

RECS info session: Understanding International Standards Shaping the Future of EACs

Merve Güngör, RECS Policy and Network Manager





1. Introduction

- Purpose and scope of the session

2. The evolving standards landscape

- Why international standardization processes matter
- The growing importance of participating in standards development related to EACs
- What you need to know

3. Next steps & involvement in ISO

- How to get involved in ISO processes
- Overview of RECS' mapping of standards and initiatives
 - What to expect from upcoming ISO developments

4. Hamburg Institute's presentation

- GHG Rules in the EU: Aligning with International Standards
- Methodology for risk analysis and key considerations for stakeholders

5. Q&A / open discussion

What does RECS do?

A collection of icons on a light green background. The icons include a solar panel, a wind turbine, a battery, a power line tower, a cloud with rain, a thermometer, and a hand holding a leaf. A diagonal line separates the top row of icons from the bottom row.

Tackle climate crisis,
accelerate renewables

A collection of icons on a light green background. The icons include a group of people, a group of buildings, and a group of people standing in a line. A diagonal line separates the top row of icons from the bottom row.

120+ member
organisations

Founded in
2002

Events
81

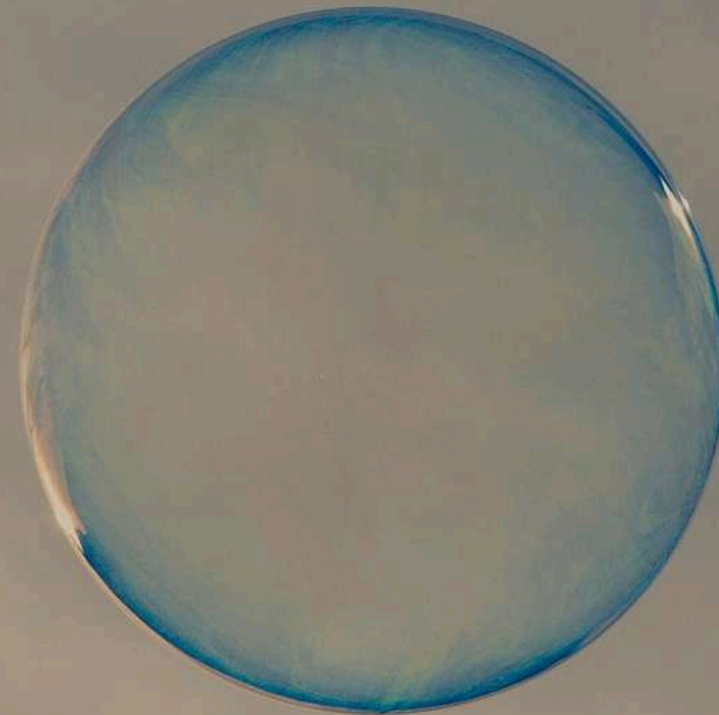
Resources
1000+

Countries represented
30+

A world map with a light green background. The map shows the continents of North America, South America, Europe, Africa, Asia, and Australia. Europe is highlighted in a darker green color.

European focus,
global perspective

EACs* don't exist in a vacuum – they're part of the wider GHG and sustainability conversation



We can not expect broader acceptance and understanding of EACs unless we engage beyond EAC circles.

EACs in broader scope

Batteries for electric vehicles - carbon footprint methodology

Have your say - Public Consultations and Feedback > Published initiatives > Batteries for electric vehicles – carbon footprint methodology

Success

Your subscriptions were updated.

In preparation

Draft act

Feedback period

30 April 2024 - 28 May 2024

Feedback: Closed

Upcoming

Commission adoption

Planned for

First quarter 2024

About this initiative

Summary

The Battery Regulation includes life-cycle carbon footprint requirements for several categories of battery, the details of which have to be set out in implementing legislation.

As a first step in implementing the carbon footprint requirements for electric vehicle batteries, this act lays down the methodology for calculating and verifying their life-cycle carbon footprint.

Topic

Single market

Type of act

Delegated regulation

Expert group

[E03343](#)



The International Tracking Standard Foundation
Founder of I-REC

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Founder of I-REC
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defined emission ownership required by CBAM and can be utilized to support the implementation of the CBAM.

Broadening the interpretation of PPAs to include EACs is not only logical but also supports the transparency and robustness of the CBAM. EACs have already been implemented in the EU—as defined in the Renewable Energy Directive—in the US and in many other countries in the world (such as the [50+ countries](#) adherent to I-REC's International Attribute Tracking Standard). These existing mechanisms *can* and *should* be leveraged by CBAM declarants as complementary tools to verify the embedded emissions of each product imported into Europe. Moreover, EACs can ease adherence for both declarants and verification bodies, by providing a trustworthy foundation for claims of renewable electricity usage, as well as other production inputs such as hydrogen, biomethane, and durable carbon dioxide removal credits.



