

Proposal for Amendments to the Legal Inspection Requirements for Energy Storage Systems Including Stationary Lithium Energy Storage Systems

By the Bureau of Standards, Metrology and Inspection (BSMI), Ministry of Economic Affairs

Introduction:

To support the energy transition policy and ensure the safe deployment of large-scale energy storage systems, the BSMI proposes to expand the scope of mandatory inspection for stationary lithium energy storage systems and secondary lithium batteries intended for use in such systems. Products with a rated energy capacity of 100 kWh or below are already subject to mandatory inspection. Under this proposal, the maximum rated energy capacity covered by mandatory inspection requirements would be increased from 100 kWh to 360 kWh. In addition, the technical requirements for stationary lithium energy storage systems would be revised to align the cyber security and grid interconnection requirements with newly published CNS standards. Secondary lithium battery packs for road vehicle propulsion would remain subject to the existing mandatory inspection requirements, and their inspection scope and technical requirements would not be changed under this proposal.

Proposed date of implementation:

Please refer to the section on related requirements.

Scope of covered products:

Item	Description of Goods	Inspection Standards*	Conformity Assessment Procedures	C.C.C. Code (the first 6 digits are the same as HS Code) (For reference)
1	Stationary Lithium Battery Storage Appliances (inspection scope: battery capacity not exceeding 360 kWh, with bidirectional power transfer function between the device and the utility grid or other equipment, or equipped with solar photovoltaic module input capability)	- CNS 62619:2020 or CNS 62619:2023 & CNS 63056: 2021 - For those equipped with solar photovoltaic module input: CNS 15426-1:2011 & CNS 15426-2:2013 For those not equipped with solar photovoltaic module input: CNS 62477-1:2023 - For those used only in industrial environments: CNS 14674-2:2023 & CNS 14674-4:2023 For those not used only in industrial environments: CNS 14674-1:2023 & CNS 14674-3:2022 - For those with the function of transmitting power to the grid of Taiwan Power Company (hereinafter referred to as the grid-connected function): (1) For power conversion systems (PCS) with a capacity not exceeding 20 kW: CNS 15382:2018 or CNS 16280:2026 (2) For power conversion systems (PCS) with a capacity exceeding 20 kW: CNS 16280:2026 - For power conversion system (PCS) with a capacity exceeding 20 kW: CNS 16281:2026 - CNS 15663:2013, Section 5 “Marking of	RPC Scheme (Modules II+IV or II+V or II+VII) or TABI Scheme	8504.40.92.00.6B 8504.40.93.00.5B 8507.60.00.90.0E 8507.80.90.19.5E

		presence”		
2	Secondary Lithium Cell Blocks, Battery Packs (Modules), Battery Systems for battery energy storage system (BESS) use (inspection scope: battery capacity not exceeding 360 kWh)	CNS 62619:2020 or CNS 62619:2023 & CNS 63056:2021	RPC Scheme (Modules II+IV or II+V or II+VII) or TABI Scheme	8507.60.00.90.0F 8507.80.90.19.5F
3	Secondary Lithium Battery Packs for Road Vehicle Propulsion (inspection scope: battery capacity not exceeding 100 kWh for vehicles with 4 or more wheels)	CNS 16160:2023	RPC Scheme (Modules II+IV or II+V or II+VII) or TABI Scheme	8507.60.00.90.0G 8507.80.90.19.5G

The import regulation codes for all of the listed products are C02.

Note:

- For products listed under Items 1 and 2, the propagation test shall be conducted in accordance with Section 7.3.3 of CNS 62619:2020 or CNS 62619:2023.
- The functional safety of the battery systems specified in Section 8.1 of CNS 62619: 2020 or CNS 62619:2023 shall comply with one of the following standards, or a later version thereof, together with the applicable requirements. Test reports shall be provided and issued by testing laboratories accredited by signatories to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), or the International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA), or testing laboratories participating in the IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE).
 - IEC/UL 60730-1:2013 (UL 60730-1:2016) Annex H (Safety integrity level Class B or C)
 - IEC 61508:2010 (Safety integrity level (SIL) 2 or higher)
 - ISO 13849-1:2015 and ISO 13849-2:2012 (performance level “C”)
 - UL 991:2004 and UL 1998:2013
- For products listed under Items 1 and 2, where components such as cells, cell blocks, battery packs (modules), battery systems, or power conversion systems (PCS) comply with the applicable standards and have been certified by the Voluntary Product Certification (VPC) system, the VPC certificates issued by the BSMI may be accepted as conformity assessment documents. However, the products themselves shall still comply with CNS 63056.
- For products listed under Items 1 and 2 that comply with the propagation test specified in Section 7.3.3 of CNS 62619, certification documents for cell components and cell block components may be accepted as conformity assessment documents, provided that such components comply with IEC 62619:2017 or the relevant international standards at a version more recent than IEC 62619:2017 and that the certification documents are issued by product certification bodies in other countries accredited to ISO/IEC 17065. However, the products themselves shall still comply with CNS 63056.
- Products listed under Item 1 that are tested in accordance with CNS 62477-1 may be exempted from the tests specified in Section 4.9, “Mechanical Active Substances - Dust and Sand,” and Section 5.2.6.6, “Dust and Sand Test.”
- For products listed under Item 1 that are tested in accordance with CNS 14674-2 and CNS 14674-4, the precautionary statement "This product is intended for use in industrial environments only." shall be indicated in Chinese on the product itself, its packaging, or in the instructions.
- For products listed under Item 1 that do not have grid-connected functions, technical documents demonstrating the absence of such functions shall be submitted.

