers, software developers, quality assurance personnels, clinical engineers, research institutions, healthcare providers and consultants, and relevant government agencies.

##### **Revision**

- 2. Sterilisation of health care products – Moist heat – Requirements for the development, validation, and routine control of a sterilisation process for medical devices** (Revision of SS ISO 17665-1:2018) (Identical adoption of ISO 17665:2024)

This standard specifies requirement for the development, validation and routine control of moist heat sterilisation processes for medical devices. It also provides guidance to explain the requirements set forth in the normative sections. The guidance given is intended to promote good practice related to moist heat sterilisation processes according to this standard. The standard applies within industrial and health care settings.

Users of the standard include medical device manufacturers, sterilisation service providers, healthcare institutions, quality assurance professionals involved in the development, validation, and routine control of sterilisation processes, as well as relevant government agencies.

## Amendment

3. **Amendment No. 1 to Cosmetics – Guidelines on technical definitions and criteria for natural and organic cosmetic ingredients – Part 2: Criteria for ingredients and products** (SS ISO 16128-2:2017) (Identical adoption of ISO 16128-2:2017/Amd.1:2022)

This amendment is to update the formulae that determines the natural and organic origin index of cosmetics ingredients.

Users of the standard include cosmetic manufactures and suppliers.

## (II) Electrical and Electronic

### New

4. **Semiconductor devices – Part 1: General** (Identical adoption of IEC 60747-1:2006+A1:2010)

This standard applies to power utility automation systems, as well as communication between intelligent electronic devices in such a system, and its related system requirements.

5. **Semiconductor devices – Mechanical and climatic test methods**

**Part 1: General** (Identical adoption of IEC 60749-1:2002)

This standard is applicable to semiconductor devices (discrete devices and integrated circuits) and establishes provisions common to the series.

**Part 3: External visual examination** (Identical adoption of IEC 60749-3:2017)

This standard verifies that the materials, design, construction, markings, and workmanship of a semiconductor device are in accordance with the applicable procurement document. External visual inspection is a non-destructive test and applicable for all package types. The test is useful for qualification, process monitor, or lot acceptance.

Users of the above standards on semiconductor devices include manufacturers and suppliers, academic institutions, research institutes, consultants, testing laboratories and relevant government agencies.

## (III) Environment and Resources

### New

6. **Circular economy – Vocabulary, principles and guidance for implementation** (Identical adoption of ISO 59004:2024)

This standard defines key terms, establishes a vision and principles for a circular economy, as well as provides guidance, including possible actions, for an organisation to implement.

7. **Circular economy – Guidance on the transition of business models and value networks** (Identical adoption of ISO 59010:2024)

This standard provides guidance for an organisation seeking to transition its value creation models and value networks from linear to circular. It focuses on business-oriented strategies to implement circular economy practices at both organisational and inter-organisational levels.

8. **Circular economy – Measuring and assessing circularity performance** (Identical adoption of ISO 59020:2024)

This standard specifies requirements and provides guidance to organisations for measuring and assessing a defined economic system to determine their circularity performance in a

specific time period. Measurement and assessment are performed by the collection and calculation of data with the help of mandatory and optional circularity indicators.

It provides a framework to guide users within organisations of all types and sizes through the measurement and assessment process. This includes system boundary setting, selecting relevant indicators, as well as processing and interpreting data in a consistent and reproducible manner to generate meaningful and verifiable results

The standards on circular economy are applicable to organisations seeking to understand and commit or contribute to a circular economy while contributing to sustainable development. These organisations can be either private or public, acting individually or collectively, regardless of type or size, and located in any jurisdiction, or position within a specific value chain or value network.

#### **(IV) Manufacturing**

##### **Revision**

#### **9. Data exchange between robots, lifts and automated doorways to enable autonomous operations (Review of TR 93:2021)**

This standard specifies the compliance requirements when integrating robots with lifts and robots with automated doorways. It defines the minimum set of data exchanges, as well as the hardware requirements and safety considerations, for robot-lift integration of both digital and discrete lift control systems. This review is intended to elevate TR 93 to a Singapore Standard.