Mary Polovtseva ✓ • 1st
Renewable Energy Policy Analyst | Environmental Commodities - EAC...
1mo •

EUROPEAN STEEL AND METALS ACTIONS PLAN REAFFIRMS EACs EXCLUSION UNDER CBAM ...more



EUROPEAN COMMISSION

Brussels, 19.3.2025
COM(2025) 125 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A European Steel and Metals Action Plan

What's the relevance of ISO?



- Quantification and reporting of GHG emissions is becoming increasingly relevant worldwide, driving efforts to align various standards.
- We understand that close cooperation is expected between ISO and the GHG Protocol, and that SBTi will take the outcomes into account.
 - However, the process remains highly opaque.
- RECS welcomes harmonization efforts, however we have to prepare for the risk that market-based accounting is an optional alternative to location-based in global standards.
- CEN* is going to adopt ISO 14064-1 as a European standard, which would increase its significance, particularly within CEN countries.

*CEN: The European Committee for Standardisation has 34 national members. These EU Member States and accession countries develop European Standards in various sectors.

It's time to stand up for the system & ensure
it's included in new standards and legislation

The usefulness of EACs in sustainability is often
taken for granted - it needs to be reiterated

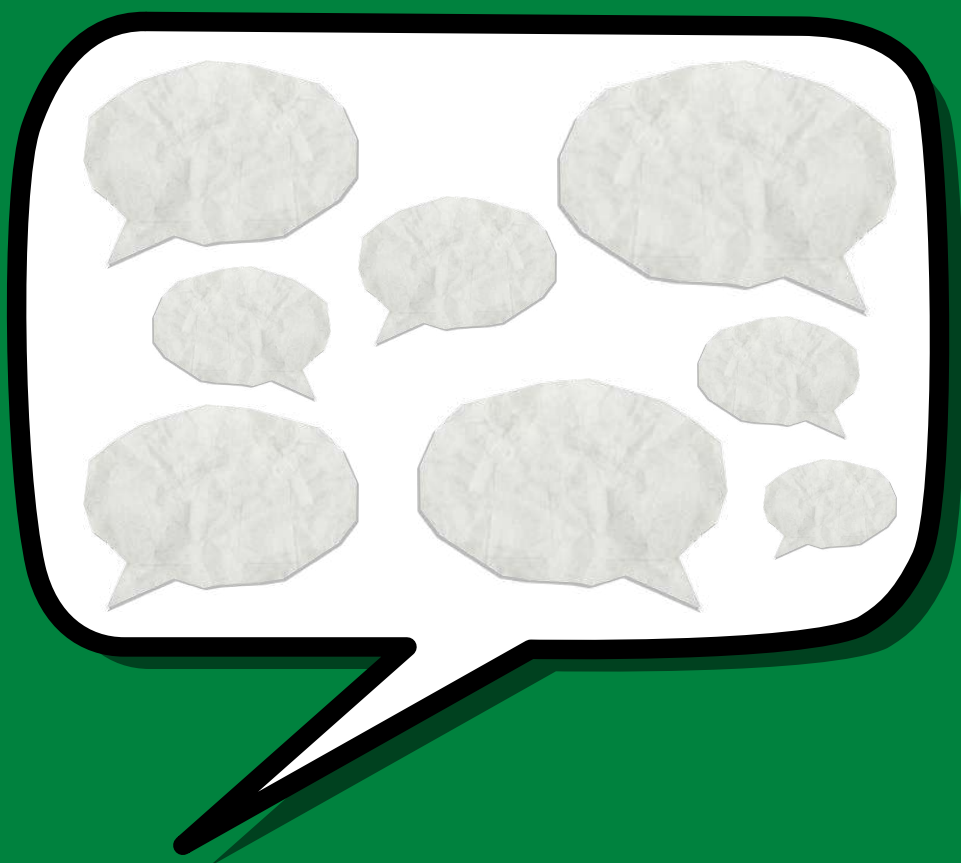


What do you need to know?



- The current situation:
 - ISO does not follow the Scope 1-2-3 structure set out by the GHG Protocol
 - Electricity is treated as a physical input, raising traceability concerns
 - National logic is applied to corporate target setting, blurring key distinctions between corporate action and countries' targets
 - Problematic definitions (esp. when quoted) risk undermining EACs
- Industry representation in the working groups is currently weak:
 - Strong criticism of EACs
 - Pushback on book & claim systems
 - Antagonistic voices dominate
 - Niche views presented as mainstream
- ISO standards reference each other – multiplying risks across GHG accounting, claims, and LCA

What do you need to know? 2



- On commenting and ISO meeting dynamics:
 - Consensus is the absence of sustained opposition ($\neq$ unanimity), making organized presence essential
 - Timing matters: It's crucial to make the right argument in the right moment - hybrid meetings span 5 days
 - Comment handling varies by leadership, but dialogue is generally welcome
 - Final vote allows resistance but limits meaningful changes, early drafting is key
 - National/regional legislation isn't considered in ISO processes, but but ISO seeks broader influence
 - We're mapping relevance to EU law with the Hamburg Institute

How to get involved?

