



1.10.2026

Unofficial English Translation

Guarantees of Origin Afternoon

Scandic Park, Helsinki / Teams

FINGRID
Finextra

Content

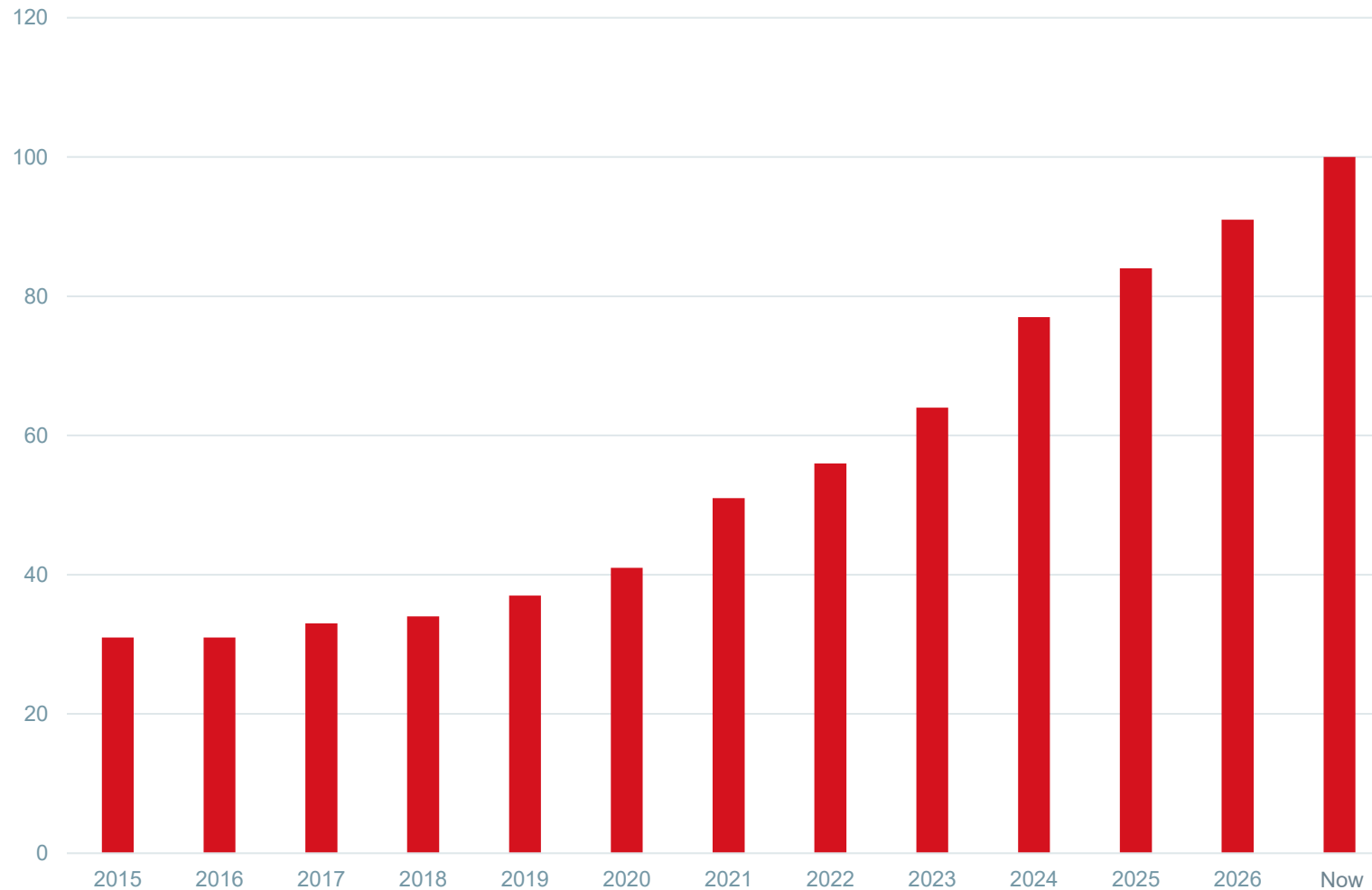
- 13:10 - 14:00 Current topics in Guarantees of Origin
- 14:15 - 14:55 Guarantees of Origin legislation proposal - Possible changes concerning Electricity
 - Status Update / Ministry of Economic Affairs and Employment of Finland, Outi Vilén
 - Status Update / Energy Authority, Mervi Suni
 - Changes to the Standard Terms and Conditions for electricity, Finextra, Kaija Niskala
- 14:55 - 15:15 Customer presentation, Fortum Power and Heat Oy, Joni Vuorela
- 15:15 - 15:30 Start of the EN 16325 standard revision process

