# Webinar on Guarantees of Origin for electricity

16 February 2021 at 1.00–3.00 pm

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# Agenda

- Welcome /  Kaija Niskala, Finextra Oy
- New Guarantees of Origin Act / Outi Vilén, Ministry of Economic Affairs and Employment
- Status report on the Guarantees of Origin standard (EN 16325) / Kaija Niskala, Finextra Oy
- Guarantees of Origin system review / Joni Vuorela, Fortum Power and Heat Oy
- Guidance for cancellations / Mervi Suni, Energy Authority

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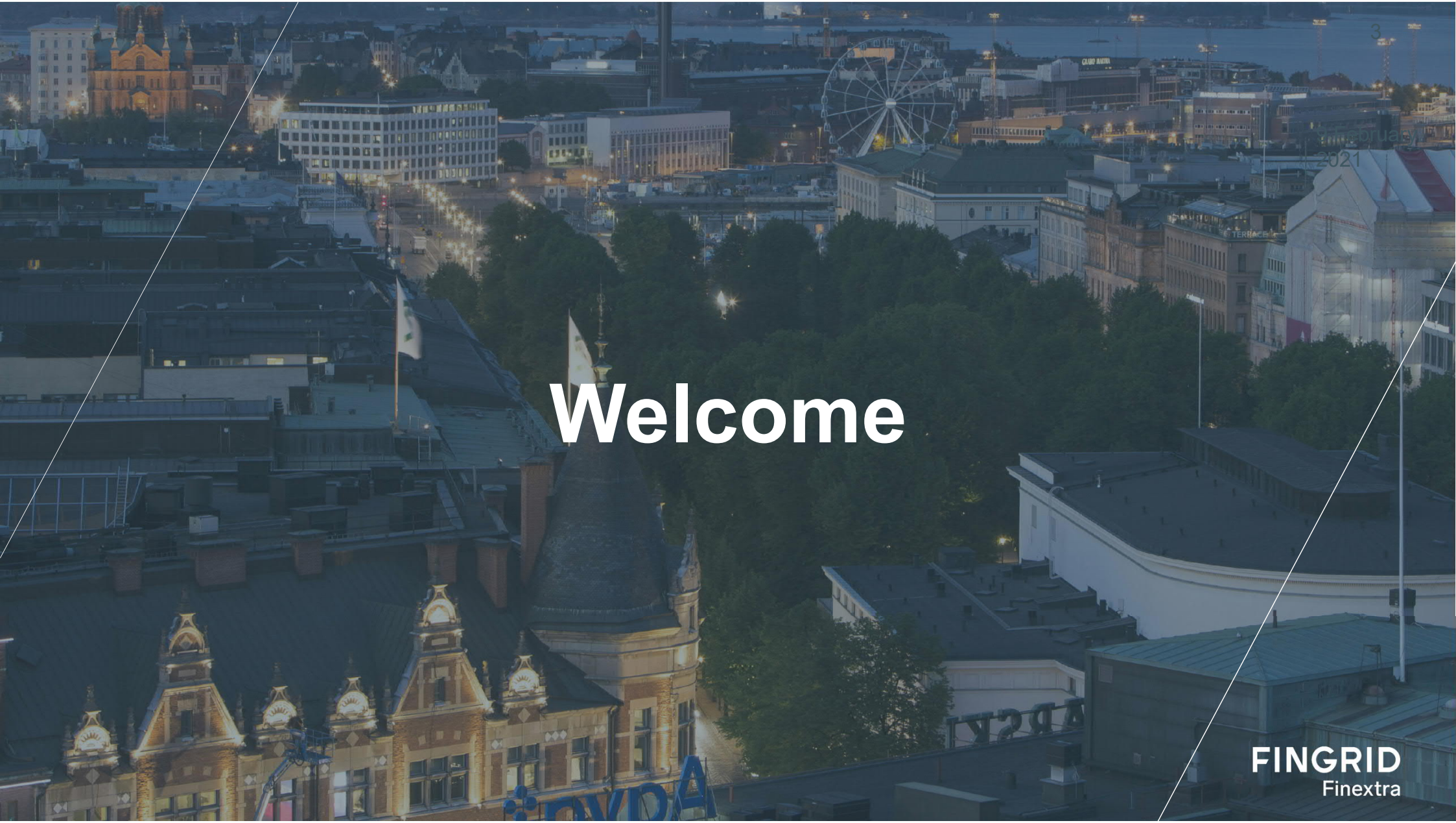

# Welcome

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# New Guarantees of Origin Act

