

2025 IEC / Enterprise Singapore International Conference



IEC Environmental Conformity Assessment (CA) Services

Mr. Chris Agius

IECQ Executive Secretary

2025-04-08

Building Trust in Environmental Services
– Supporting a Circular Economy

The IEC – Strategic Business Plan

Vision — IEC everywhere for a safer, more efficient world.

Mission — Our mission is to achieve worldwide use of IEC International Standards **and Conformity Assessment Systems** to ensure the safety, efficiency, reliability and interoperability of electrical, electronic and information technologies, to enhance international trade, facilitate broad electricity access and enable a more sustainable world.

3 Strategic Themes supported by 9 Strategic Goals

- *Enabling a digital and all-electric society*
- *Fostering a sustainable world*
- *Leading on Trust, inclusion and collaboration*

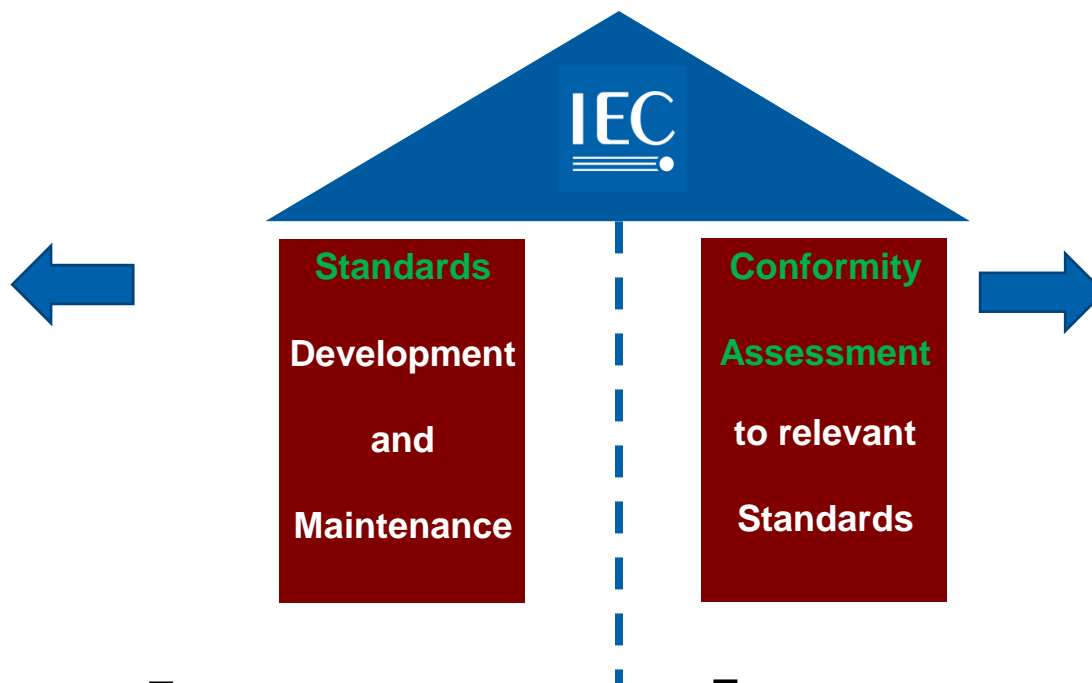




IEC: A Unique Standardization Organization

With 2 sides to the IEC house

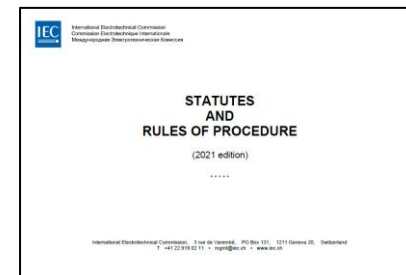
Over 100 years
210 Committees
30,000+ Experts



E.g.,
IEC TC 111, 107

E.g.
IECQ

The 2 Sides to the House of IEC:
Standards Development +
Conformity Assessment



IEC Standards set out
“**Standardised Requirements**”