Guarantees of Origin: Current Topics

Finextra



Account holders and users



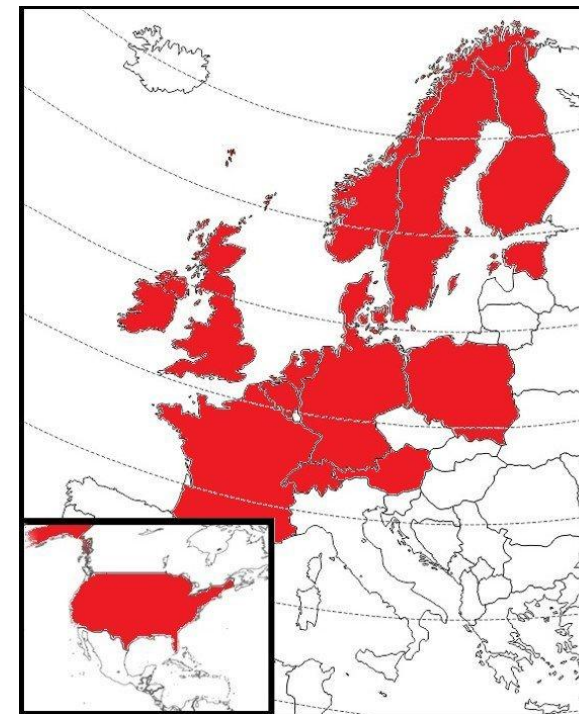
Account holders 100 pcs

User accounts 493 pcs

- representatives 124
- users 361
- authorities 8

Customers 9/2026 (100 pcs)

	3Degrees Group Inc		Greenely Oy		Power-Deriva
	ABO Energy O&M Suomi Oy		Haapajärven Välikankaan Tuulivoima Oy		PowerLinks P.S.A.
	ACT Commodities B.V		Halsuan Tuulivoima Oy		Primeclimat Oy
	AFS Energy BV.		Hansel Oy		Renewable Power Capital Finland Oy
	Alight Ukko Oy		Helen Oy		Respect Energy Environmental Commodities Sp. z o.o
	Allwinds AB		Holt Global Group International AG		Respect Energy S.A.
	Alpiq AG		Ilmatar Energy Oy		Sandbacka Vindkraft Oy
	Arise AB		Ingka Investments Sustainable Resources B.V.		SAS NW RE
	Axpo Finland Oy		Kinect Energy Green Services AS		SA Société Européenne de Gestion de l'Energie
	Becour AS		Kuopion Energia Oy		Saunamaa Wind Farm Oy
	Borealis Polymers Oy		Kympivoima Oy		Savon Voima Oyj
	Centrica Energy Trading A/S		Lappeerannan Energia Oy		Seinäjoen Energia Oy
	CFP Commodities Limited		LSL Husk Oy		Slice Power Oy
	Co22o Oy		Lumivaaran Tuulivoima Oy		Soldera OÜ
	CPC Lakarin Aurinkovoima Oy		MA Corporate Oy		SSAB Europe Oy
	ECOHZ AS		Marex Trading International Limited		Statkraft Energi AS
	Ecolab Inc		Mastotuuli Oy		STX Commodities B.V
	Elkraft Sverige AB		Mind Energy Oy		Suodenniemen Tuulivoima Oy
	Elmera Energy AS		Mörknässkogens Wind Ab		Switch Nordic Green AB Filial Finland
	Energiequelle Oy		Neoen Renewables Finland Oy		Taaleri Energia Operations Oy
	Engelhart CTP Renewables GmbH		Neste Oyj		Tolpanvaara Wind Farm Oy
	Entelios Oy		Norra Pörtom Vindpark Ab		Torvenkylän Tuulivoima Oy
	EPV Energia Oy		Nvalue AG		Tuike Finland Oy
	Ethora Renewables AB		Oomi Oy		Tuulipuisto Lakiakangas 1 Oy
	FP Lux Wind GmbH & Co. Primus KG		OTC Flow BV		Tuulivoimapuisto Soidinmäki Oy
	Fortum Power and Heat Oy		Oulun Energia		Umicore Finland Oy
	Gasela GmbH		Outokumpu Oyj		UPM Energy Oy
	Gasum Oyj		Oy Alholmens Kraft Ab		UPM-Kymmene Oyj
	Gasum Portfolio Services Oy		Piiparinmäki Oy		