Users of this standard include lift vendors, building infrastructure providers, system integrators, facility owners and relevant government agencies.

Copies of the draft are available at:

##### Viewing from Singapore Standards eShop

Login to Singapore Standards eShop at: [www.singaporestandardseshop.sg](http://www.singaporestandardseshop.sg)

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##### Viewing Singapore Standards from Public Libraries

Singapore Standards are viewable multimedia stations at all Public Libraries via NLB databases "Singapore Standards Collection" at <https://reference.nlb.gov.sg/guides/sci-tech/tech/standards-and-references/> Please refer to <https://www.nlb.gov.sg/main/visit-us> for address and viewing hours.

##### Purchase of Singapore Standards

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**NOTE** – The viewing period of the draft and standard will expire on the closing of the public comment period and will no longer be available after this date.

## **B) Notification of the Work Item Proposals**

### **B.1 Proposal for New Work Items**

#### **(I) Electrical and Electronic**

##### **1. Communication networks and systems for power utility automation**

**Part 1: Introduction and overview** (Identical adoption of IEC TR 61850-1:2013)

This standard is applicable to power utility automation systems and defines the communication between intelligent electronic devices in such a system, and the related system requirements.

**Part 2: Glossary** (Identical adoption of IEC TS 61850-2:2019)

This standard contains the glossary of specific terms and definitions used in the context of substation automation systems which are standardised in the various parts of the IEC 61850 series.

**Part 3: General requirements** (Adoption of IEC 61850-3:2013)

This standard defines the general requirements, mainly regarding construction, design and environmental conditions for utility communication and automation IEDs (intelligent electronic devices), as well as systems in power plant and substation environments.

##### **2. Energy management system application program interface (EMS-API)**

**Part 2: Glossary** (Identical adoption of IEC TS 61970-2:2004)

This standard contains the glossary for the terms and definitions used in the context of energy management system application program interface which are standardised in the various parts of the IEC 61970 series.

**Part 301: Common information model (CIM) base** (Adoption of IEC 61970-301:2020)

This standard defines the CIM, which is an abstract model that represents all the major objects in an electric utility enterprise typically involved in utility operations.

By providing a standard way of representing power system resources as object classes and attributes, the CIM facilitates the integration of network applications developed independently by different vendors, between entire systems running network applications developed independently, or between a system running network applications and other systems concerned with different aspects of power system operations, such as generation or distribution management.

**Part 401: Profile framework** (Adoption of IEC 61970-401:2022)

This standard specifies the structure of a profile specification and the rules for selecting subsets of information from the CIM. It standardises the operations used to create the profile elements from the Canonical CIM.

**Part 452: CIM static transmission network model profiles** (Adoption of IEC 61970-452:2021)

This standard defines the subset of classes, class attributes, and associations from the CIM necessary to execute state estimation and power flow applications between control centres and/or control centre components, such as power systems applications.

## **Part 453: Diagram layout profile** (Adoption of IEC 61970-453:2014)

This standard defines the general use cases for exchange of diagram layout data, and guidelines for linking the layout definitions with CIM data. Guidelines for management of schematic definitions through multiple revisions are also included.

Users of the above standards include testing and inspection companies, substation equipment manufacturers, suppliers, substation contractors and service providers, training providers, institutes of higher learning and relevant government agencies.

### **B.2 Proposal for the Review of Singapore Standards**

#### ***(I) Electrical and Electronic***

##### **1. Code of practice for installation, operation, maintenance, performance and construction requirements of mains failure standby generating systems (SS 535:2018)**

This standard specifies the performance and construction requirements, installation, operation, testing, inspection and maintenance of mains failure standby generating systems for buildings and where applicable to mobile generating systems. It does not apply to installations for marine/offshore or base load use.

The standard is reviewed with the intention to revise it to align it with latest industry and international practices.

Users of the standard include engineers, contractors, manufacturers, suppliers and relevant government agencies.