Description of the conformity assessment procedures:

1. Registration of Product Certification (RPC) Scheme: Modules II+IV, II+V, or II+VII

Under the RPC scheme, a combination of modules is applied to ensure that products comply with the

applicable inspection standards at both the design and production stages. Module II requires products to undergo type testing by testing laboratories designated by the BSMI. In addition, the production premises must undergo assessment to ensure that products manufactured at those premises conform to the type-tested prototypes submitted under Module II. Depending on the applicable procedure, the assessment may cover the full quality management system under Module IV, the production quality management system under Module V, or factory inspection under Module VII.

For Module IV and Module V, a registration certificate in accordance with the CNS 12681, which is equivalent to ISO 9001, must be obtained from a certification body recognized by the BSMI. For Module VII, a factory inspection report issued by the BSMI or a BSMI-recognized factory inspection body is required.

In addition, a declaration of conformity-to-type is also required to ensure that the mass-produced commodities conform to the types specified in the type-test report.

Once a product has been certified and registered by the BSMI, it will be allowed to use the Commodity Inspection Mark, which is comprised of a graphic symbol with an identification number. The identification number shall consist of the Roman letter “R” and a designated code (five digits) given by the BSMI. Unless selected by RPC border checks, such products can clear customs directly without any further inspection. The application fee and annual fee for RPC are both NT\$5,000 (about US\$170) per product type, and an RPC certificate is valid for three years. If there are any serial products, an extra NT\$3,000 (about US\$102) is charged for each type in a series. The fees for type testing vary by products and are determined in accordance with the fee schedule of the relevant testing laboratories.

2. Type-Approved Batch Inspection (TABI) Scheme

Under this scheme, manufacturers or importers are required to have their products undergo type testing by the BSMI or by designated testing laboratories recognized by the BSMI, and to submit an application for Type Approval to the BSMI or its branches.

After obtaining a Type Approval certificate, manufacturers or importers are required to apply to the BSMI for batch inspection each time before the products are released from the production premises or arrive at the port of entry. The BSMI will then review the application and supporting documents, and may require additional samples for further testing where necessary.

Once the products have passed inspection, they will be allowed to use the Commodity Inspection Mark, which is comprised of a graphic symbol with an identification number. The identification number shall consist of the Roman letter “T” and a designated code (five digits) given by the BSMI. The application fee for a Type Approval is NT\$3,500, and the certificate remains valid for three years. The fees for type testing vary by products and are determined in accordance with the fee schedule of the relevant testing laboratories.

*Further information about the scheme is available on the BSMI website at <https://www.bsmi.gov.tw/wSite/lp?ctNode=9846&CtUnit=4208&BaseDSD=7&mp=2>

Locations to apply for Type Testing:

The BSMI designated testing laboratories.

Locations to apply for Registration of Product Certification:

The BSMI or its branches.

Locations to apply for Batch Inspection:

1. Domestic manufacturers or commissioned manufacturers: applications for inspection shall be submitted to the BSMI or its branches having jurisdiction over the place of production. Where necessary, applications may be submitted across jurisdictions.
2. Importers or entrusted importers: applications for inspection shall be submitted to the BSMI or its branches having jurisdiction over the port of entry. Where necessary, applications may be submitted across jurisdictions.

Time required for Type Approval / Registration of Product Certification:

Fourteen working days. (This period pending submission of supplementary documents or samples shall not be included in the calculation. In cases where samples are selected for testing, an additional seven working days shall be added after the samples have been delivered.)