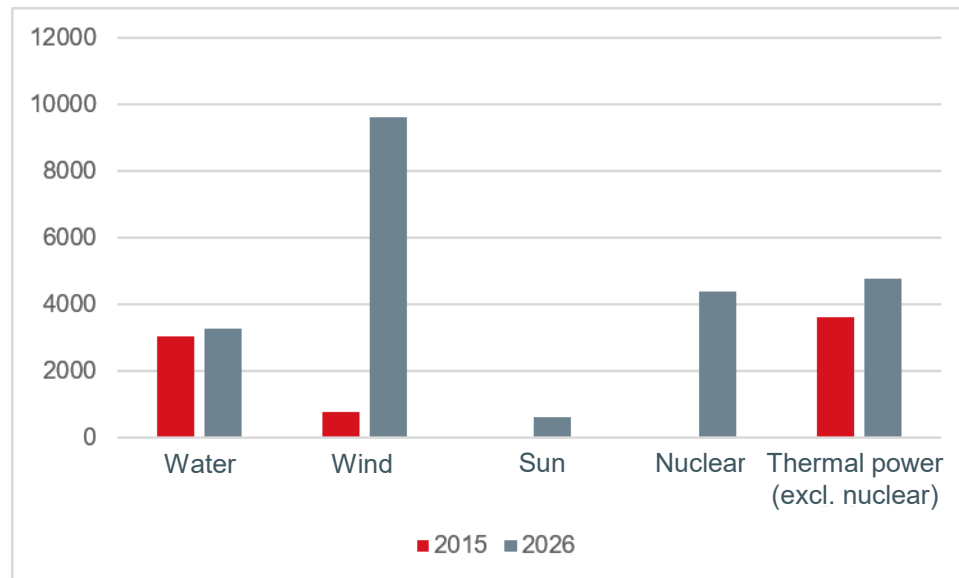


	Vaasan Sähkö Oy
	Vantaan Energia Oy
	Vattenfall AB
	Vind AX Ab
	Vindin Svalskulla Ab/Oy
	Volue Energy Market Services AS Filial Finland
	Vöyrinkangas Wind Farm Oy
	Wind Farm Lappfjärd Oy
	wpd Kannusen Tuulipuisto Oy
	Wpd Karhunnevakankaan Tuulipuisto Oy
	Wpd Nuolivaaran Tuulipuisto Oy
	wpd Oulaisten Tuulipuisto Oy
	Å Energi Vannkraft AS
	Ålands Elandslag