**Webinar on Guarantees of Origin for electricity 16 February 2021**

**Senior Specialist Outi Vilén**

Työ- ja elinkeinoministeriö
Arbets- och näringsministeriet

# Renewable Energy Directive (RED II)

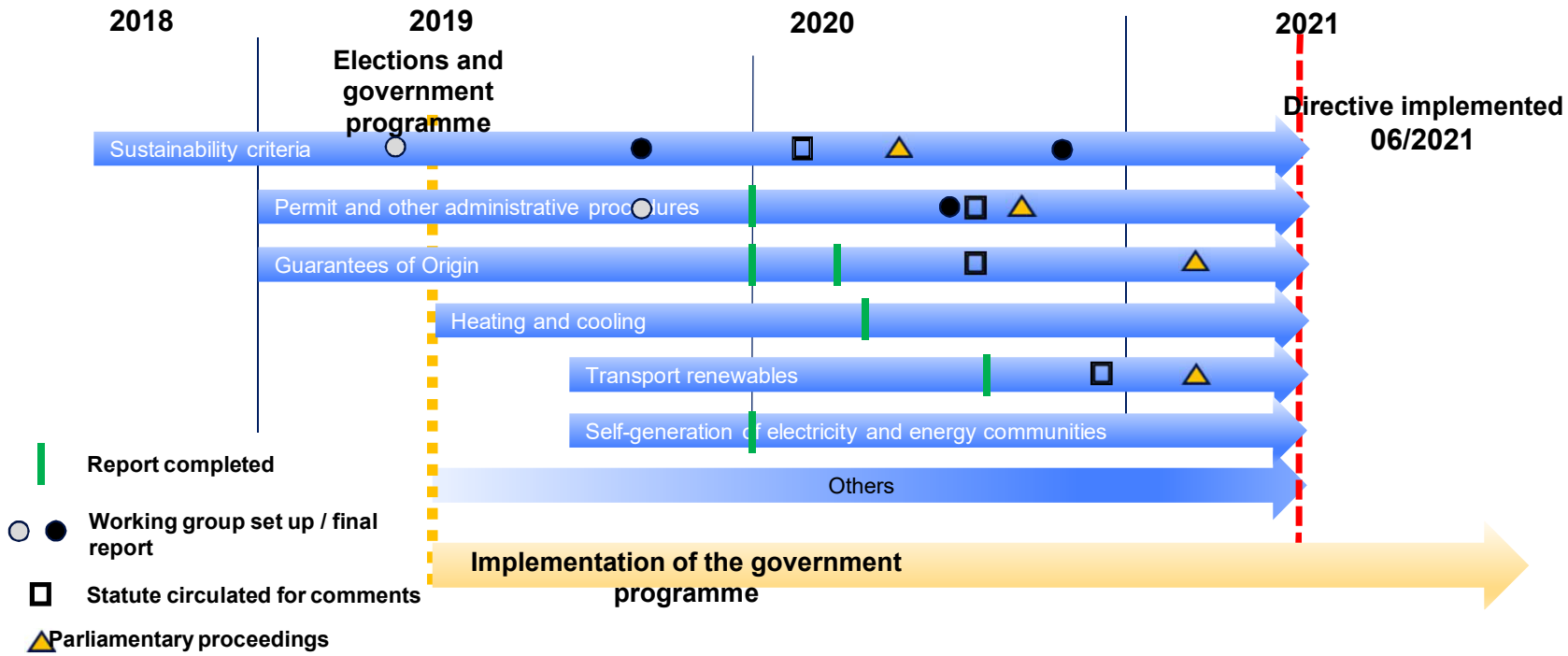
- **Member States will jointly ensure that renewable energy accounts for at least 32% of final energy consumption in the EU by 2030**
- **The target for Finland's share of renewable energy has been set in the National Energy and Climate Plan to at least 51%**
- **The next update of the directive is already being planned to increase the level of ambition**

**The directive is to be implemented by 30 June 2021.**

# RED II – briefly by theme

- **Renewable energy support schemes and opening them**
  - No mandatory opening of support schemes, technology-neutral tenders, taking small-scale production into account
- **Permit and other administrative procedures**
  - Contact point, centralised advice and time limits for the permit process of electricity production projects (2 years)
- **Guarantees of Origin**
  - Extended to include gas and hydrogen as well as heating and cooling
- **Self-generation of electricity and energy communities**
  - Dismantling barriers, creating an enabling framework
- **Heating and cooling, district heating and surplus heat**
  - Share of renewables in heat and cooling at least +0.65%/year (for Finland)
- **Sustainability criteria**
  - Extension of scope to solid and gaseous biomass fuels used in electricity and heat production, risk-based assessment of forest biomasses at country level
- **Transport renewables**
  - 14% renewable 2030, lower and upper limits, coefficients

# RED II Implementation



# Preparation of national implementation

- **VN TEAS report: Extension of the Guarantees of Origin system to gas**
  - Final report 12/2019:
    - Certification obligation for biogas sales, with the exception of off-grid under certain conditions
    - Guarantees of Origin would not be differentiated according to the quality of the gas (e.g. CBG, LBG, raw gas)
    - Guarantees of Origin would have no impact on the taxation of biogas
- **Report: Implementation options for the Guarantees of Origin system of heating and cooling**
  - Final report 2/2020:
    - There is growing demand for heat products based on renewables and waste heat, though demand and supply are still very unbalanced
    - District heating companies already have products based on renewable energy and waste heat, common rules could be in the consumer's interest
    - The lightest possible implementation is recommended
- **The Government's draft proposal was circulated for comments from 6 July to 24 August 2020**