← Developing standards

Get involved

One of the strengths of ISO standards is that they are created by the people that need them. Industry experts drive all aspects of the standard development process, from deciding whether a new standard is needed to defining all the technical content.

Getting involved in this process can bring significant advantages to your business. For example by:

- Giving early access to information that could shape the market in the future
- Giving your company a voice in the development of standards
- Helping to keep market access open.

Getting involved in standards development brings your concerns and needs to bear on a process that will affect you in the future.

How to get involved?

Standards are developed by groups of experts called technical committees. These experts are put forward by ISO's national members. If you are interested in getting involved, contact your national standards body. Your national standards body is the ISO member, and represents ISO in your country. Contact details can be found in the [list of national members](#). Companies and individuals are not eligible to join ISO as members.

<https://www.iso.org/developing-standards.html>

- You can participate through your NSB (National Standardization Body), which represents your country in ISO.
- There is only one ISO member per country, usually the national standards organization: <https://www.iso.org/about/members>
- Processes for joining standardization bodies as a national expert, timings, and fees differ from country to country

"Taking part can give you early access to industry information, give your company a voice in the development of standards and help to keep market access open." [ISO website, developing standards](#)

Joining as an external liaison organization

ISO has three categories of external liaison:

A TC/SC level	B TC/SC level For intergovernmental organizations	C WG level
Able to participate in TC/SC and may appoint WG experts	Can attend meetings as an observer	Able to participate in WG work
Access to documents	Access to documents	Access to documents
No voting rights, but can comment and submit new work proposals	Can submit comments	No voting rights, but allowed to comment

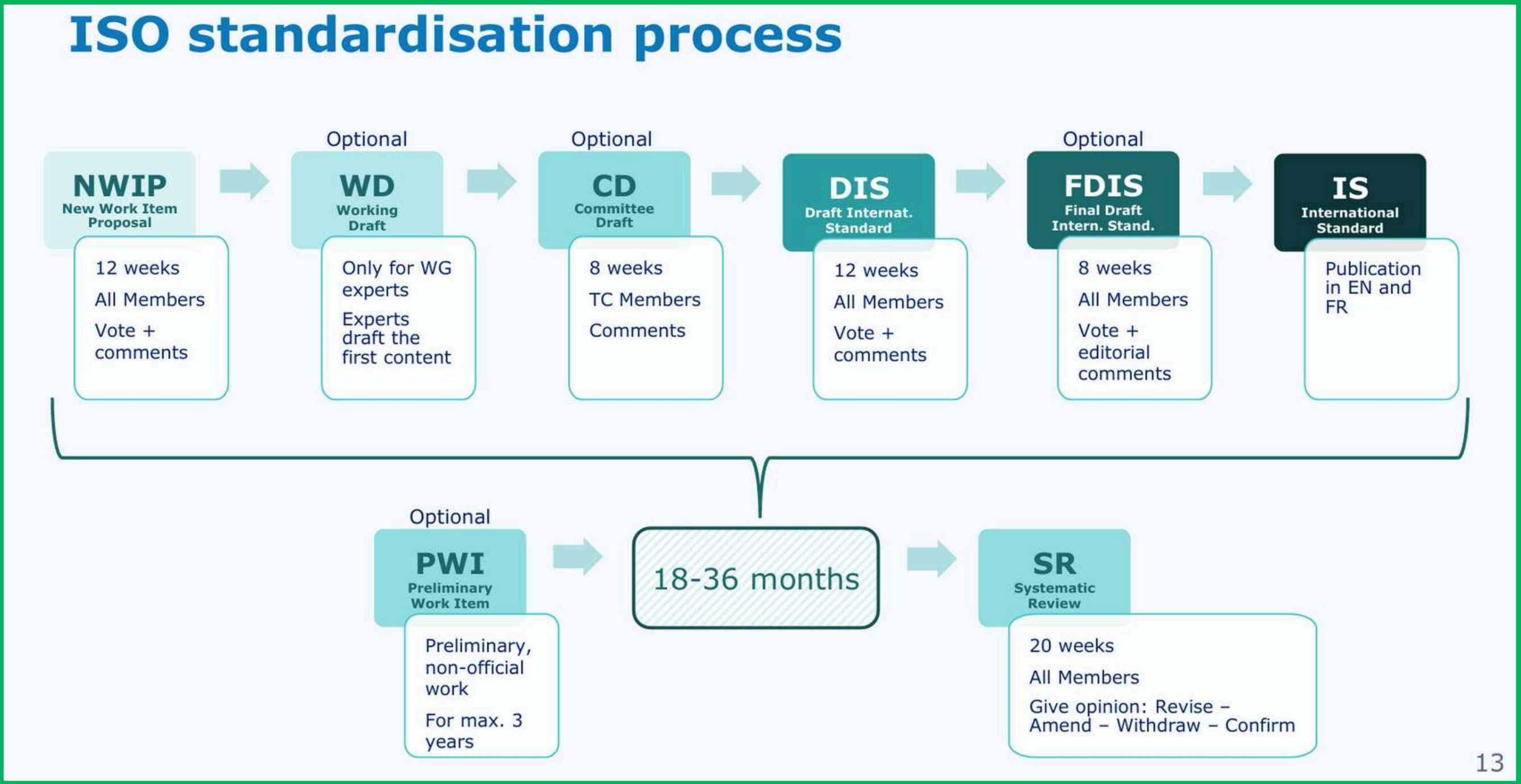
<https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100447.pdf>