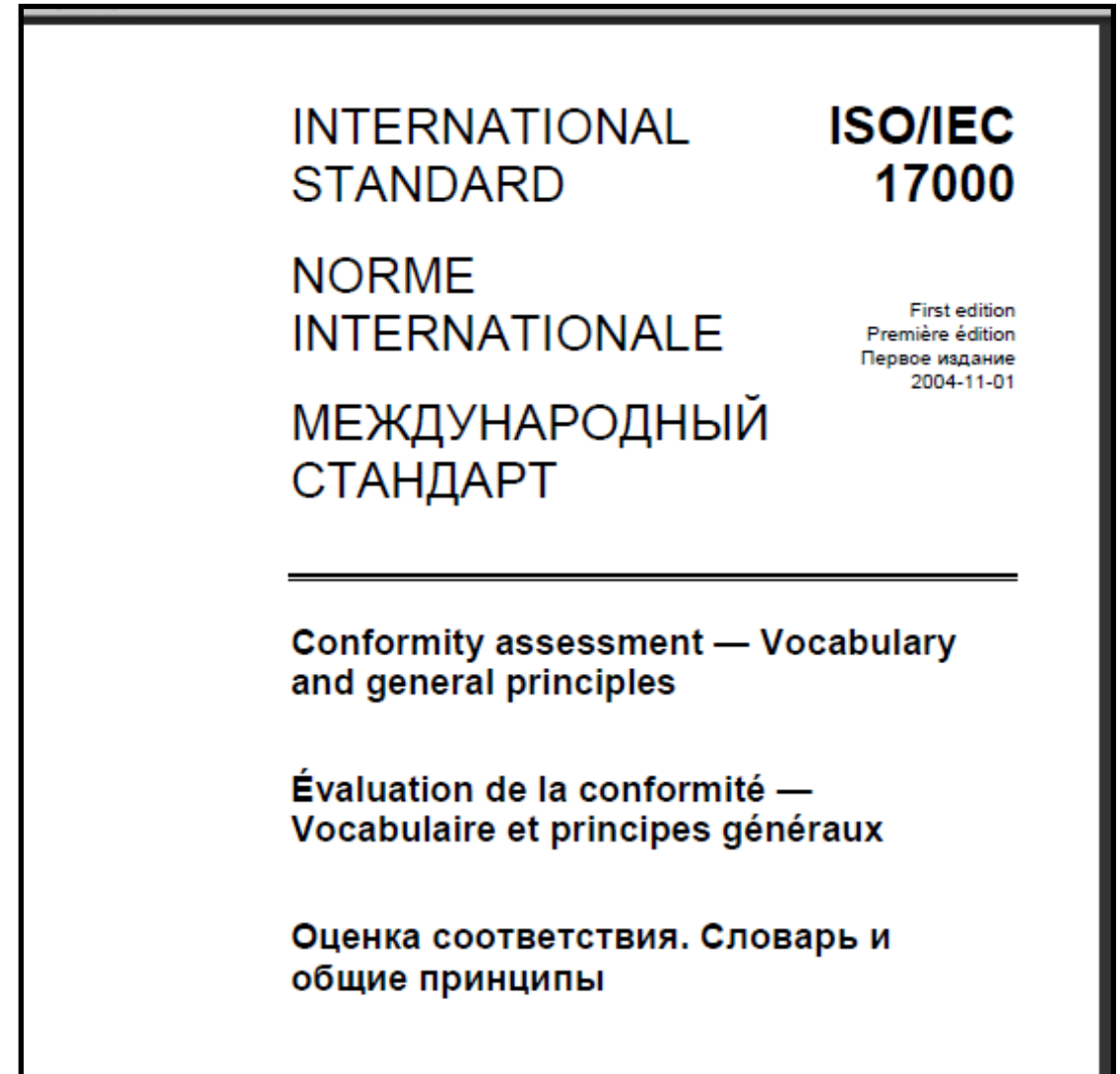
IEC CA Systems set out **Standardised way of doing testing, certification and inspection**



**Enterprise
Singapore**

“CONFORMITY ASSESSMENT”

- Accreditation
- Certification
- Testing
- Audit
- Attestation
- Inspection
- Approval
- Declaration
- Surveillance
- First Party Conformity Assessment
- Second Party Conformity Assessment
- Third Party Conformity Assessment
- Peer Assessment
- Others





Why have Conformity Assessment Services in IEC?

Problem – Certification Framework

- Word “**Certification**”
 - Certificate
 - Certificate
 - Certificate
 - Certificate
 - Certificate
 - Certificate



- What are the criteria for issuing Certificates?
 - IECEX
 - IECQ
 - IECRE
 - IECEE
- What is the procedure for issuing certificates?
- Are International ISO/IEC 17000 standards followed?

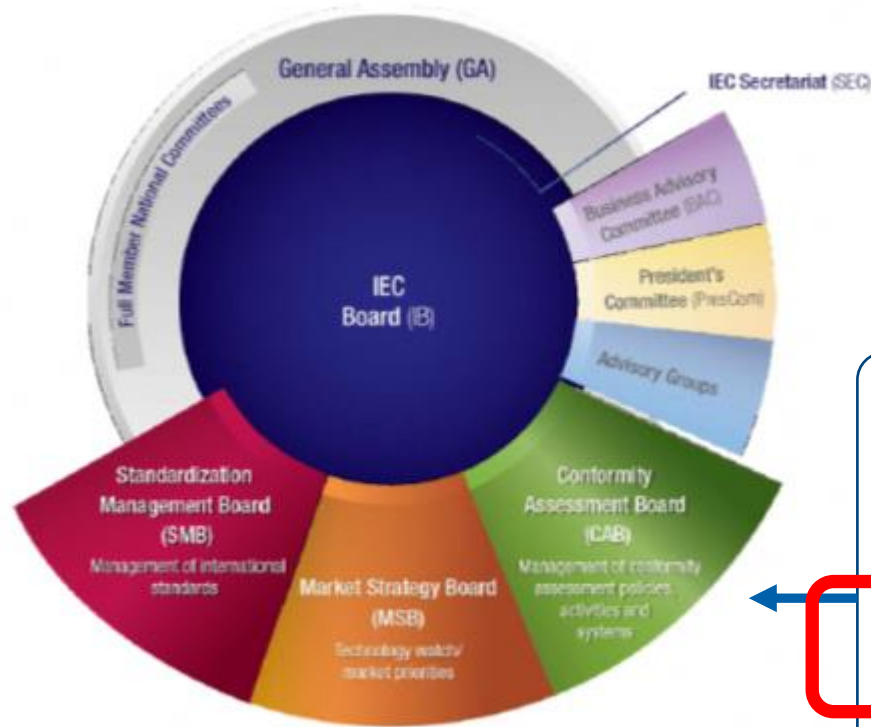
Solution – Harmonization via single IEC System

Google search for “Certificates”

- Word “**Certificates**” look used on
 - Template
 - Free download
 - Clip art
 - Of appreciation
 - Png
 - Sample word
 - Marriage
 - Background
 - Business
 - Certificate Of Completion... \$5.86 (32) Certificate
 - Certificate of Participation... \$34.90 Amazon AU Certificate - Classroom
 - Editable Certificate... \$2.99 (10) Certificate
 - Blank Certificate of... \$2.57 (10) Certificate
 - Customizable Certificate of... \$3.41 Free delivery Certificate - Diploma
 - Novelty 'OXFOD'... \$30.61 (10) Certificate
 - Editable Certificate... \$3.01 (3) Certificate
 - Gold Certificate of Achievem... \$2.63 Zazzle.com.au Certificate
 - 698,400+ Certificate Stock Photos, ... iStock
 - Free printable certificate templates y... Canva
 - Certificate Images - Browse 1,446,694 S... Adobe Stock
 - 181,700+ Certificate Template Stock Ph... iStock
 - Certificate Images - Free Do... Freepik
 - 123 Certificates www.123certificates.com
 - Free printable certificate temp... Canva
 - 92,502 Certificate Stock Ph... Dreamstime.com
 - 16,692 Certificate Template St... Getty Images
- Management Committee, supported by dedicated Technical Secretariat