# RED II: Guarantees of Origin for renewable energy sources

- **Mandatory extension of the Guarantees of Origin system to gas, hydrogen, heating and cooling in addition to electricity**
  - Guarantees of Origin must be issued by the Member State at the request of the producer
- **Renewable origin of electricity sales must be certified by cancelling Guarantees of Origin**
  - To be decided nationally for gas and hydrogen as well as heating and cooling
- **Requirements for Guarantees of Origin must comply with standard CEN-EN 16325**
  - The standard currently only applies to electricity; update of the standard is in progress
- **Member States must recognise Guarantees of Origin issued by other Member States**

# National implementation

- **Obligation to certify the sale and use of renewable energy with Guarantees of Origin (certification obligation)**
  - Applies to all forms of energy with certain exceptions
  - The obligation relates to situations where energy of specified origin is sold or where a company reports that it has used energy of specified origin.
- **Guarantees of Origin validity period 12 months**
- **Guarantees of Origin are also issued to producers that have received financial support**
  - The market value of the Guarantees of Origin is taken into account in the new support schemes
- **Guarantees of Origin also for non-renewable energy**
  - Electricity produced by nuclear power
  - Waste heat and waste cold
  - The certification obligation applies to these as well
- **Registrars**
  - Electricity: Fingrid Oyj
  - Gas and hydrogen: Gasgrid Finland Oy
  - Heating and cooling: Energy Authority
- **Energy Authority as the supervisory authority**
  - Monitors compliance with the Act and the provisions issued thereunder
- **New Act on Guarantees of Origin for Energy repealing the Act on Verification and Notification of Origin of Electricity (1129/2003)**

# Guarantees of Origin for electricity

- **Guarantees of Origin are issued for electricity produced from renewable energy sources and nuclear power**
  - The obligation relates to situations where energy of specified origin is sold or where a company reports that it has used energy of specified origin.
  - It is not mandatory to apply for Guarantees of Origin for all production.
  - The certification obligation applies to both renewable and nuclear-generated electricity
  - For nuclear power, certification obligation from the beginning of 2022
- **Exemption from certification obligation**
  - The electricity user produces electricity for own use from renewable energy sources using electricity production equipment with a nominal capacity of less than 1 MVA and reports in marketing that the electricity used is produced from renewable energy sources
  - The exemption is subject to the condition that no Guarantees of Origin have been sought for the electricity produced
- **Guarantees of Origin issued by EU and EEA countries for both renewable and nuclear-generated electricity are recognised**
  - Except if there are reasonable doubts as to the accuracy, reliability or authenticity of the Guarantees of Origin

# Residual mix

- Calculated only for electricity
- An energy unit produced from renewable energy sources and nuclear power is only taken into account once
- The Energy Authority publishes the residual mix each year by the end of June
- Operators must use the latest residual mix of electricity three months after its publication at the latest

# Disclosure of the origin of electricity

- **The information must be provided**
  - For electricity purchased by end user on product level
    - At least once a year in invoices
  - Share of each energy source in retailers total sales
    - On the electricity supplier's website or in another similar manner that is easily accessible to the end user of electricity, provided that the invoices or their appendices clearly indicate where the information is available

**Corrected on 19/02/2021**

- **Division of energy sources**
  - Renewable energy sources
  - Nuclear power
  - Fossil fuels
- **Electricity of known origin other than from renewable energy sources or nuclear power may be disclosed in the division either according to the actual production method or using the residual mix published by the Energy Authority**

# Further preparation

- **Tracking the update work of the standard**
- **Government proposal to Parliament in the spring of 2021**
- **The Act is expected to enter into force on 30 June 2021**

# Questions?

# Status report on the Guarantees of Origin standard (EN 16325)

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# Guarantees of Origin service

- Customer satisfaction survey
  - Overall grade 4.4 (max. 5)
  - NPS all respondents 51.1 (representatives 73.9 and other users 27.3)
- Deadlines
  - Cancellations for 2020 must be made by 31 March 2021
  - Issuances for 2020 production by 31 March 2021 (NB! Filling in fuel mixes)
- Development work
  - e.g. API interface

# Baseline for the revision of standard EN 16325

- Valid standard EN 16325+A1 Guarantees of Origin related to energy. Guarantees of Origin for Electricity
  - covers only Guarantees of Origin for electricity
- The Finnish organisation is METSTA (Mechanical Engineering and Metals Industry Standardization in Finland)
    - responsible for coordinating the national work in the field of mechanical engineering and metals industry, construction, building automation and energy management standardisation, both on the European and international level.
  - Contact person Tommi Carlson (tommi.carlson@metsta.fi)

*Renewable Energy Directive: Member States and designated competent bodies must ensure that the requirements they set comply with standard EN 16325.*

*CEN European Committee for Standardization*

*CENELEC European Committee for Electrotechnical Standardization*

# EN 16325 standard revision project

**European working group**

- Launched 2/2020
- The aim is to revise the standard and extend it to also cover renewable gas, hydrogen as well as heating and cooling in addition to electricity
- Working group CEN-CLC/JTC14 WG 5 ‘Revision of EN 16325’
  - JTC Joint Technical Committee 14
  - Working Group 5

**Finland’s national working group**

- Chair Kaija Niskala / Fingrid Oyj, Joni Vuorela / Fortum Power and Heat Oy
- Outi Vilén / Ministry of Economic Affairs and Employment
- Mervi Suni and Roland Magnusson / Energy Authority
- Anni Nuppunen and Cea Mittler / Gasgrid Finland Oy
- Kati Takala and Mirja Tiitinen / Finnish Energy