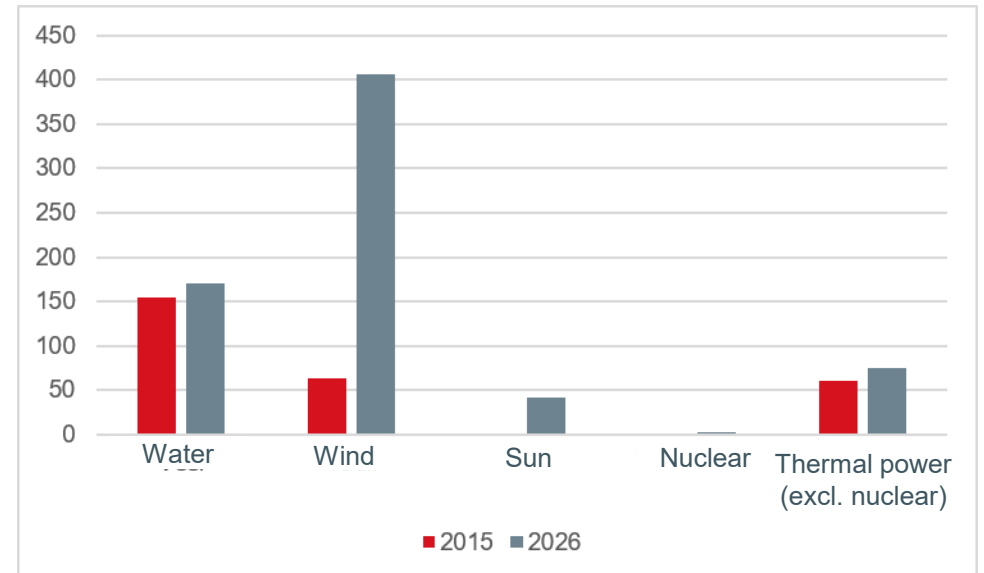
Production Devices in the Electricity Guarantees of Origin Registry

- ~95% of Finland's renewable electricity production is registered in Finextra's Guarantees of Origin Registry (2025)
- ~700 production devices managed by 54 account holders (owned by 248 companies)