- Liaison organizations don't have the same voting rights as national bodies and need to be voted in. Among the requirements are:
 - Be not for profit
 - corporate-led initiatives or technical forums can be granted liaison status if they represent a broader interest
- Category A and B only:
 - Must be a legal entity
 - Must have a membership-based structure and be open to members worldwide or across an extensive region

Overview of key standards and initiatives on Scope 2 accounting

Standard name	Status	Basis / Framework	Led by	Responsible organization/committee	Preference for a particular GHG accounting methodology	Reference to EACs	Approach to Framework Alignment	Relevance to ISO Standards
RE100	Version 5.0 revised on 24 March 2025. Reviewed periodically.	Based on the GHG Protocol Corporate Standard market based scope 2 accounting guidance.	CDP and the Climate Group.	RE100 Technical Advisory Group (TAG), with the approval of the RE100 Project Board	Dual reporting, market based.	Yes	Recommends third party sustainability assurance (i.e. ISO 13065:2015 is recommended for bioenergy)	Unknown, possible
GHGP Scope 2 Guidance	Revision ongoing, public consultation of Phase 1 in Q4 2025. Final standard expected in Q4 2027 (Phase 1 covers the improvement of location and market based accounting, role of project based, regional guidance and policy interaction)	GHGP Scope 2 Guidance (2015)	World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD)	Scope 2 Technical Working Group (TWG), GHGP Independent Standards Board	Previous reference to dual reporting is changing	Yes, with proposed restrictions: - Physical connection is added to the definition of Scope 2 - Temporal correlation and deliverability requirements for market based– reflecting flow of electricity on grids + metered or estimated hourly consumption data - New definition of “matched” and “unmatched” consumption, with matching a required for companies above a certain threshold (proposed: > 10 GWh)	Negotiations are ongoing, some similar discussions to those under ISO 14064-1 and 14060	ISO 14064-1 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals ISO TS 14064-4 Greenhouse gases — Part 4: Guidance for the application of ISO 14064-1
The Science Based Targets initiative (SBTi) Corporate Net Zero standard	Revision ongoing, consultation ended June 2025. NZS v2 Consultation Draft . Estimated publication in Q1 2026. Regular review cycle of 2-5 years.	First Corporate Net-Zero Standard was launched in 2021, targets to meet the goals of the Paris Agreement.	CDP, the United Nations Global Compact, the We Mean Business Coalition, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF) .	Five Expert Working Groups (EWGs), SBTi Technical Department	Location-based target accompanied by either a market-based or zero-carbon electricity target	Confusing reference to “environmental” attribute certificates, including offsets. “Zero carbon electricity targets” is used instead of renewable energy targets.	SBTi is following ISO processes, overlapping discussions are ongoing. “Energy and commodity EACs which can be traced directly to a	ISO 14064-1 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals,
						Geographic matching – indirect mitigation with zero carbon electricity from other grids is mentioned as a time limited alternative.	company's value chain, and thus substantiate <i>direct mitigation</i> ”, are the preferred use of EACs in the draft standard.	ISO 14060-2 Net Zero Aligned Organizations
CDP	Updated annually, no regular external working group.	First CDP corporate questionnaire February (2013), GHGP is referenced for dual reporting.	CDP	CDP	Dual reporting is encouraged , primarily based on market-based method where available	Yes	CDP's corporate questionnaire supports disclosures aligned with the GHG Protocol	Unknown, possible