# Standard process

### Working group stage – in progress

- Experts have the best chance of influencing the content of the future standard

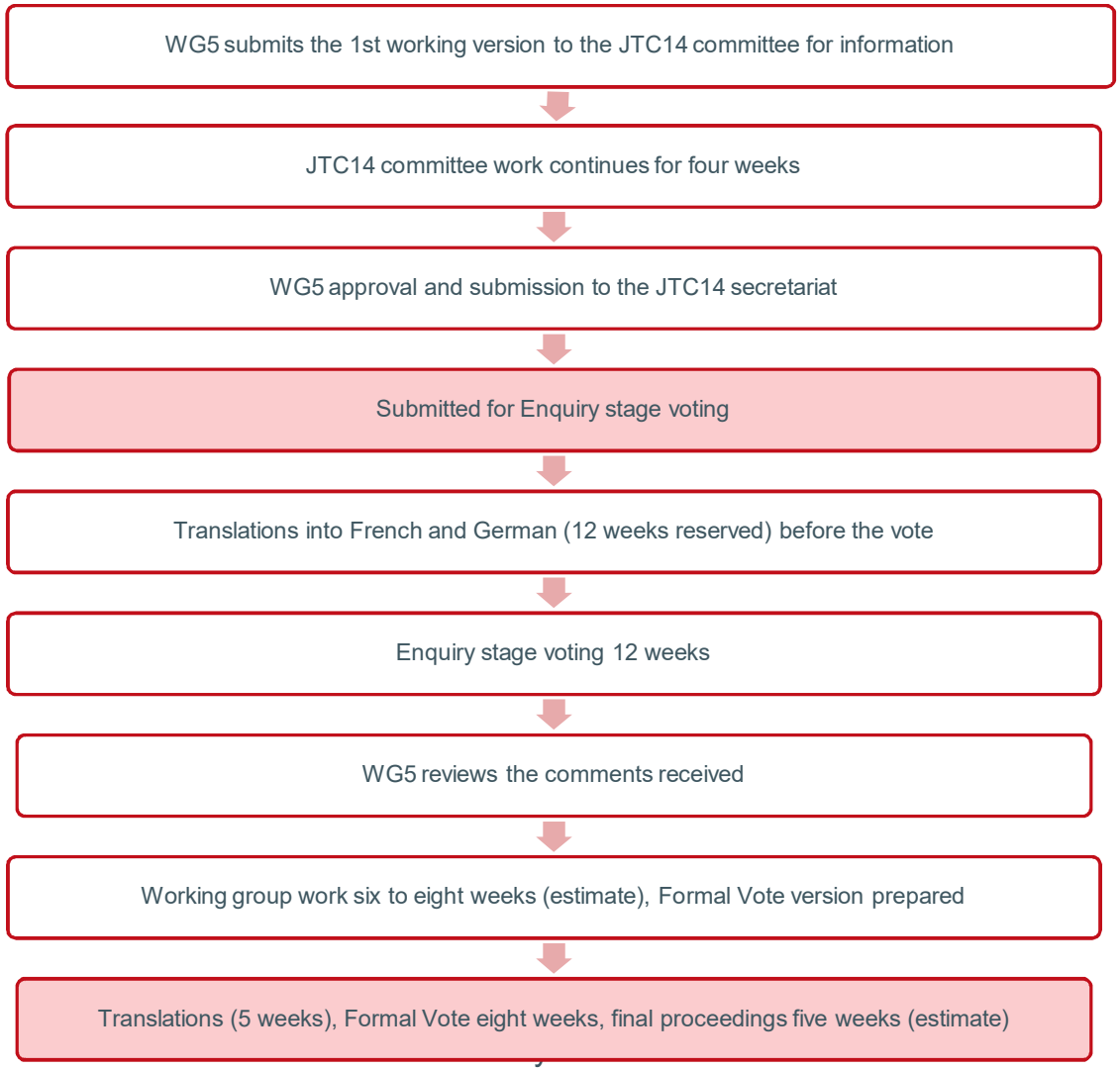
### Enquiry stage

- The Enquiry is the most important stage in terms of the content of the future standard.
- Possible to nationally submit both technical and editorial comments extensively.
- At the same time, votes are also cast on the acceptability of the proposal, whether it will be put to Formal Vote.
- A Member State may apply for a national exemption if national legislation differs from the standard

### Formal Vote

- The Formal Vote only involves voting in favour or against the adoption of the draft standard.
- Votes are allocated in proportion to the populations of the Member States participating in CEN

**Estimate of the duration of the revision process of standard EN 16325 at CEN/CENELEC once WG5 has completed the text proposal => approx. 60…70 weeks**



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# EN 16325 draft standard 11/2020

- 0 Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Generic Rules for guarantees of origin (for all energy carriers
- 5 Rules specific to individual energy carriers
  - 5.1 Electricity
  - 5.2 Energy Gas
  - 5.3 Hydrogen
  - 5.4 Heating and cooling