IEC's Standards + Conformity Assessment Services - Governance



40+ years Operating

More than 1 Million Certificates issued

Electrical + Mechanical Products

Electrical + Mechanical Components

Electronic Components and assemblies

Process Certification

Personal Competence

Sector Specific, e.g. Avionics

Self Financed – sets annual budgets

Standards used for IEC CA Activities



Others:

- Regulations
- Specifications

IEC CA Systems work closely with Standards Technical Committees, eg

- **IECEX** ➔ IEC TC 31, IEC TC 105, **ISO TC 197/SC1**
- **IECQ** ➔ IEC TC 107, IEC TC 111,
- **IECRE** ➔ IEC TC 82, IEC TC 88, IEC TC 114
- **IECEE** ➔ IEC TCs Many



**Enterprise
Singapore**



A Standardisation Organisation

IEC Offering: “TRUST” since 1906



10,000+ International Standards
1M+ International Certificates (by approved CBs)
30,000 Experts coming together



IEC CA Services: **Equipment, Services, Personnel,**
beyond Electrotechnology

IEC's Collaborative Approach to Sustainability with Partners, eg **Low Emission Hydrogen, H₂**



IECEX expansion:-

- ISO Standards, TC 197 in IECEX
- H₂ Dispensing Equipment
- H₂ Fuel Dispensing Units

Expand IECEX CoPC (Personnel Certification) – H₂ Safety,

HOT NEWS: IECQ Carbon Footprint verification to cover H₂ ISO TS 19870

IECEX 2024 International H2 Conference, May 2024



- Partnered 1 Day Event
- Diverse stakeholders
- Use existing QI, 30K+ IECEX H₂ certificates issued
- Energy transition – H₂ role
- Focus on all H₂, as Low Emission H₂
- Presentations now available
- Repeat event other locations

www.iecex.com

IEC Circular economy services

Using the IEC Circular economy services to assist industry to manage our resources more efficiently and minimize waste, including harmful environmental waste.

The circular economy is a model that seeks to minimize waste and promote sustainability by keeping resources in use for as long as possible.





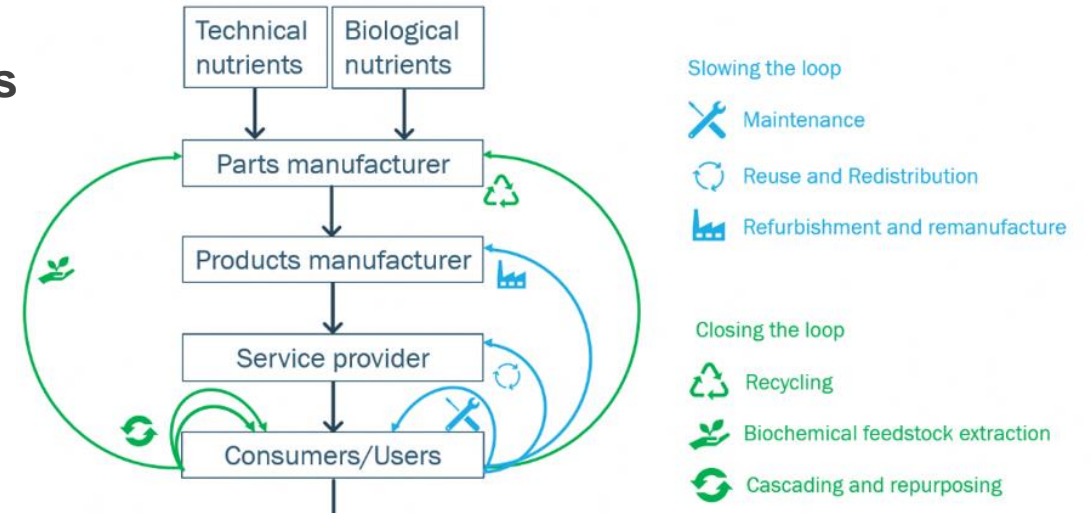
Take an example

The electronics industry serves as an example, which has traditionally been associated with high levels of waste due to product obsolescence, leading to a significant amount of electronic waste (e-waste) being generated, this approach can be applied across various industries.

Circular economy and Eco-design in a nutshell

Circular economy is the concept of designing products and services so that they can be reused, repaired or recycled at the end of their life.

Goal : use our resources more efficiently and minimizes waste and emissions to the environment.



Eco-design is both a principle and an approach. It consists of integrating environmental protection criteria over a service or a product's lifecycle.

Goal : anticipate and minimize negative environmental impacts (of manufacturing, using and disposing of products). Simultaneously, eco design also keeps a product's quality level according to its ideal usage.



IEC Circular economy services

By applying our IEC Circular Economy services, organizations can experience multiple benefits. These include

- overall environmental improvements,
- cost reductions,
- increased transparency,
- and demonstration of regulatory compliance + Great Marketing tool.

These advantages can be realized not only in the electronics industry but across diverse sectors. Our circular economy services are **adaptable** and **customizable**, allowing them to be effectively implemented in any industry seeking sustainable solutions for the future.

IEC Circular economy services

IEC offers **globally harmonized** certification & verification services thru IECQ accredited Certification Bodies (IECQ CBs), many of which are well known and operating across more than 40 countries, with **internationally recognised and accepted IECQ certificates and verification statements** publicly accessible on the IEC centralized on-line certificate system (OCS).