ISO process overview



Source: NBN's training to Belgian experts

Overview of related ISO standards and timelines

ISO standard	Name	Responsible Committee and Working Group	Start date	Current stage	Project duration	Expected publication date	EAC relevance
ISO 14064-1	Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals	ISO/TC 207/SC 7/WG 4	2024-10-14	20.00 WG started working on the revision of the 2018 text	36 Months	2027-10-14	High
ISO DTS**** 14064-4	Greenhouse gases — Part 4: Guidance for the application of ISO 14064-1	ISO/TC 207/SC 7/WG 4	2023-02-01	50.00 Final text received or FDIS registered for formal approval	24 Months	Deadline exceeded: 2025-02-01	Medium
ISO 14067	Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification	ISO/TC 207/SC 7/WG 8	2024-10-14	20.00 WG started working on the revision of the 2018 text	36 Months	2027-10-14	Medium (?)
ISO 14060-2	Net Zero Aligned Organizations	ISO/TC 207/SC 7/WG 18	2024-05-27	20.60 Resolving comments. Awaiting WD* approval for registration as CD**	36 Months	Target date: 2026-12-31 Limit date: 2027-05-27	Medium
ISO 14077	Environmental management — Life cycle assessment — Requirements and guidelines for application of Chain of Custody (CoC) approaches	ISO/TC 207/SC 5/WG 12	2024-09-30	20.60 Resolving comments. Awaiting WD* approval for registration as CD**	36 Months	2027-09-01	Low-Medium
ISO 13659	Chain of custody — Book and claim — Requirements and guidelines	ISO/TC 308/WG 2	2022-03-28	40.60 voting is closed. Awaiting DIS*** circulation with TC/SC	57 Months	2025-11-28	Low-Medium

*Working Draft (WD) is the first formal draft of a proposed ISO standard. Typically reviewed internally by the working group (WG) responsible for drafting the standard.

** Committee Draft (CD) is the following stage after WD, when the draft is considered mature enough for broader input. It is shared with the full Technical Committee (TC) and Subcommittee (SC) for comment and feedback.

*** Draft International Standard (DIS) is the formal ballot stage where the content of the draft is nearing final form, but feedback is still welcome from ISO member bodies.

**** Draft Technical Specification (DTS) refers to a document for which there isn't yet sufficient consensus to be published a full International Standard, but the content is still technically mature and useful. It's faster to publish than a full standard and useful for rapidly changing or specialized fields.

Standards with relevance to our industry

Technical Committee Sub committee Working Group drafting the text Standard name



- ISO/TC 207/SC 7 WG 4 – ISO 14064-1: Quantification of GHG emissions for organisations
- ISO/TC 207/SC 7 WG 8 – ISO 14067: Quantification and reporting of CFP
- ISO/TC 207/SC 7 WG 18 – ISO 14060: Net zero-aligned organisations
- ISO/TC 207/SC 5 WG 12 – ISO 14077: Life cycle assessment – Requirements and guidelines
- The upcoming revision of ISO 22095 on Chain of Custody (ISO/TC 308), which currently includes a problematic table and graph.

ISO/TC 207/SC 7 – ISO/TC 207 Environmental Management: <https://www.isotc207.org/subcommittees-iso/tc-207/sc-7>

Thanks for listening!
It's time for joint effort





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EU REQUIREMENTS FOR GHG ACCOUNTING: REGULATORY OVERVIEW AND ALIGNMENT WITH INTERNATIONAL STANDARDS

30th June 2025 | Marina Kemper, Juliane Mundt, Alexandra Styles
RECS Info Session International Standards



MEMBERSHIPS AND INITIATIVES ENSURE TOP INFORMATION ON LATEST DISCUSSIONS



Co-chair of the Project Team
Heating & Cooling at the **European Committee for Standardization CEN/CENELEC** JTC 14 Working Group 5 "Guarantees of Origin related to energy".



- Hamburg Institut Research gGmbH (HIR) is a member of the **German Institute for Standardization (DIN)**
- Participation in the following DIN working groups:
 - Climate neutrality (NA 172-00-19-03) for ISO 14068
 - Update ISO 14067 "Carbon footprint of products" (NA 172-00-03-04 AK)
 - Revision of EN 16325
 - "Verification and sustainability aspects" of the joint project "[Standardization roadmap for hydrogen technologies](#)"



Dr Alexandra Styles is member of the Technical Working Group Scope 2 for the update process of [GHG Protocol](#)'s corporate standards



Participation in the [IEA Hydrogen Technology Collaboration](#), with a focus on hydrogen certification