Related requirements:

1. For products listed under Item 1 with a battery capacity not exceeding 20 kWh, and products listed under Item 2 with a battery capacity exceeding 1 kWh but not exceeding 20 kWh:
 - (1) The inspection requirements shall apply to both imported and domestically manufactured products from 1 July 2026. From the date of this notice, the BSMI will accept applications for TABI or RPC for the above-mentioned products.
 - (2) Applicants submitting applications to the BSMI on or after the date of this notice shall provide a type-test report demonstrating compliance with the applicable inspection standards. A certificate will be issued upon approval by the BSMI and shall remain valid for three years from the date of issuance. However, if the certificate is issued on or before 30 June 2026, its validity period shall commence on 1 July 2026 and expire on 30 June 2029.
2. For products listed under Items 1 and 2 with a battery capacity exceeding 20 kWh but not exceeding 100 kWh, and products listed under Item 2 with a battery capacity not exceeding 1 kWh:
 - (1) The inspection requirements shall apply to both imported and domestically manufactured products from 1 July 2027. From the date of this notice, the BSMI will accept applications for TABI or RPC for the above-mentioned products.
 - (2) Applicants submitting applications to the BSMI on or after the date of this notice shall provide a type-test report demonstrating compliance with the applicable inspection standards. A certificate will be issued upon approval by the BSMI and shall remain valid for three years from the date of issuance. However, if the certificate is issued on or before 30 June 2027, its validity period shall commence on 1 July 2027 and expire on 30 June 2030.
3. For products listed under Items 1 and 2 with a battery capacity exceeding 100 kWh but not exceeding 360 kWh:
 - (1) The inspection requirements shall apply to both imported and domestically manufactured products from 1 July 2028. From the date of this notice, the BSMI will accept applications for TABI or RPC for the above-mentioned products.
 - (2) Applicants submitting applications to the BSMI on or after the date of this notice shall provide a type-test report demonstrating compliance with the applicable inspection standards. A certificate will be issued upon approval by the BSMI and shall remain valid for three years from the date of issuance. However, if the certificate is issued on or before 30 June 2028, its validity period shall commence on 1 July 2028 and expire on 30 June 2031.
4. For products listed under Item 3:
 - (1) The inspection requirements shall apply to both imported and domestically manufactured products from 1 July 2027. From the date of this notice, the BSMI will accept applications for TABI or RPC for the above-mentioned products.
 - (2) Applicants submitting applications to the BSMI on or after the date of this notice shall provide a type-test report demonstrating compliance with the applicable inspection standards. A certificate will be issued upon approval by the BSMI and shall remain valid for three years from the date of issuance. However, if the certificate is issued on or before 30 June 2027, its validity period shall commence on 1 July 2027 and expire on 30 June 2030.
5. For products listed under Item 1, the inspection standards listed above shall come into force from the date

of this notice, and the previous version shall cease to apply from 1 July 2027. Applications for TABI or RPC shall be processed in accordance with the followings from the date of adoption:

(1) For certified products:

- Type Approval certificates and RPC certificates obtained on or before 30 June 2027 may continue to be used until their expiration date. During the validity period, additional series products may be added in accordance with the original inspection requirements.
- From 1 July 2028, applicants applying to the BSMI for certificate extension shall provide type-test reports and technical documents based on the revised inspection standards.

(2) For new applicants:

- For products already included in the inspection scope before these amendments, namely products with a battery capacity not exceeding 100 kWh: applicants applying to the BSMI on or before 30 June 2028 may provide type-test reports based on either the pre-revised or revised inspection standards, together with technical documents, documents indicating the location of the “Marking of Presence,” samples of the “Marking of Presence,” and the “Declaration of the Presence Conditions of the Restricted Substances Marking.” Certificates shall be valid for three years from the date of issuance. For products with a battery exceeding 20 kWh but not exceeding 100 kWh, the validity period of certificates issued on or before 30 June 2027 shall be from 1 July 2027 to 30 June 2030. From 1 July 2028, applicants shall provide type-test reports based on the revised inspection standards, together with the technical documents and marking-related documentation listed above. Certificates shall be valid for three years from the date of issuance.
 - For products newly added to the legal inspection scope, namely products with a battery capacity exceeding 100kWh but not exceeding 360 kWh: applicants shall provide type-test reports based on the revised inspection standards, technical documents, documents indicating the location of the “Marking of Presence,” samples of the “Marking of Presence,” and the “Declaration of the Presence Condition of the Restricted Substances Marking” when applying for a certificate.
6. For products listed under Item 2, information on cell model, model or identifiable code of the battery management system (BMS), and the software version shall be added as suffixes to the battery system model when applying for a Type Approval certificate or RPC certificate.
 7. For products listed under Items 2 and 3 that comply with the above standards and have been certified under the Voluntary Product Certification (VPC) system, the type-test report may be issued by the original BSMI-designated testing laboratory after supplementary testing has been conducted to verify compliance with any differences in the product or the applicable standard.
 8. For products listed under Item 3 that have obtained an Examination Report or a Vehicle Safety Type Approval Certificate issued by the Ministry of Transportation and Communications (MOTC) or by a certification institution authorized by the MOTC are not subject to mandatory inspection by the BSMI.
 9. The technical documents required for type testing shall comply with the requirements specified in the “Directions Governing Type Approval of Electrical and Electronic Commodities.”
 10. Fees for RPC and TABI shall be charged in accordance with the relevant provisions of the "Regulations Governing Fees for Commodity Inspection."
 11. The inspection standards for the listed products shall be based on the versions specified in this notice. Where a new or updated version is issued, the BSMI shall announce its implementation date in a separate notice.
 12. Products listed under Item 1 shall, in accordance with Section 5 “Marking of Presence” of CNS 15663:2013, indicate the presence of restricted substances in the format prescribed in Table 1 and Table 2 on the product body, packaging, labels, or instructions. Where the information on the presence of restricted substances is provided by way of a webpage, the relevant URL shall be clearly indicated on the product body, packaging,