IEC was asked by Industry and leading Certification Bodies to develop a **globally harmonized certification & verification services framework.**

Industry and their Customers – seek globally harmonized and comparable certification & verification services. (*I.e., An IECQ CoC or SoV issued in Taiwan has the same value and meaning as an IECQ CoC or SoV in France or Germany – true global harmonization*)

Certification Bodies – seek global recognition and international brand acceptance through a globally harmonized framework servicing their industries worldwide.

Why IECQ ?

- ✓ Part of IEC – IEC Rules of Transparency / Equity / Credibility Follow International Best Practices, e.g., ISO/IEC 17000 Series
- ✓ Single set of Rules and Standard Operating Procedures that all IECQ Certification Bodies (IECQ CBs) and IECQ Certified Organizations comply with
- ✓ One Single System for Qualifying/accrediting IECQ CBs Regardless of Country – Initial and re-assessment of IECQ CBs using Peer Assessment and IAF Accreditation
- ✓ Standardised/harmonized Reporting and Certificate formats IECQ On-Line electronic Certificate System (OCS)
- ✓ **Global Population concerned about the environment:**
 - 54% in 2014
 - 62% in 2017
 - 71% in 2022

⇒ **Create confidence and trust in a global Market to meet SDGs**

IEC Circular economy services

Using the IECQ Approved Process Scheme (process certification) for the following environment-focused services:



New!

Carbon Footprint of
Product Verification
to ISO 14067

**Plus ISO 14064-1
Organisation Level**



New!

Environmentally
Conscious Design
(Eco-Design)
to IEC 62430





Restricted/Hazardous
Substances Process
Management (HSPM)
to IECQ QC 080000 –
expanded to all industries



IEC's Environmental CA Services: IECQ Hazardous Substances Certification – An example of direct use of IEC Conformity Assessment for Regulations - RoHS (Hazardous Substances)

Certifies that Regulations covering Hazardous Substances are being met

| | | | |
|---|----------------------------|-------------|------------|
|  | | | |
| IEC QUALITY ASSESSMENT SYSTEM (IECQ) covering Electronic Components, Assemblies, Related Materials and Processes <small>For rules and details of the IECQ visit www.iecq.org</small> | | | |
| IECQ Certificate of Conformity Hazardous Substance Process Management | | | |
| IECQ Certificate No.: | IECQ-H BSI 11.0005 | Issue No.: | 5 |
| Supersedes: | IECQ-H BSI 11.0005 Issue 4 | Issue Date: | 2020/01/07 |
| CB Reference No.: | H566747 IECQ | Expiration: | 2023/02/17 |
| Status: | Current | Org. Issue: | 2011/02/18 |
| Applicable to: | | | |
| <ul style="list-style-type: none">European Directive 2011/65/EU ("RoHS – Restriction of the use Of certain Hazardous Substances") in electrical and electronic equipment. Including all published amendmentsChina – RoHS 2 2016-01-21 (Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products) | | | |
| Carven Technology (Wuxi) Co., Ltd No. 28, Donghong Road, GuanLin Town Yixing, Wuxi 214251, Jiangsu China | | | |
| <small>The organization has developed and implemented Hazardous Substances Process Management procedures and related processes which have been assessed and found to comply with the applicable requirements for IECQ HSPM organization approval which is in accordance with the Basic Rules IECQ 01 and Rules of Procedure IECQ 03-S "IECQ Hazardous Substances Process Management" of the IEC Quality Assessment System for Electronic Components (IECQ), and with respect to the IECQ Specification:</small> | | | |
| <ul style="list-style-type: none">IECQ QC 080000:2017 - Hazardous Substance Process Management System Requirements | | | |
| <small>This Certificate is applicable to all electronic components, assemblies, related materials and processes for the following scope of activities :</small> | | | |
| Manufacture of Printed Circuit Boards (PCB) | | | |
| <small>- Attached Schedule: none</small> | | | |
| <small>Issued by the Certification Body: BSI</small> | | | |
| <small>Kitemark Court, Davy Avenue Knowlhill, Milton Keynes MK5 8PP United Kingdom</small> | | | |
| <small>Authorised Person: Paul Turner</small> | | | |
|  | | | |

Origins – 2005 to address Hazardous Substances in electronic component supply – expanded to all sectors

While the original need was to address EU RoHS, IECQ HSPM was developed to cover any Regulations relating to the control of Hazardous Substances associated with electrical/electronic product components.

The example shown here, the IECQ HSPM Certificate, covers both EU RoHS and the China RoHS **Regulations**.

Ongoing annual surveillance Auditing required – All Locations visited.

Identifies manufacturers that have controls in place to prevent Hazardous Substances entering the manufacturing + supply chain processes.



IECQ Eco-design certification

IECQ environmentally conscious design (Eco-design) to IEC 62430

The IECQ Eco-design certification refers to the systematic integration of environmental considerations into the design and development of products, services, and systems. It seeks to minimize negative environmental impacts and promote sustainability throughout a product's life cycle, from raw material extraction to end-of-life management. This includes considering factors such as energy efficiency, resource use, waste reduction, and toxicity. The goal of eco-design in the electronics industry is to create products that are both functional and environmentally responsible.

The IECQ eco-design certification service can assist the industry in quantifying the environmental impacts of a product, service or process while keeping a product's quality level according to its ideal usage.

The goal is to anticipate and minimize negative environmental impacts associated with the manufacturing of products.