SELECTED PUBLICATIONS ON HARMONIZING GHG ACCOUNTING



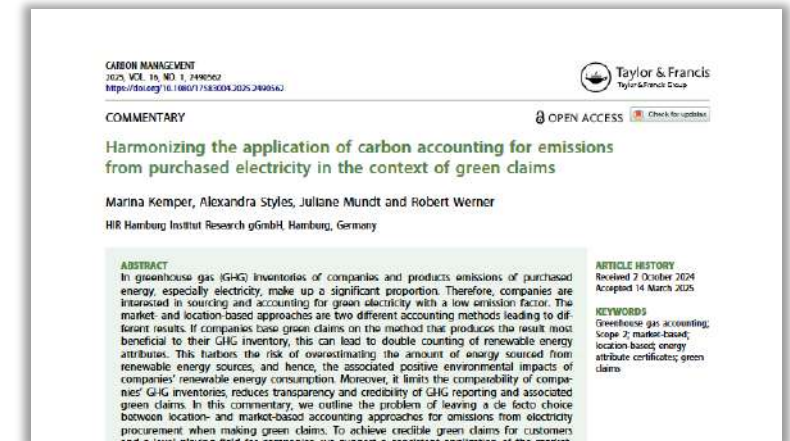
[Carbon Accounting of Electricity: Managing the Gap between market- and location-based Approaches](#)

Hamburg Institut Discussion Paper



[The Challenges of PCF Creation in the Automotive Value Chain](#)

Hamburg Institut Discussion Paper



[Harmonizing the application of carbon accounting emissions from purchased electricity in the context of green claims](#)

Journal Contribution

ABOUT HAMBURG INSTITUT

We offer **strategy consulting, research work and engineering** with a focus on energy policy and the energy industry.

- Founded in **2012**
- **More than 50** employees in the interdisciplinary team
- Owner- and employee-managed
- Locations in **Hamburg-Altona** (head office), Berlin and Lindau
- **Clients:** energy industry, municipalities, ministries & authorities, companies, property industry, finance industry, associations & institutes



CONSULTING

Climate-neutral municipalities & heat transition

- Climate action plans
- Action plans
- Potential analyses
- Scenario development
- Municipal heat planning
- Biochar

Policy & markets

- Policy analysis
- Policy making / legislation
- Design of regulatory framework
- Market design
- Funding policy
- Stakeholder processes



RESEARCH

District heating & energy systems

- Potential and feasibility studies
- Transformation plans
- Energy system planning
- Heat pumps
- Waste heat, process heat
- Heat storage

- Guarantees of origin, mass balancing, real-time evidence
- Markets for renewable energies, PPA
- Green electricity quality
- Certification of energy products



ENGINEERING

Climate-neutral companies & products

- GHG accounting (CCF, PCF)
- Climate strategies, SBTi
- Reduction plans
- Potential analyses
- Monitoring, CDP, CSRD
- Climate risk analyses

Communication

- Communication strategies
- Development & implementation of communication strategies
- Consulting on communication-related issues
- Ghostwriting
- Concept & content für project websites

OVERVIEW OF EU REGULATIONS IMPOSING REQUIREMENTS FOR GHG ACCOUNTING

CSRD

(Corporate Sustainability Reporting Directive)

Mandates large and listed companies in the EU to disclose detailed sustainability information and imposes strict requirements for GHG accounting (European Sustainability Reporting Standards)

CSDDD

(Corporate Sustainability Due Diligence Directive)

Obliges large companies to address environmental and human rights risks, including climate transition plans, which imposes a need for GHG emission calculation.

EU Battery Directive

Mandates battery manufacturers and importers to declare the carbon footprint of EV and industrial batteries using a standardized life-cycle methodology.

EU Taxonomy

The EU Taxonomy is a classification system for environmentally sustainable economic activities. For some activities GHG emission thresholds are defined necessitating GHG accounting.

ESPR

(Ecodesign for Sustainable Products Regulation)

Sets ecodesign rules for product groups, including carbon footprint requirements and introduced the concept of the Digital Product Passport.

CBAM

(Carbon Border Adjustment Mechanism)

Applies a carbon price to imports of high-emission goods, requiring GHG reporting and CBAM certificate purchases from 2026.

