Guarantees of origin

Reliable energy tracking to provide transparency to consumers

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 O(DE)ntmoetingen – 8 september 20201
Simple Supply

Guarantees of Origin
The principle for electricity

Guarantees of Origin
The principle for gas

Guarantees of Origin

Issuing Body

Guarantee of Origin
### Timeline

**Guarantees of Origin**

- **Concept of GO**
- **What is an EECS-GO?**
- **What are GOs used for?**
- **GOs are for Disclosure**

#### Birth of GOs
**RES Directive**
2001/77/EC (Art. 5)

#### Electricity Disclosure
**IEM Directive**
2003/54/EC (Art. 3)

#### Directives
**RES – 2009/28/EC**
**Disclosure – 2009/72/EC**
2003/54/EC (Art. 3)
Info content of GO

#### PRO → EECS
Adapt to latest Directives

#### RED II
(Art. 19)

- 2002
- 2004
- 2006
- 2010
- 2014
- 2017
European Legislation

Guarantees of Origin


Electricity Disclosure

Guarantee of Origin
European legislation (gas GO)

Guarantees of Origin


Issuing Body

Guarantee of Origin
What does a GO look like under EECS™?

Guarantees of Origin

- Energy Medium
- Product
- Unique certificate number
- Production period (start and end dates)
- Energy source
- Type of installation
- Production device info
- Identity and country of originating member
- Issue date
- Identity and country of relevant competent body
- Purpose
- Support received by type
- Independent Criteria Schemes (Labels) *

*Optional field

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Additional Gas certificate

- Type of Gas
  - Networking compatible gas, hydrogen, other gas
- Calorific Value
- Means of Supply – Category
- CO2 Emissions Saved & Produced *
- Sustainability Criteria met?*
  - Y/N, name Certification Body, reference to report
- GHG saving criteria met?*
- End-Use of gas category*

*Optional field
Components to be managed in a reliable GO system

Guarantees of Origin

Account Holder Registration
- Prevent access of fraudulent actors
- Ensure rule-compliance contractually

Production Device Registration
- Verify plant data
- Ensure data maintenance and re-verification

GO Issuing
- Base issuing on verified meter readings
- Verify shares of energy origin in multi-fuel pants

GO Transfer
- Secure and electronic transfer independently from the physical energy or energy trading
- Non-mutability and uniqueness of certificate data

GO Cancellation
- GO as the sole instrument to disclose renewable energy to consumers

Disclosure
- Disclosure of the energy origin sold/consumed
- Where applicable, calculation of the residual mix and obligation to use it for untracked energy

Competent Body
Reliable disclosure

→ Reliability of the GO system = prevention of double counting!
  • Double counting of certificates
  • Double disclosure
  • Double perception

→ Prevention of double disclosure
  • Origin unknown? -> residual mix!
Residual mix

- International allocation mechanism for "electricity attributes" not tracked by guarantees of origin
- Belgium: net importer of GOs: "surplus" of attributes flows over to the European Attribute Mix (EAM)
- Net GO exporting countries (= with a "deficit" of attributes) fill this deficit with the EAM
- Residual mix = production for which no GOs are issued + EAM (in case of deficit)
Why do we have standards?

Framework

Try plugging that in!
Why isn’t the law enough?

AIB Facts & Statistics

→ Differences between national markets
→ Infrastructure / technology differences
→ Lack of precision
→ Interpretation
Guarantees of Origin
The AIB

AIB Facts & Statistics

→ AIB was founded in 2002
→ International Non-Profit Association
→ Headquarters in Brussels
→ Developer and custodian of the EECS™ standard
AIB and its Member Countries / Regions

AIB Facts & Statistics

- 27 countries connected (31 members)
- Geographical scope: EU - EFTA – Energy Community
- All AIB’s current members are issuing bodies for GOs
- Very diverse: regulator, market operator, TSO, ministry, power exchange etc.
- About half AIB’s members are also competent bodies for the supervision of electricity disclosure
- Already 7 AIB members assigned by their government for issuing gas GO – more to follow
Organisation model