IECQ Eco-design certification



IEC's Environmental CA Services: *IECQ Ecodesign Certification to IEC 62430*

IEC QUALITY ASSESSMENT SYSTEM
covering Electronic Components,
Assemblies, Related Materials and Processes
For rules and details of the IECQ visit www.iecq.org

IECQ Certificate of Conformity
Environmentally Conscious Design (Ecodesign)

IECQ Certificate No.: IECQ-P-IECQDEMO 21.0006 Issue No.: 1 Status: **Example 7**
Supersedes: Issue Date: 2022/03/14 Org. Issue: 2021/11/15
CB File Reference: DSPMITNSDES8 Expiration: 2024/11/15

Example for Implementor Company X
XYZ Street Address,
XYZ Town/City Address,
Country

The organization has developed and implemented procedures and related processes which have been assessed by the IECQ Certification Body, according to IECQ 03-1 and IEC 62430, issuing this certificate and found to comply with the applicable requirements of the IECQ Approved Process Scheme (IECQ 03-2) and in respect of standard(s) or specification(s):

- IEC 62430:2019 (Ed 2.0) Environmentally Conscious Design – Principles, Requirements and Guidance
- XXX XXXXXXX (May also include additional Standards or specifications also applied and assessed during the IECQ Certification process)

Process Manual Reference: **E.G. QM-Company-X-YYY Rev. A/1 2020-10-01**
(Unique Document Ref + Revision Status + Date)

Scope of Activity:
Design and production of LED Lighting Drivers Type XXX-ZZZZ

Issued by IECQ Certification Body: ABC Certification Company

IECQ CB Address: **FOR DEMONSTRATION PURPOSE ONLY** IECQ CB LOGO HERE

Authorized Person: _____

The validity of this certificate is maintained through ongoing surveillance audits by the IECQ CB issuing this certificate.
This Certificate of Conformity may be suspended or withdrawn in accordance with the Rules of Procedure of the IECQ System and its Schemes.
This certificate and any schedule(s) may only be reproduced in full.
This certificate is not transferable and remains the property of the issuing IECQ CB.
The status and authenticity of this certificate may be verified by visiting www.iecq.org

— Certifies that IEC 62430 Environmentally Conscious Design Requirements are being met

*Provides International confidence and trust of Organisations that embrace Ecodesign that minimise adverse impact to the environment thru compliance with IEC 62430. Thereby contributing to UN SDGs – **Prevents Green Washing....***

Developed in close cooperation with IEC/TC 111

IEC ISO IEC 62430
Edition 2.0 2019-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

HORIZONTAL STANDARD
NORME HORIZONTALE

Environmentally conscious design – Principles, requirements and guidance

Ecoconception (ECD) – Principes, exigences et recommandations

1 Scope

This document describes principles, specifies requirements and provides guidance for organizations **intending to integrate environmental aspects into the design and development in order to minimize the adverse environmental impacts of their products.**

18

IEC's Environmental CA Services:

IECQ Ecodesign Certification to IEC 62430

— Certifies that IEC 62430 Environmentally Conscious Design Requirements are being met

*Provides International confidence and trust of Organisations that embrace Ecodesign that minimise adverse impact to the environment thru compliance with IEC 62430. Thereby contributing to UN SDGs – **Prevents Green Washing....***

Developed in close cooperation with IEC/TC 111



IECQ Certificate of Conformity

Environmentally Conscious Design (Ecodesign)

IECQ Certificate No.: IECQ-P IECQDEMO 21.0006 Issue No.: 1 Status: **Example 7**
Supersedes: Issue Date: 2022/03/14 Org. Issue: 2021/11/16
CB File Reference: DSPMITNSDES6 Expiration: 2024/11/15

Example for Implementor Company X

XYZ Street Address,
XYZ Town/City Address,
Country

The organization has developed and implemented procedures and related processes which have been assessed by the IECQ Certification Body, according to IECQ 03-1 and IEC 62430, issuing this certificate and found to comply with the applicable requirements of the IECQ Approved Process Scheme (IECQ 03-2) and in respect of standard(s) or specification(s):

- IEC 62430:2019 {Ed 2.0} Environmentally Conscious Design – Principles, Requirements and Guidance
- XXX ?????? (May also include additional Standards or specifications also applied and assessed during the IECQ Certification process)

Process Manual Reference: **E.G. QM-Company-X-YYY Rev. A/1 2020-10-01**
(Unique Document Ref + Revision Status + Date)

Scope of Activity:
Design and production of LED Lighting Drivers Type XXX-ZZZZ

Issued by IECQ Certification Body: ABC Certification Company

IECQ CB
Address

Authorised Person:

**FOR
DEMONSTRATION
PURPOSE ONLY**

IECQ CB LOGO
HERE



The validity of this certificate is maintained through on-going surveillance audits by the IECQ CB issuing this certificate.
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The Status and authenticity of this certificate may be verified by visiting www.iecq.org



IEC 62430

Edition 2.0 2019-10

INTERNATIONAL STANDARD

NORME
INTERNATIONALE

HORIZONTAL STANDARD
NORME HORIZONTALE

Environmentally conscious design – Principles, requirements and guidance

Écoconception (ECD) – Principes, exigences et recommandations

1 Scope

This document describes principles, specifies requirements and provides guidance for organizations **intending to integrate environmental aspects into the design and development in order to minimize the adverse environmental impacts of their products.**

IECQ Eco-design certification



How does an IECQ CB get involved:

1. Ensure sufficient and appropriate resources are in place according to IECQ OD 62430.
2. Complete the IECQ CB Application for Extension of Scope (form MC-130-Q)

Related documents

IECQ Approved Process - Eco-Design Certification



IECQ OD 62430 ed1.1 (2022-06-18)

IECQ Operational Document

Application of IEC 62430 within IECQ for issuing IECQ Approved Process Certification for Environmentally Conscious Design (ECD)

[IECQ OD 62430 \(667kb\)](#) 

► [IECQ SAR ISO 14067 Ed1.0 \(2023-06-17\)](#)

► [IECQ CB Application Form](#)

► [IECQ CB Application for Extension of Scope](#)

IECQ carbon footprint verification statements

Carbon footprint of product (CFPP), to ISO 14067

New!