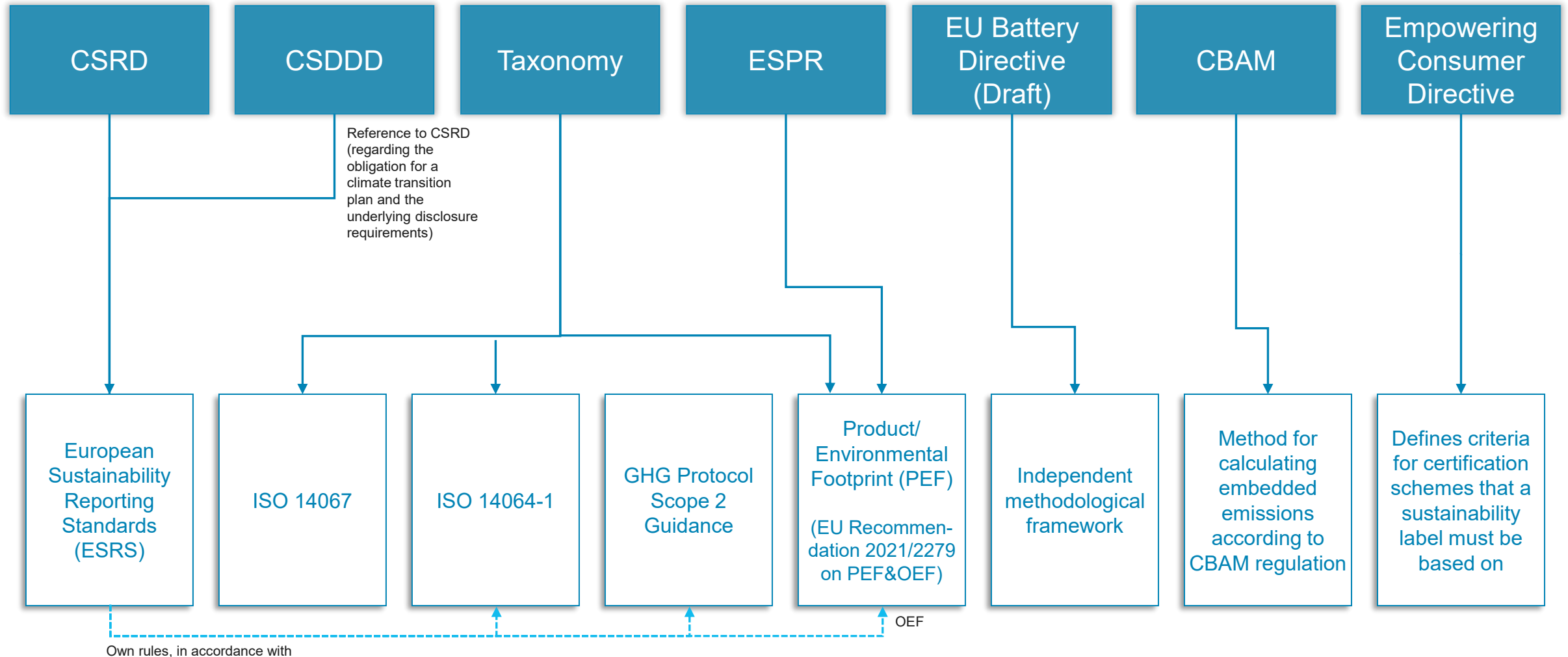
Empowering Consumers Directive

Bans vague green claims unless based on verified performance, promoting credible climate info and transparency on electricity-related GHG emissions.

Green Claims Directive

Ensures that environment related claims are verifiable—thus implying the need for credible GHG accounting to substantiate them

METHODOLOGICAL REQUIREMENTS FOR GHG ACCOUNTING IN EU LEGISLATION



ELECTRICITY ACCOUNTING REQUIREMENTS IN REFERENCED STANDARDS

ISO 14067

ISO 14067 establishes a hierarchy of emission factors that shall be followed, preferring a market-based approach. Criteria for market-based instruments are defined.

CBAM Methodology

CBAM Method refers to location-based default values; a PPA may be used as an alternative. No specific criteria for verifying PPAs are defined.

ISO 14064-1

As per ISO 14064-1 a location-based approach shall be applied, meaning that grid-average emission factors shall be used. A market-based approach may be used. Criteria for market- and location-based approaches are defined

EU Battery Directive (DA - Draft)

As per the draft methodology electricity emissions shall be accounted using a location-based approach. The national average electricity consumption mix shall be applied.

Product/ Organizational Environmental Footprint

The PEF methodology requires a market-based approach for accounting for emissions from electricity. Criteria for market-based instruments are defined.

ESRS E1 (Climate Change)

As per ESRS E1, Scope 2 GHG emissions dual reporting is required. Refers to the criteria for market- and location-based approaches set by common accounting standards like GHG Protocol and ISO 14067-1. Newly established SME-Standards differ.

GHG Protocol Scope 2 Guidance

The GHG Protocol Scope 2 Guidance requires dual reporting of emissions from purchased electricity.

MOST OF THE STANDARDS REFERENCED IN EU LEGISLATION ARE UNDER REVISION

ISO 14067

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CBAM

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GHG Protocol Scope 2 Guidance

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Standards under revision

CONCLUSION

1

The application of various greenhouse gas (GHG) accounting standards is required by EU legislation.

2

Currently, many of these are undergoing revisions. The market-based accounting method is presently under evaluation.