General Meeting

Board

EECS Unit

EECS ELECTRICITY SCHEME GROUP

EECS GAS SCHEME GROUP

External Affairs Unit

Information Systems Unit

Disclosure Platform
The AIB HUB

Framework

➔ International transfers of electronic documents
  • 2020: 618 million GOs cross border transfer
  • 27 Domains

➔ How
  • Standardised
  • Automated
  • Jointly operated

➔ Why
  • Efficiency
  • Trust
  • Fraud prevention
Size of the market for electricity GOs

AIB Facts & Statistics

Annual EECS transactions by transaction date (TWh)

- Issue
- Internal Transfer
- Import
- Export
- Expire
- Cancel

Grafiektitel
Size of the market for electricity GOs

AIB Facts & Statistics
Before REDII: The European Energy Certificate System (EECS)

**Framework**

**EECS Rules**
- Certificate Administration
  - Core principles – objectives & aspirations
  - Plant registration
  - Certificate issue, transfer and cancellation
- EECS participation rules
  - Membership, admission, compliance, disputes & change
- Scheme specific rules
  - E.g., electricity, gas ...

**Detail**
*subsidiary documents*
- Decision-making – disputes, voting etc
- Registry system & networking standards
- Approval of agents
- Change management
- Assignment of codes
- Audit & periodic reviews

**Dynamic information**
*fact sheets*
- Addresses, membership details, codes, guidelines ...

**Domain protocols**
- Description of regulations in a specific country

Mirrored in EN16325, based on EECS
REDII: Formal European standard EN16325 (CEN)

Framework


• “Member States and designated competent bodies shall ensure that the requirements they impose comply with the standard CEN- EN16325”
• Transposition by 30/6/2021

EN16325: standard on guarantees of origin related to energy

• Drafted in 2013, updated in 2015
• Revision opened 7/2/2020 in CEN Joint Technical Committee 14 Working Group 5
• Aim:
  ✓ Facilitate multi-energy carrier,
  ✓ Update towards REDII,
  ✓ Integrate improvements from practice
Relationship REDII-EN16325-EECS

Framework

1. GOs are for disclosure – legislation
2. Reliable GO system – mandatory standard
3. Efficient and reliable GO system – voluntary standard
Relationship EN16325 (CEN) and EECS™

Framework

**EN16325**
Principles for reliable GOs

- Under discussion in CEN, in addition to EECS today:
  - Data field on the GO “Type of Dissemination of the physical energy”
  - GOs for heating and cooling – new attributes e.g. temperature range
  - Hydrogen blending into the gas grid
  - Export & Import – maintain same perimeter as in residual mix

**EECS**
Reliable and efficient operation

- EECS going beyond CEN
  - Operational details, needing flexible adaptation
  - IT facilitation of international transfers and joint needs
  - Platform for sharing experiences
  - Co-creation by issuing bodies
  - Standard procedures for robust decision-making
Facilitating multi energy carriers

1. EECS Energy Carrier Conversion Rules
   • September 2019

2. EECS Gas Scheme: Chapter O of the EECS Rules
   • November 2019
   • https://www.aib-net.org/eecs/eecsr-rules

3. Changes in the Articles of Association and internal rules
   • February 2020

4. Gas Scheme Group
   • Existing members
   • Observer - Scheme co-developer status
   • Forum for discussion and resolution of challenges
Why a generic GO system for all energy carriers?

GO Conversion Issuance

GO system
Hydrocarbon network-compatible gas

GO system
Hydrogen

GO system
Electricity

GO system
Hydrogen
Other trends and challenges

- Third country recognition (CH, UK, Energy Community)
- Temporal granularity
- Linking separate certificate systems
- Heating/cooling
- Hydrogen
- Fit for 55
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