**Annex A (normative)**
- Energy Source Type codes

**Annex B (normative)**
- Technology codes

**Annex C (normative)**
- Coding structures

**Annex D (normative)**
- Cogeneration GO codes — Uses of Heat

**Annex E (informative)**
- Methodology for quantifying the Carbon Footprint of the Output for which a GO is being Issued

**Annex F**
- The parameter value for the Attribute on the GO that indicates the dissemination level of the produced physical energy for which the GO is issued

**Project teams - työryhmät**

**Generic**
- Joni Vuorela / Fortum

**Electricity**
- Kaija Niskala / Fingrid

**Gas+hydrogen**
- Anni Nuppunen ja Cea Mittler / Gasgrid Finland

**Heating and cooling**
- Outi Vilen / TEM
- Joni Vuorela / Fortum
- Mirja Tiitinen /Energiateollisuus

# Challenges in the work of the WG5 working group

- The revision of the standard is based on the Fastgo project presentation, not the current standard
  - Very detailed, goes too far in terms of RED II according to the interpretation of the Finnish working group
- There is a lot to sort out, especially with regard to new forms of energy
- Different forms of energy have different expectations as to the content of Guarantees of Origin
- Processing of the conversion between forms of energy
- The biggest problem is the treatment of hydrogen in the natural gas network
- The Finnish national working group considers it important that all production receives Guarantees of Origin and that national legislation ensures the reliability of the entire arrangement.

# Progress of the work of the WG5 working group

- 8 meetings held during 2020
- Challenges in the work, conflicting interests => JTC14 committee consulted, response by 12 February
    - *EN 16325 [Shall include] or [Shall not include] specific disclosure principles and GO cancellation rules for other energy carriers? (Then electricity)*
- WG5 Project teams – working groups continue their work
- The next WG5 working group meeting is not yet known
- The revised standard is unlikely to be completed by the entry into force of the RED II directive on 30 June 2021?

# Questions?

# Guarantees of Origin


TAO Green Desk

# Guarantees of Origin for electricity.

## Based on RES E Directive 2009/28/EC and strengthened on RED II winter package 2019

### What is GoO?

- Unique **tracking certificate** for origin of electricity
- **Book and claim** system present in EU
- **Tradable and transferrable** certificate between counterparties and countries
- **Detached** attribute from physical electricity flow

### Why to use GoO

- To **brand** your electricity products (supplier)
- Create (**additional claims)** on your electricity sales/consumption* (anyone)
- Make credible and **verifiable** claims on your **product disclosure** (everybody)
- To avoid double counting of electricity attributes

### Where to use GoO

- To inform your customer and stakeholders on the **electricity supply disclosure**
- CDP **sustainability reporting**
- Scope 2 **emissions reporting**
- Other sources for **sustainability tracking** (RE100 etc.)

### GO includes following information

- Energy Source
- Production time
- Name of the generation unit
- Location
- Commissioning date
- Capacity of station
- Potential financial support
- Date and country of issuance

- 1 MWh
- 12 months lifetime
- Unique

- GHG info (?)
- Dissementation level (?)