MW

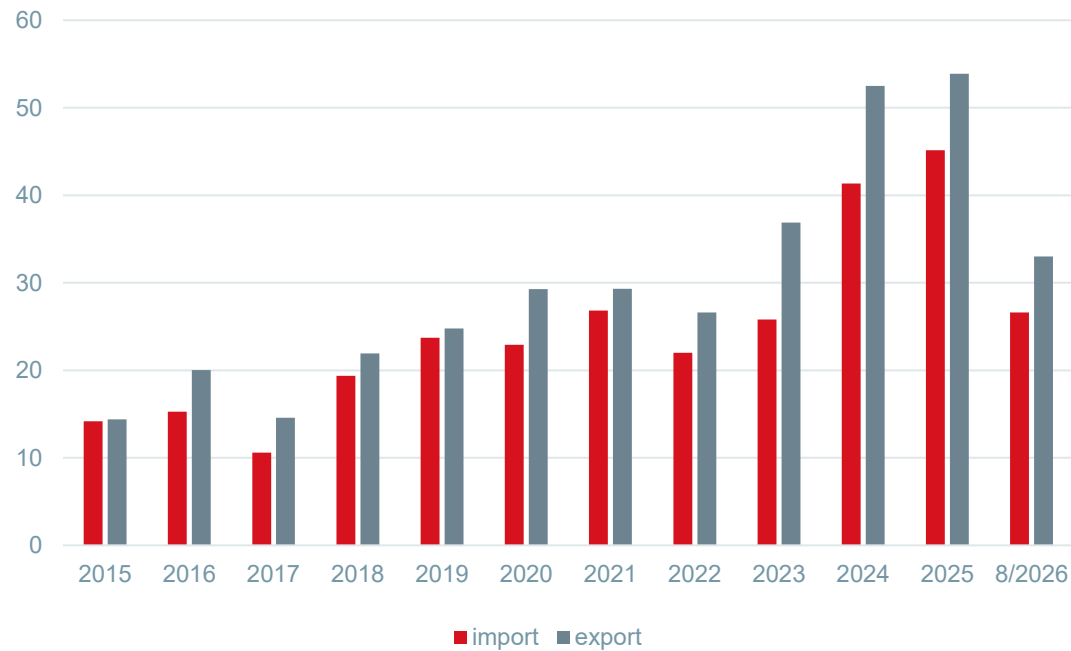


kpl

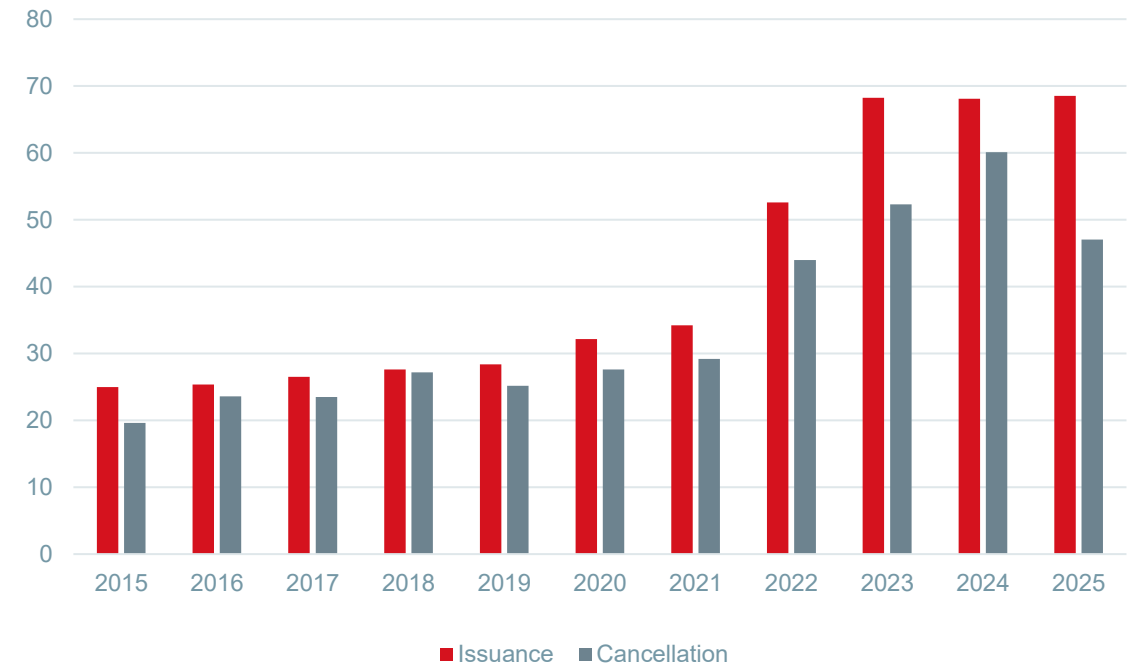


Transactions

Import and export TWh, (Transaction time)