##### **2. Electrical energy storage (EES) systems – Safety considerations for grid-integrated EES systems – General specification (Revision of TR 77-2:2020) (Modified adoption of IEC TS 62933-5-1:2017)**

This standard specifies safety considerations (e.g. hazards identification, risk assessment, risk mitigation) applicable to EES systems integrated with the electrical grid. It provides the criteria to foster the safe application and use of electric energy storage systems of any type or size intended for grid-integrated applications.

Users of the standard include testing and inspection companies, EES system manufacturers, suppliers, renewable energy contractors and service providers, and relevant government agencies.

##### **3. Specification for 13 A plugs and socket-outlets – Part 2: 13 A switched and unswitched socket-outlets (SS 145-2:2018+C1:2019) (Modified adoption of BS 1363-2:2016+A1:2018)**

This standard specifies requirements for 13 A switched and unswitched shuttered socket-outlets for household, commercial and light industrial purposes, with reference to safety in normal use. The socket-outlets are suitable for the connection of appliances, sound-vision equipment, luminaires, etc. in a.c. circuits only, operating at voltages not exceeding 250 V r.m.s at 50 Hz using plugs in accordance with SS 145-1.

It does not cover socket-outlet incorporating remote control switching function. The standard is reviewed with the intention to revise it.

Users of the standard include testing and inspection companies, plugs and sockets manufacturers, suppliers, service providers, and relevant government agencies.

(II) **Food**

**4. Specification for good agriculture practice** (Revision of SS 675:2021+A1:2022)

This standard specifies a set of requirements for a farm management system detailing best practices to prevent risk of hazards occurring to ensure the production of safe and high quality produce, while minimising impact to the environment and workers. The standard covers the following four areas of agriculture farm production:

- a) food safety;
- b) crop protection and produce quality;
- c) environmental management; and
- d) workers' health, safety and welfare.

The standard is reviewed with the intention to update the scope to include mushroom and bean sprouts farms.

Users of the standard include vegetables, fruits and herbs farms, retailers, certification bodies, institutes of higher learning, training providers, industry associations, research and professional institutions, and relevant government agencies.

Submit Comments

## Frequently asked questions about public comment on Singapore Standards:

### 1. What is the public comment on Singapore Standards?

Singapore Standards are established based on an open system which is also in accordance with the requirements of the World Trade Organisation. These documents are issued as part of a consultation process before any standards are introduced or reviewed. The public comment period is an important stage in the development of Singapore Standards. This mechanism helps industry, companies and other stakeholders to be aware of forthcoming changes to Singapore Standards and provides them with an opportunity to influence, before their publication, the standards that have been developed by their industry and for their industry.

### 2. How does public comment on Singapore Standards benefit me?

This mechanism:

- ensures that your views are considered and gives you the opportunity to influence the content of the standards in your area of expertise and in your industry;
- enables you to be familiar with the content of the standards before they are published and you stand to gain a competitive advantage with this prior knowledge of the standards.

### 3. Why do I have to pay for the standards which are proposed for review or withdrawal?

These standards are available for **free viewing** at Toppan Leefung Pte Ltd and all Public Libraries. However, the normal price of the standard will be charged for those who wish to purchase a copy. At the stage where we propose to review or withdraw the standards, the standards are still current and in use. We seek comments for these standards so as to:

- provide an opportunity for the industry to provide inputs for the review of the standard that would make the standard suitable for the industry's use,
- provide feedback on the continued need for the standard so that it will not be withdrawn.

### 4. Why are comments only accepted through the new public comment form provided by Enterprise Singapore?

We have developed a new public comment form which will enable users to submit their comments in a standardised and structured manner. The Working Group (WG) that will be reviewing the comments will have a better understanding of what the commenter has proposed, the rationale for the changes and where these changes will be made in the standard. This will assist the WG in addressing the comments more effectively.

### 5. What happens after I have submitted my comments?

The comments will be channelled to the relevant WGs for consideration and you will be informed of the outcome of the committee's decision. You may be invited to meet the WG if clarification is required on your feedback.

### 6. Can I view drafts after the public comment period?

Drafts will not be available after the public comment period.

### 7. How do I request for the development of a new standard?

You can propose the development of a new standard [here](#).