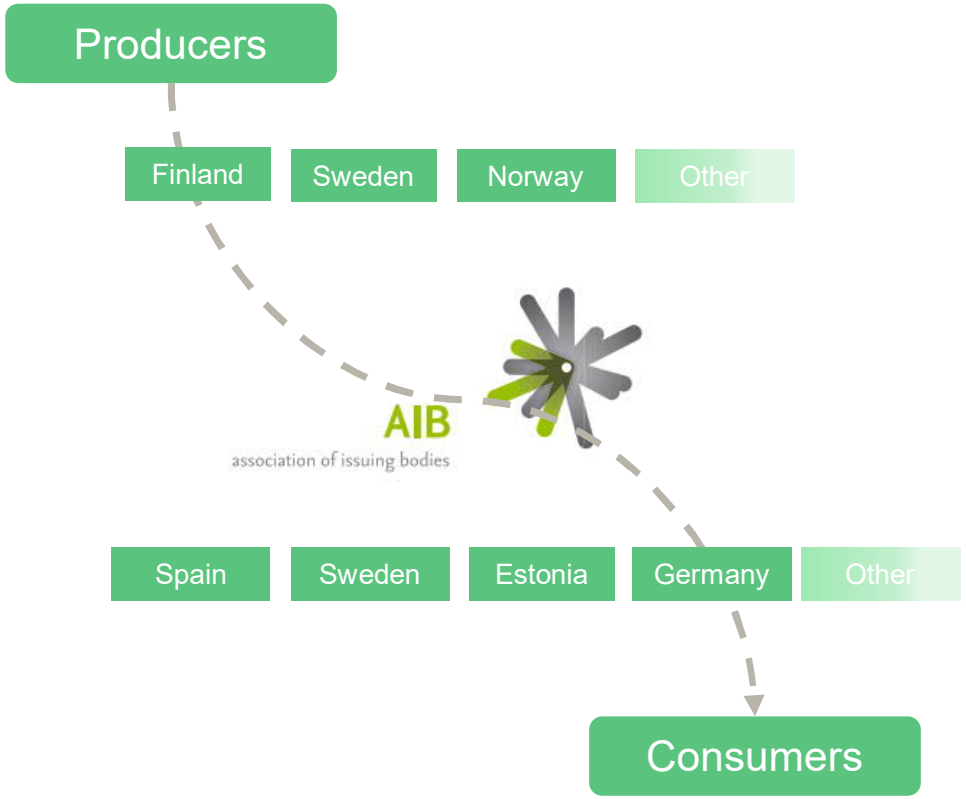


fortum

# European wide GoO market from System perspective. AIB is connection hub between Member States (EECS standard)

Basic building blocks for EU wide market

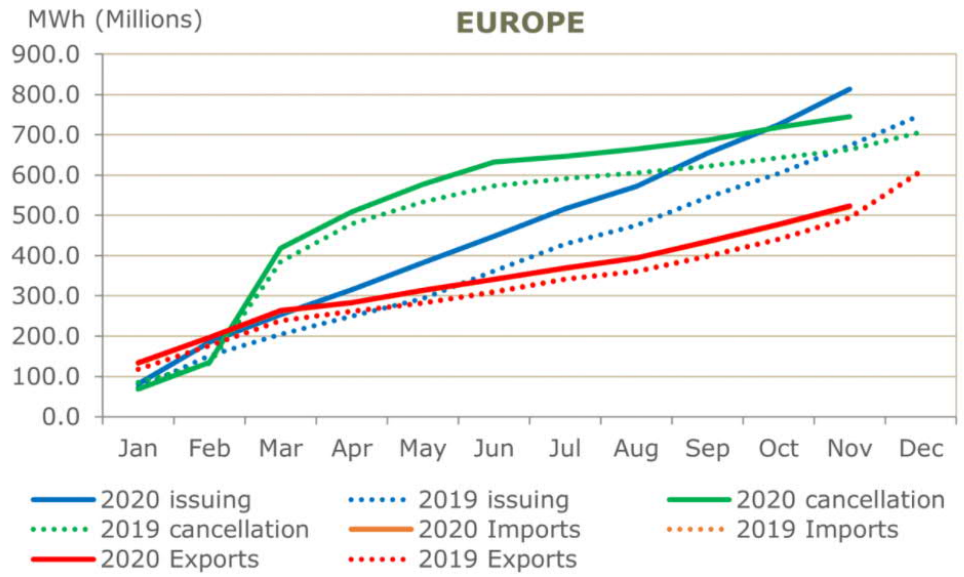
- GoOs are created by national issuing bodies in each member state
- AIB Hub connects issuing bodies on EU level
- **Member states needs to recognise other Member states GoOs (Import- Export)**
- Supply from registered renewable assets in system (voluntary)
- Demand from market participants who need and want to prove their electricity origin
- Electricity suppliers are obligated to disclose electricty origin to consumers
- Voluntary demand from various sources



# 2020 AIB statistics. Impressive growth for past decade, but still covers only fifth of electricity markets in EU…

Volumetric growth excpected to continue with status quo

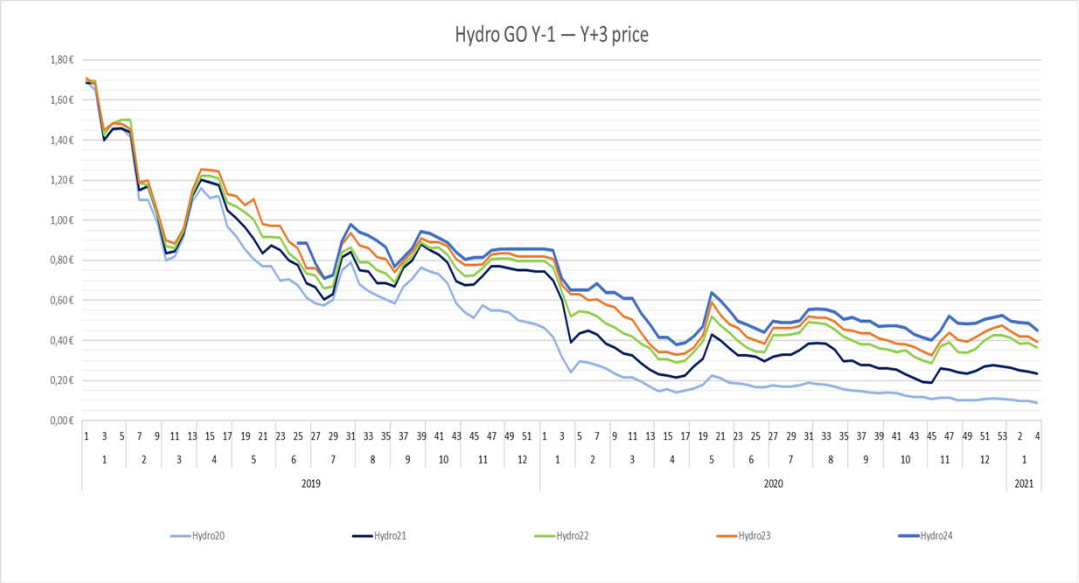
- Increased amount of AIB countries have pushed the overall figures
  - Portugal, Serbia, Greece…
- Increase in certified (renewables) consumption is reality but requires harmonization between MS.
- System is still voluntary, no quotas for RES consumption EU wide
- 2020 RES generation was reported to be higher than fossils.
  - However not from certification point of view
- Hydro share has diminished in overall volumes from ~85 % to ~50
- Additional growth mainly from Wind