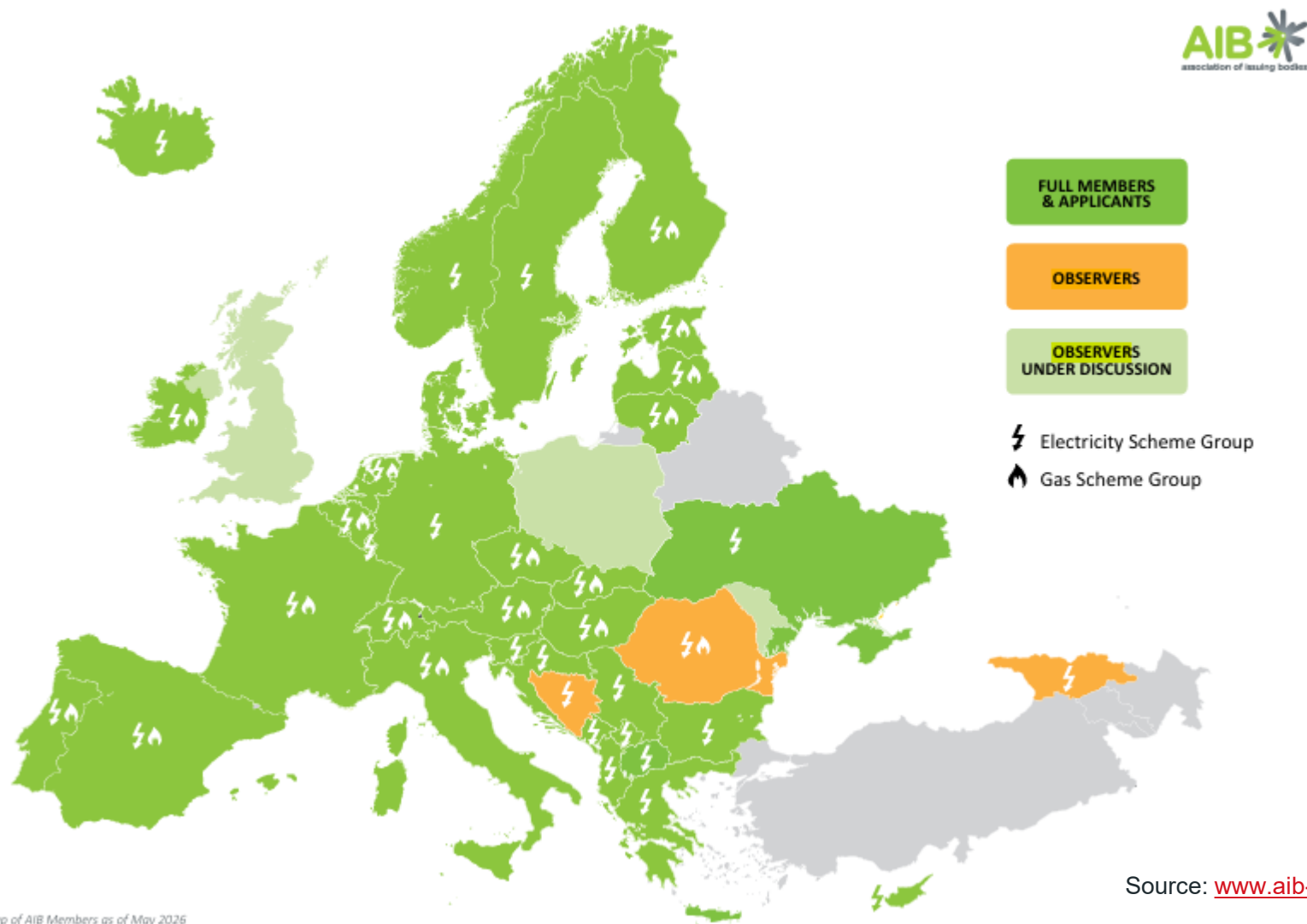
Issuances and cancellations TWh, (production time 2015-2025)



AIB

(Association of Issuing Bodies)