Carbon footprint at Organisational Level, to ISO 14064-1

A carbon footprint is a measure of the total greenhouse gas emissions caused by an individual, organization, event, or product, expressed as carbon dioxide equivalent.

Measuring and reducing a carbon footprint is one way to act on climate change, which many organizations have adopted regarding their environmental performance.

Regulators, public interest groups, and organizational peers are now requesting independent assurance (no greenwashing) that an organization has prepared carbon footprint reports in accordance with international standards, providing **confidence** in the **claims** made by organizations regarding their **environmental performance**.

IECQ carbon footprint verification statements

The carbon footprint of a product or service can be divided into three main stages:



1

Direct emissions

from the manufacturing process, including the production of the product components, assembly, and packaging

2

Indirect emissions

from the energy used during the product's use, such as electricity consumption during operation

3

Emissions associated

with the end-of-life stage, including transportation, disposal, and recycling

To calculate the carbon footprint of a product, ISO 14067 provides a standardized methodology for assessing the greenhouse gas (GHG) emissions associated with each stage of the product's life cycle. This includes using established data sources and calculation methods to estimate emissions from different processes and activities, as well as considering relevant factors such as product use patterns and end-of-life management practices.

IECQ carbon footprint verification statements

New!

The IECQ carbon footprint verification statement Certificates service provides independent verification that companies use the correct process, methodology, and registers to calculate the carbon footprint of

a) Product – ISO 14067

b) At Organisational level ISO 14064-1.

Independent verification refers to the process of having an independent third party assess and confirm a company's process used to arrive at a carbon footprint claim.

The benefits of independent verification include:

IECQ carbon footprint verification statements

The benefits of independent verification include:

Increased credibility and transparency

Independent verification provides assurance that the carbon footprint calculation and reduction efforts are accurate, reliable, and trustworthy

Enhanced reputation

Companies that have undergone independent verification of their carbon footprint often see an improvement in their reputation as responsible environmental stewards

Improved efficiency

An independent verification helps identify areas for improvement in a company's carbon management and reduce the risk of over or underestimating emissions

Increased accountability

Independent verification provides a higher level of accountability and helps ensure that organizations are meeting their commitments to reducing their carbon footprint and addressing climate change

New!

IECQ carbon footprint verification statements

By quantifying the carbon footprint of products, manufacturers can identify opportunities to reduce emissions and improve the sustainability of their operations. Additionally, consumers can use this information to make more informed purchasing decisions and choose products that have a lower environmental impact.

The IECQ carbon footprint of product verification statement service is based on **ISO 14067 Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification**.



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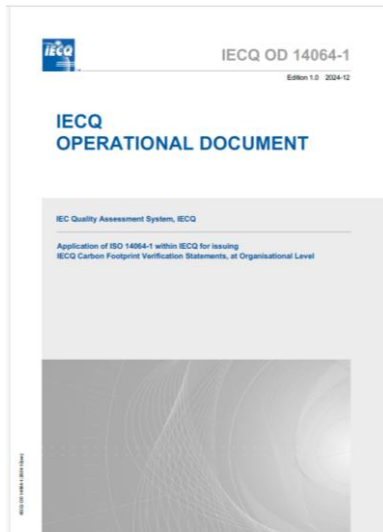
| IEC QUALITY ASSESSMENT SYSTEM (IECQ) | |
|--|--|
| For rules and details of the IECQ visit www.iecq.org | |
| IECQ Verification Statement Carbon Footprint of Product | |
| IECQ Certificate No.: | IECQ-V LQASCCN 24.0001 |
| Issue Date: | 2024/12/27 |
| Expiration: | 2027/12/26 |
| CB Reference No.: | LQA-CFP-202409-001 |
| Inner Mongolia Chuangyuan Metal Co., Ltd. Within C Zone of Southwest Industrial Park, Huolingol City, Tongliao City 029299, Inner Mongolia, China | |
| The organization's carbon footprint claim of product has been verified by the independently third party IECQ Conformity Assessment Body, in accordance with IECQ scheme rules, ISO/IEC 17029, and ISO 14065. The decision to issue this verification statement is based on the material fulfilment of requirements as outlined in the below listed standard(s) and specification(s), according to the stated objectives and scope: | |
| <ul style="list-style-type: none">• ISO 14067:2018 {Ed 1.0} - Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification• PCR: GB/T 44905 (2024) Greenhouse gas – Qualification requirement and method of product carbon footprint – Electrolytic aluminium | |
| Product/Service: | Liquid Electrolytic Aluminium |
| Carbon Footprint of Product per Functional Unit: | 13,790 kg CO2-eq |
| Carbon Footprint Study Report: | CYJS-CFP-2023 (2024-11-22) |
| Additional Information: | System Boundary: From cradle to gate Time Boundary for data: 2023.1.1 – 2023.12.31 Functional Unit: 1 tonne of liquid electrolytic aluminium |
| Issued by the IECQ Body: Suzhou LQA Standard Certification Co., Ltd. Fl 5, Bld 5, Wors Industrial Park, No.111 Hengshan Rd, High-tech Zone, Suzhou City, Jiangsu Province 215011 China | |
| Authorized person: | ZHOU Yan Chong (Civen) |
|  | |
| This Statement may be suspended or withdrawn in accordance with the Rules of Procedure of the IECQ System and its Schemes. This statement and any schedule(s) may only be reproduced in full. This statement is not transferable and remains the property of the issuing IECQ CB. The Status and authenticity of this statement may be verified by visiting www.iecq.org | |
| – Attached Translation – None – | |
| IECQ-V CFP Product Rev. 01 EN | |

IECQ carbon footprint verification statements

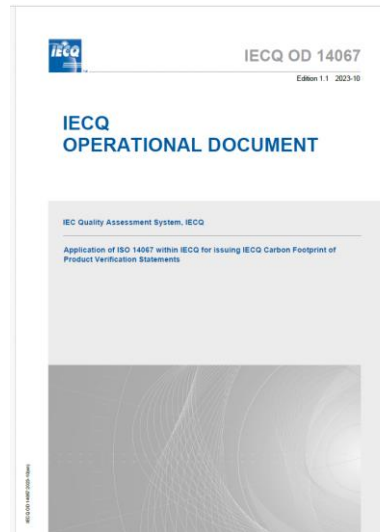
New!