# European wide GoO market is OTC based and no single marketplace exists. (Market perspective)

No single price or market for GoO exists

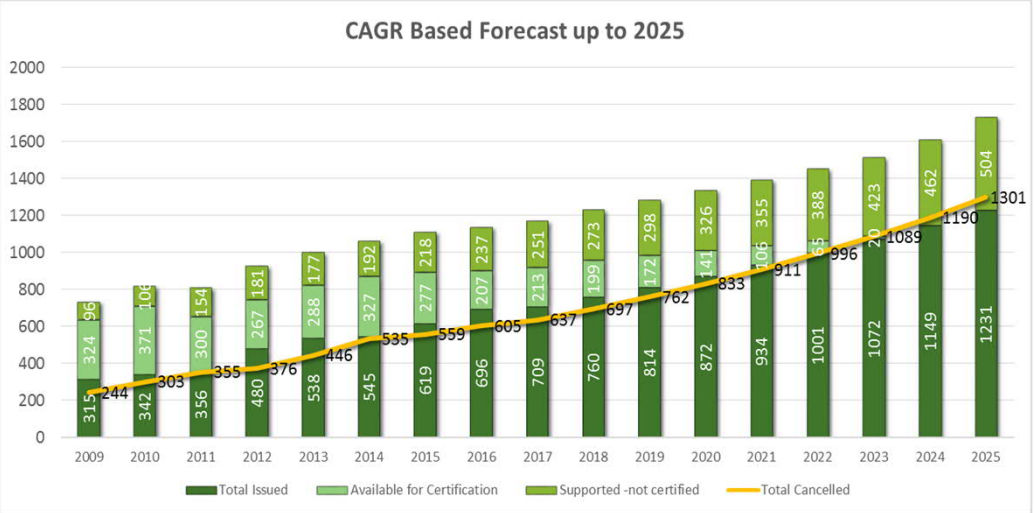
- OTC traded commodity
- Fortum has some few hundred OTC counterparties
- Market participants are not only power utilities
- Participants facilitate market inquiries both ways
- Price is settled via bid-ask -spread between market participants
- Stricter product criteria affect pricing of GoO
- Fundamental expectations on total demand vs total supply on bulk hydro GoO pricing
- Traded volumes reflect the total and expected renewable consumption system-wide
- Special products and regions add complexity to market set-up



# Future aspects for Certification. GoO market is still developing but has gained political momentum and credibility

More complex and more volumes

- Basic GoO (electricity) market is growing further 15% CAGR
- Two possible major trends
  - Market harmonization and volumetric growth.
  - Localization & structured products for added value.
- RED II and possible review in short term
  - Heat, Cooling, Gas, Hydrogen
- EU-wide green label mentioned in directive
- Evolution of disclosure legislation for electricity origin in EU. This is needed for harmonization
- Possible implemented RES quotas can turn into major market drivers
- Full disclosure requires tracking of all origins, not only RES




*Source RECS International

# Questions?

energiavirasto

# Guidance for guarantee cancellations

Guarantees of Origin for electricity webinar 16 February 2021

Mervi Suni

Reilua energiaa

# Energy Authority instructions

- Energy Authority regulation on Guarantees of Origin for electricity (26 June 2020)
- Instructions for certifying and disclosing the origin of electricity (45/402/2014)
- Clarification for the Energy Authority instructions for certifying and disclosing the origin of electricity (29 March 2016)
  - The Energy Authority recommends a procedure in which the electricity supplier cancels the Guarantees of Origin for electricity it has sold as renewable in its own name (the beneficiary of the cancellation is the electricity supplier)
  - When cancelling, it is possible to enter information on which customer's consumption the cancellation of the Guarantees of Origin accounts for in the additional information field (Cancellation Statement).
- Recognition of Guarantees of Origin issued by EU and EEA countries in Finland (1926/002/2014)
- Issuing Guarantees of Origin for electricity produced from waste (2200/002/2016)