Members and observers

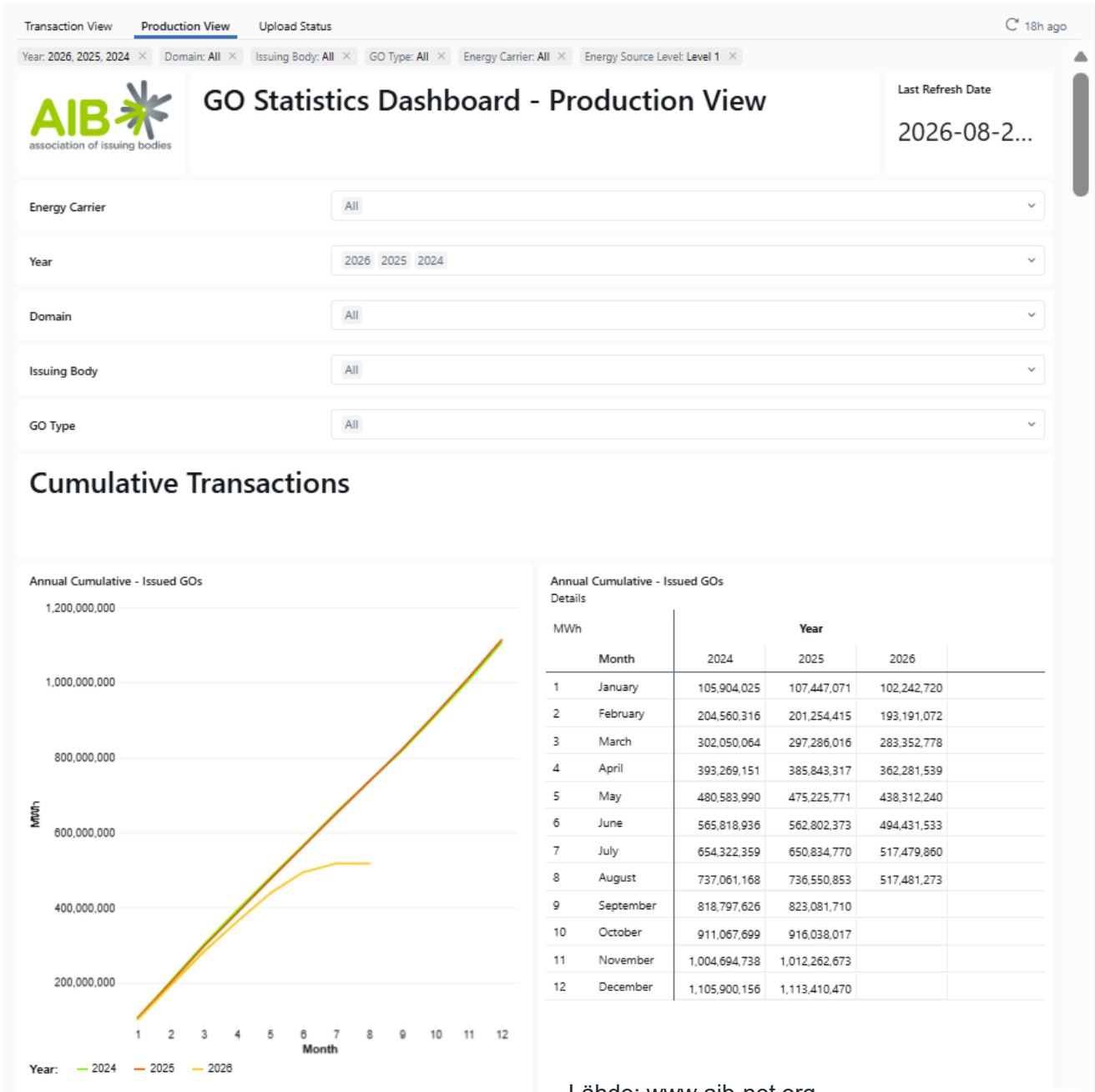


Source: www.aib-net.org, AIB 2025 annual report

Renewed statistics

EECS GO Statistics | AIB

EECS GO Statistics



New – Transfer flows