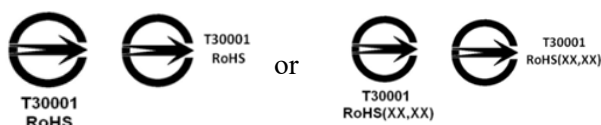
labels, or instructions. The requirements of Section 5.3 of CNS 15663 regarding the marking location shall not apply.

13. After products listed under Item 1 are approved by the BSMI for certificate issuance, the labeling requirements shall be as follows:

- (1) In accordance with the “Regulations Governing the Use of Commodity Inspection Mark,” the identification number of the Commodity Inspection Mark shall consists of a Roman letter “R,” a designated code (five digits),” and “the presence conditions of the restricted substances” (e.g., RoHS or RoHS (XX,XX)).
- (2) The identification number shall be placed below or to the right of the graphic symbol and “the presence conditions of the restricted substances” shall be indicated in the second row.
- (3) No fixed dimensions are prescribed for the Commodity Inspection Mark. However, it shall be affixed, in an appropriately proportioned size, at a conspicuous place on the product body. The mark shall be made of material not liable to deterioration, and its content shall be clear and legible, not easily effaced, and permanently affixed.
- (4) Examples of the Commodity Inspection Mark under the RPC scheme are shown below:



(5) Examples of the Commodity Inspection Mark under the TABI scheme are shown below:



(6) “RoHS” indicates that, except for the exemptions specified in CNS 15663, the content of restricted substances in the product does not exceed the reference percentage value.

“RoHS(XX,XX)” indicates that, except for the exemptions specified in CNS 15663, the content of restricted substance(s) (element XX, element XX, ...) in the product exceeds the reference percentage value.

Restricted substances: Pb, Cd, Hg, Cr+6, PBB, and PBDE.

Examples:

RoHS (Pb) indicates that the percentage content of Pb in certain parts of the commodity exceeds the reference percentage value specified in Annex A to CNS 15663.

RoHS (Cd, Cr+6, PBB) indicates that the percentage content of Cd, Cr+6, and PBB in certain parts of the commodity exceeds the respective reference percentage value specified in Annex A to CNS 15663.

(7) For products newly added to the legal inspection scope that obtained an RPC certificate before 30 June 2027, the obligatory inspection applicant may print the Commodity Inspection Mark themselves in accordance with the above requirements from the date on which the certificate is obtained.

14. The C.C.C. Codes listed in the table are for reference only. Where a listed product is determined by the Customs Administration of the Ministry of Finance or the International Trade Administration of the Ministry of Economic Affairs not to fall within the listed reference C.C.C. Code, the product shall nevertheless complete the applicable inspection procedures before being placed on the market

15. Where a listed product is a combined-function or multifunction product and falls within the scope of mandatory inspection, it shall comply with the requirements of the relevant inspection standards and conformity assessment procedures.

Table 1. Example of markings where the presence conditions of the restricted substances exceed the reference percentage value

Equipment name: Stationary Lithium Battery Storage Appliances, Type: XXX*						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr ⁺⁶)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Circuit board	Exceeding 0.1 wt %	○	○	○	○	○
Shell	○	○	Exceeding 0.1 wt %	○	○	Exceeding 0.1 wt %
Power cord	—	○	○	○	○	○
Accessory	—	○	○	○	○	○
Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value. Note 2: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value. Note 3: The “—” indicates that the restricted substance is exempted.						

Table 2. Example of markings where, except for the exempted substances, the content of the restricted substances does not exceed the reference percentage value of presence condition

Equipment name: Lithium Battery Storage Appliances, Type: YYY*						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr ⁺⁶)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Circuit board	○	○	○	○	○	○
Shell	○	○	○	○	○	○
Power cord	—	○	○	○	○	○
Accessory	—	○	○	○	○	○
Note 1: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value. Note 2: The “—” indicates that the restricted substance is exempted.						

* Where the location of the marking in the sample label is sufficient to clearly indicate its correspondence to the product, the field for equipment name and type may be omitted. Where the same sample label applies to multiple types, their types can be indicated in the same field.