**Example 1:**

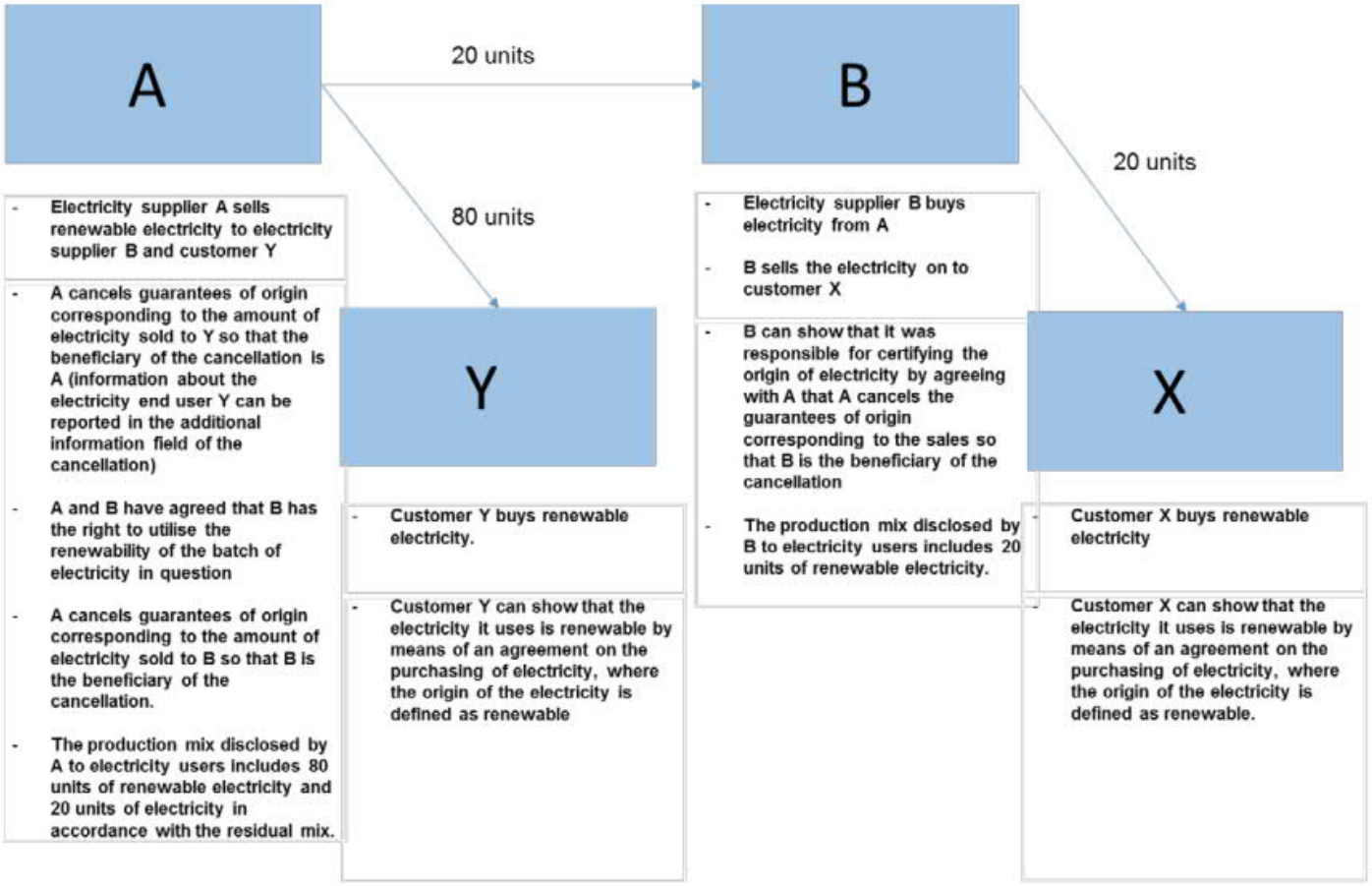
Electricity supplier A sells to its customer X (electricity end user) electricity defined as having been produced from renewable energy sources.


| | |
|---|---|
| - Electricity supplier A sells renewable electricity to customer B | - Customer X buys renewable electricity |
| - Electricity supplier A cancels an amount of guarantees of origin corresponding to the sales so that the beneficiary of the cancellation is electricity supplier A (information about the electricity end user X can be reported in the additional information field of the cancellation) | - Customer X can verify that the electricity it uses is renewable by means of an agreement on the purchasing of electricity, where the origin of the electricity is defined as renewable. |

Clarification for the Energy Authority instructions for certifying and disclosing the origin of electricity (29 March 2016)

**Example 2:**

Electricity supplier A sells electricity that is renewable in origin to both electricity supplier B and its own customer Y (electricity end user). A sells a total of 100 units of electricity. A sells 80 units of renewable electricity to Y and 20 units of electricity to B. Electricity supplier B sells on the electricity as renewable in origin to its customer X (electricity end user).




Clarification for the Energy Authority instructions for certifying and disclosing the origin of electricity (29 March 2016)

# Recent instructions or policies, e.g.

- Verifying that the guarantees for the specific wind farm desired by the customer have been cancelled is carried out by entering the farm in question in the additional information of the cancellation statement.
- Trade in Guarantees of Origin for electricity is not reportable wholesale electricity trade under the REMIT regulation.
  - However, an agreement could fall within the scope of REMIT reporting, for example, if it is fixed-price including Guarantees of Origin in addition to energy and is classified as wholesale market products and if it is resold by the company's customer.
- In the case of (Virtual) PPA, it has been instructed that only the share consumed in Finland out of total European consumption can be cancelled in Finland.

Reminder: The certification obligation referred to in Section 11 of the Act concerning the origin of electricity reported to be produced from renewable energy sources must be fulfilled by cancelling the Guarantees of Origin allocated for the previous calendar year by 31 March of the present year in the register maintained by the registrar.

Thank you!

Questions and feedback are welcome at go@energiavirasto.fi

Senior Adviser Mervi Suni, mervi.suni@energiavirasto.fi tel. +358 295 050 122

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# Screen.io questionnaire

Using web browser on your computer or phone go to

https://m33.screen.io/fingrid

Passcode: GO

# Thank you for participating!

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