3

Modifications affect the methodology of GHG accounting and may, therefore, influence the utilization of Energy Attribute Certificates (EACs).

4

Contributions to revision processes necessary to reflect market perspective. An evaluation of the relevance of GHG accounting standards is necessary to determine how engagement aligns with impact.

RELEVANCE ASSESSMENT OF GHG ACCOUNTING STANDARDS - METHODOLOGY

Objective: Derive recommendations for maximizing impact through strategic engagement

DRAFT CRITERIA

- Addressed sectors
- Estimated scale and volume of market impact
- Level of market relevance
- Revision status
- Regulatory obligation to comply with the standard
- Reference to other standards
- Openness to stakeholder contributions

	Standard X	Standard Y	Standard Z	...
Criterion 1				
Criterion 2				
Criterion 3				
Criterion 4				
Criterion 5				
Criterion 6				
Criterion 7				

YOUR CONTACTS. WE ARE LOOKING FORWARD TO FURTHER EXCHANGE!



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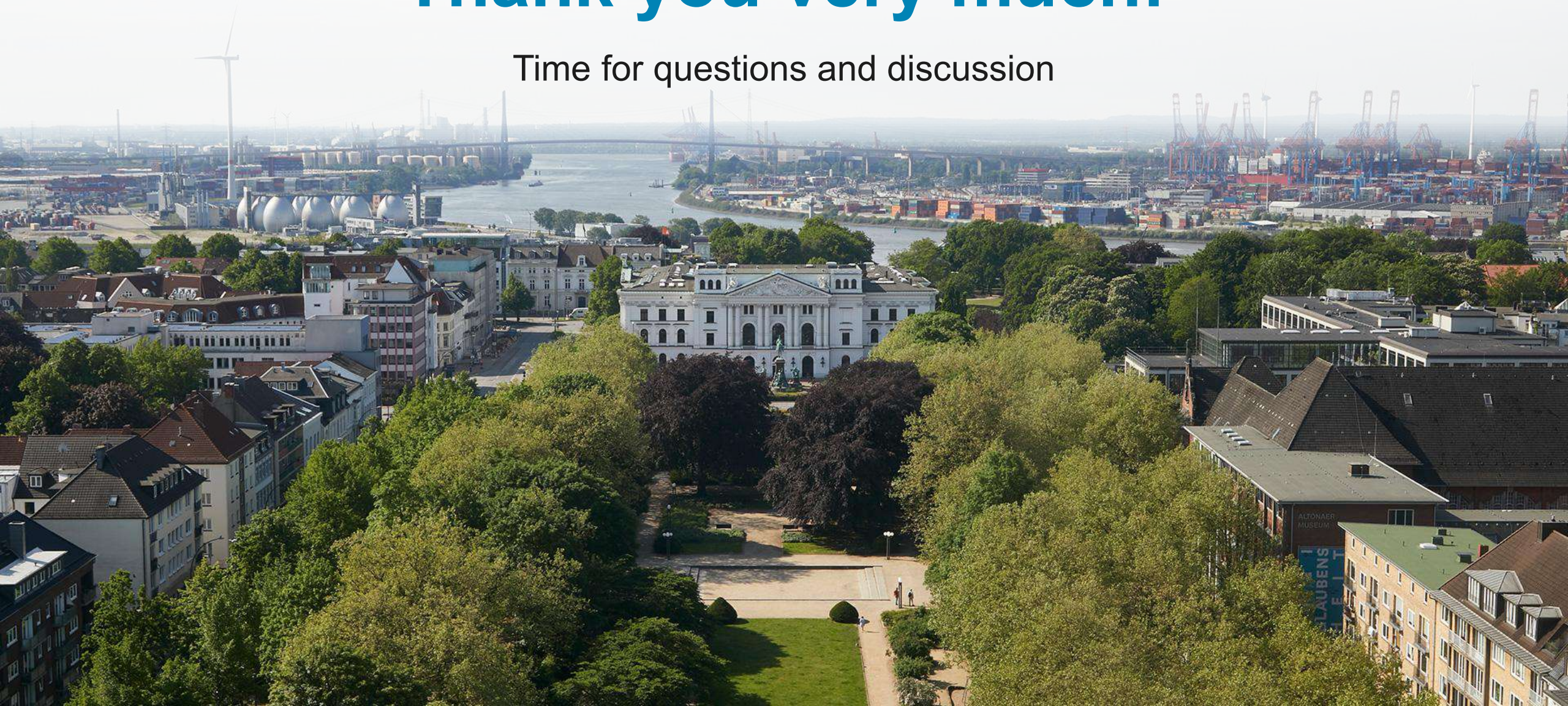


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Thank you very much!

Time for questions and discussion



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