How does an IECQ CB get involved:

1. Ensure sufficient and appropriate resources are in place according to IECQ OD 14067 + OD 14064-1.
2. Complete the self-declaration of implemented ISO/IEC 17029 management system. (form IECQ ARF ISO 14065)
3. Complete the IECQ CB Application for Extension of Scope (form MC-130-Q)



ISO 14064-1
CO2 Footprint
Organization
Level



ISO 14067
CO2 Footprint
of Product

► [IECQ SAR ISO 14067 Ed1.0 \(2023-06-17\)](#)

► [IECQ CB Application Form](#)

► [IECQ CB Application for Extension of Scope](#)

► [IECQ ARF ISO 14067 Ed1.0 \(2023-06-17\)](#)

IECQ carbon footprint verification statements

IECQ Ensuring consistency by all IECQ CBs:

1. Common criteria (ISO 14065) + assessment process for CBs to become IECQ CBs + IECQ Monitoring
2. Complete set of Standard Operating procedures + Standard Checklists for both ISO 14064-1 + ISO 14067



IECQ Standard Assessment Report (SAR) ISO 14064-1:2018(E) IECQ Assessment Report No.:

| ISO 14064-1:2018 clauses | | Assessed (Y, N or N/A) if N/A give reason | Organisation's Doc. Ref. List organisations document(s) viewed, with revision status and Comments. List any pertinent details / compliance with requirements of clause and comments of the Assessor | Verdict C = Comply N = does not comply |
|--------------------------|--|--|--|---|
| 5.2.2 | Direct GHG emissions and removals <i>The IECQ CB shall check that the organisation has quantified the direct GHG emissions separately for CO₂, CH₄, N₂O, NF₃, SF₆ and other appropriate GHG groups (HFCs, PFCs, etc.) in tonnes of CO₂e</i> | Apply | | |
| 5.2.3 | Indirect GHG emissions <i>The IECQ CB shall check if the organisation has addressed significant indirect emissions to include in its GHG inventory and if the justification for excluding any significant indirect emissions are justified on the basis a risk assessment or other procedure that addresses the practical application of this clause.</i> | Apply | | |
| 5.2.4 | GHG inventory categories <i>The IECQ CB shall check if the GHG emissions have been grouped into the categories according to this clause. However, while the Clause mentions that the organisation "should" document the categories. This is not required providing the categorisation of the GHG inventory has been demonstrated.</i> | Apply | | |
| 6. | Quantification of GHG emissions and removals | | | |
| 6.1 | Identification of GHG sources and sinks <i>IECQ CB to confirm that the organization has identified and documented all relevant GHG sources and sinks in its reporting boundaries. The organization may exclude GHG sources or sinks for which the contribution to GHG emissions or removals is not relevant. The IECQ</i> | Apply | | |

Instructions
to IECQ CBs
for each
Clause

IECQ Standard Assessment Report (SAR) ISO 14067:2018(E) IECQ Assessment Report No.:

| ISO 14067:2018 clauses | | Assessed (Y, N or N/A) if N/A give reason | Organisation's Doc. Ref. List organisations document(s) viewed, with revision status and Comments. List any pertinent details / compliance with requirements of clause and comments of the Assessor | Verdict C = Comply N = does not comply |
|------------------------|---|---|--|---|
| | <i>IECQ CB to consider if the selection of data and methods used are appropriate.</i> | | | |
| 5.7 | Completeness | Guidance | | |
| 5.8 | Consistency | Guidance | | |
| 5.9 | Coherence | Guidance | | |
| 5.10 | Accuracy <i>IECQ CB to consider if the quantification of the CFP and partial CFP is accurate, verifiable, relevant and not misleading, and bias and uncertainties are reduced as far as is practical</i> | Apply | | |
| 5.11 | Transparency | Guidance | | |
| 5.12 | Avoidance of double-counting | Guidance | | |
| 6. | Methodology for quantification of the CFP and partial CFP | | | |
| 6.1 | General <i>IECQ CB to consider if the four phases of the LCA are included</i> | Apply | | |
| 6.2 | Use of CFP-PCR | Apply | | |
| 6.3 | Goal and scope definition | | | |
| 6.3.1 | Goal of a CFP study | Apply | | |
| 6.3.2 | Scope of a CFP study <i>IECQ CB to check that the items in 6.3.2 were considered in the scope of the CFP study as they relate to the product under assessment</i> | Apply | | |

IECQ carbon footprint verification statements



IECQ Standard Assessment Report (SAR) ISO 14064-1:2018(E)

IECQ Assessment
Report No.:

| ISO 14064-1:2018 clauses | | Assessed (Y, N or N/A) if N/A give reason | Organisation's Doc. Ref. List organisations document(s) viewed, with revision status and Comments. List any pertinent details / compliance with requirements of clause and comments of the Assessor | Verdict C = Comply N = does not comply |
|--------------------------|--|--|--|---|
| 5.2.2 | Direct GHG emissions and removals <i>The IECQ CB shall check that the organisation has quantified the direct GHG emissions separately for CO₂, CH₄, N₂O, NF₃, SF₆ and other appropriate GHG groups (HFCs, PFCs, etc.) in tonnes of CO₂e</i> | Apply | | |
| 5.2.3 | Indirect GHG emissions <i>The IECQ CB shall check if the organisation has addressed significant indirect emissions to include in its GHG inventory and if the justification for excluding any significant indirect emissions are justified on the basis a risk assessment or other procedure that addresses the practical application of this clause.</i> | Apply | | |
| 5.2.4 | GHG inventory categories <i>The IECQ CB shall check if the GHG emissions have been grouped into the categories according to this clause. However, while the Clause mentions that the organisation "should" document the categories. This is not required providing the categorisation of the GHG inventory has been demonstrated.</i> | Apply | | |
| 6. | Quantification of GHG emissions and removals | | | |
| 6.1 | Identification of GHG sources and sinks <i>IECQ CB to confirm that the organization has identified and documented all relevant GHG sources and sinks in its reporting boundaries. The organization may exclude GHG sources or sinks for which the contribution to GHG emissions or removals is not relevant. The IECQ</i> | Apply | | |



IECQ Standard Assessment Report (SAR) ISO 14067:2018(E)

IECQ Assessment
Report No.:

| ISO 14067:2018 clauses | | Assessed (Y, N or N/A) if N/A give reason | Organisation's Doc. Ref. List organisations document(s) viewed, with revision status and Comments. List any pertinent details / compliance with requirements of clause and comments of the Assessor | Verdict C = Comply N = does not comply |
|------------------------|---|---|--|---|
| | <i>IECQ CB to consider if the selection of data and methods used are appropriate.</i> | | | |
| 5.7 | Completeness | Guidance | | |
| 5.8 | Consistency | Guidance | | |
| 5.9 | Coherence | Guidance | | |
| 5.10 | Accuracy <i>IECQ CB to consider if the quantification of the CFP and partial CFP is accurate, verifiable, relevant and not misleading, and bias and uncertainties are reduced as far as is practical</i> | Apply | | |
| 5.11 | Transparency | Guidance | | |
| 5.12 | Avoidance of double-counting | Guidance | | |
| 6. | Methodology for quantification of the CFP and partial CFP | | | |
| 6.1 | General <i>IECQ CB to consider if the four phases of the LCA are included</i> | Apply | | |
| 6.2 | Use of CFP-PCR | Apply | | |
| 6.3 | Goal and scope definition | | | |
| 6.3.1 | Goal of a CFP study | Apply | | |
| 6.3.2 | Scope of a CFP study <i>IECQ CB to check that the items in 6.3.2 were considered in the scope of the CFP study as they relate to the product under assessment</i> | Apply | | |



**Enterprise
Singapore**

IECQ carbon footprint verification statements

New!

INTERNATIONAL
STANDARD

ISO
14064-1

Second edition
2018-12



10 Organization's role in verification activities

The organization **may decide** to conduct a verification. To review GHG emissions and removals information, impartially and objectively, **the organization shall conduct a verification consistent with the needs of the intended user.** Principles and requirements are described in ISO 14064-3. Requirements for verification bodies are described in ISO 14065. Requirements for the competence of validation teams and verification teams are described in ISO 14066



IECQ Carbon Footprint Verification service provides independent and impartial verification services consistent with the requirements of ISO 14064-1

Greenhouse gases —

Part 1:
Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

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IECQ Carbon Footprint verification statements
CO₂

Carbon Footprint of Product (CFPP), to ISO 14067
A carbon footprint is a measure of the total greenhouse gas emissions caused by an individual, organization, event or product, expressed as carbon dioxide equivalent. Measuring and reducing a carbon footprint is one way to act on climate change which many organizations have adopted regarding their environmental performance. Regulations, public interest groups, and organizational peers are now requesting independent assurance (no greenwashing) that an organization has prepared carbon footprint reports in accordance with International Standard (ISO 14067) providing confidence in the claims made by organizations regarding their environmental performance.
The carbon footprint of a product or service can be divided into three main stages:
Obtaining IECQ CFPP Verification Statements, to ISO 14067?
Organizations who are interested in obtaining IECQ Carbon Footprint of Product (CFPP) verification

IECQ Eco-Design certification

IECQ Environmentally conscious design (Eco-Design) to IEC 62430
The IECQ Eco-design certification refers to the systematic integration of environmental considerations into the design and development of products, services, and systems. It seeks to minimize negative environmental impacts and promote sustainability throughout a product's life cycle, from raw material extraction to end of life management. This includes considering factors such as energy efficiency, resource use, waste reduction, and toxicity. The goal of eco-design in the electronics industry is to create products that are both functional and environmentally responsible.
Obtaining IECQ Eco-Design Certification as an Organization?

IECQ HSPM certification

IECQ Restricted/Hazardous Substance Process Management (IECQ HSPM) to IECQ QC 080000
In response to global concerns regarding the presence of restricted / hazardous substances in equipment production, countries have enacted legislation to restrict or prohibit their use.
The IECQ QC 080000 International Specification offers a comprehensive approach to managing and controlling processes aligned with Hazardous Substance Free (HSF) goals. Through IECQ HSPM certification, organizations are evaluated based on this specification, ensuring the establishment and implementation of processes for effectively managing hazardous substances beyond restricted substances avoidance.
Meeting the certification requirements allows organizations to minimize technical trade barriers and demonstrates compliance with customer requirements and regulations. The IECQ HSPM certification also enables efficient compliance checks, consistent deployment throughout organizations and their supply chains, and harmonization of compliance and enforcement methods. This certification enhances an organization's reputation while actively contributing to a sustainable future.
Restricted substances
Examples include (ref. EU RoHS 2 Directive 2011/65/EU @ 2023), among others:
pb Lead hg Mercury cd Cadmium cr 6 Hexavalent chromium pbb Polybrominated biphenyls dlp dlp
Obtaining IECQ HSPM Certification as an Organization?
Organizations who are interested in obtaining IECQ HSPM Certification should contact the IECQ Certification Body (IECQ CB) of their choice.
IECQ Hazardous Substances Process Management



Thank you for your
attention!