Hub Transfer Flows | AIB

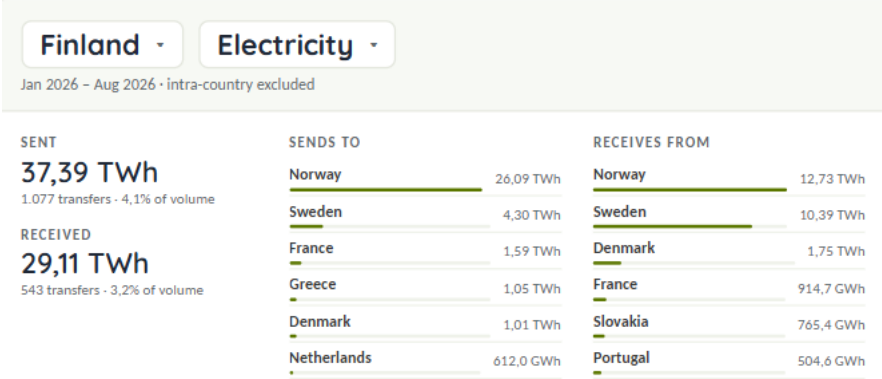
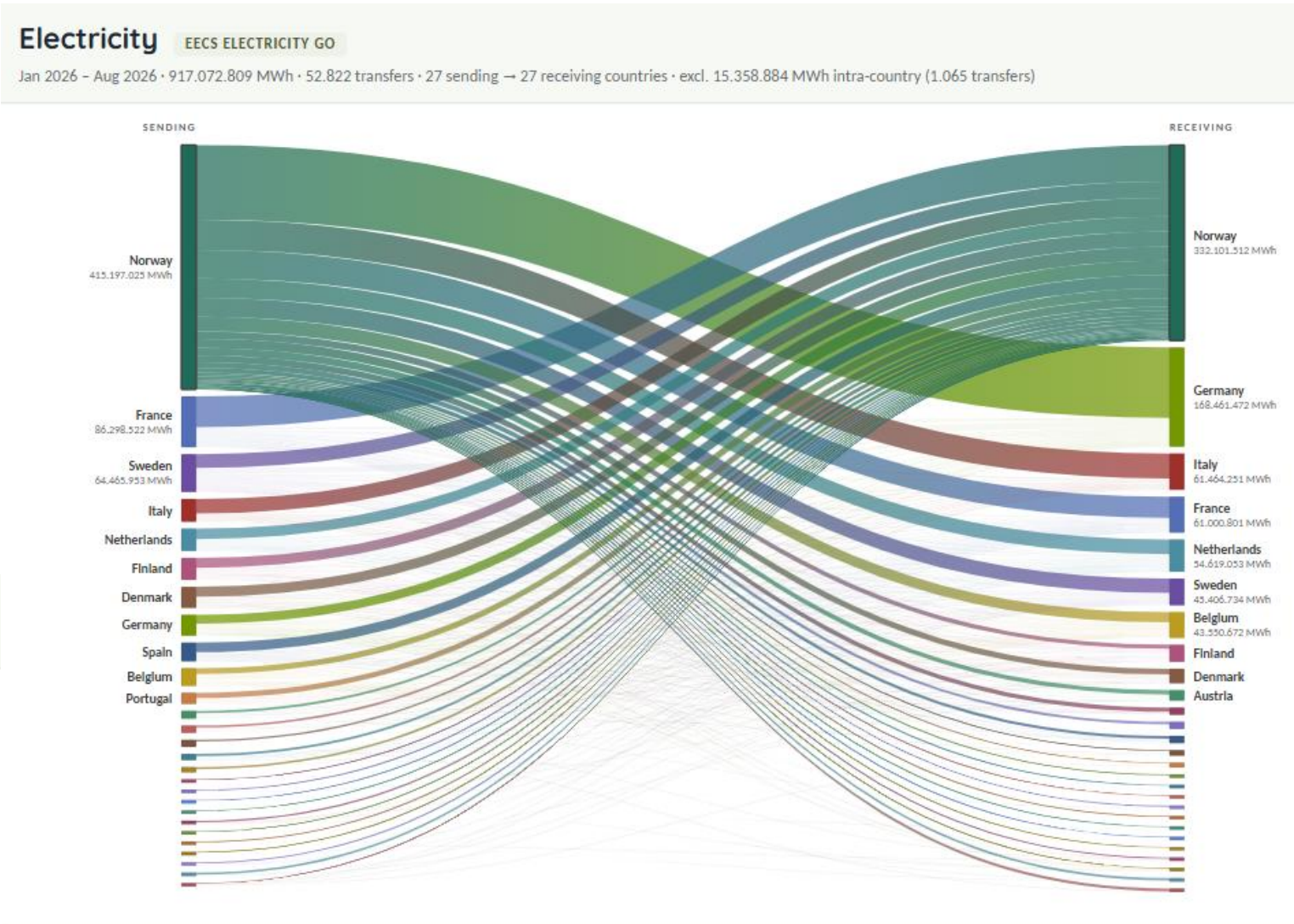
Data from 1 January 2024 onwards

Transfer volumes are growing rapidly

1 113 TWh 2024

1 198 TWh 2025

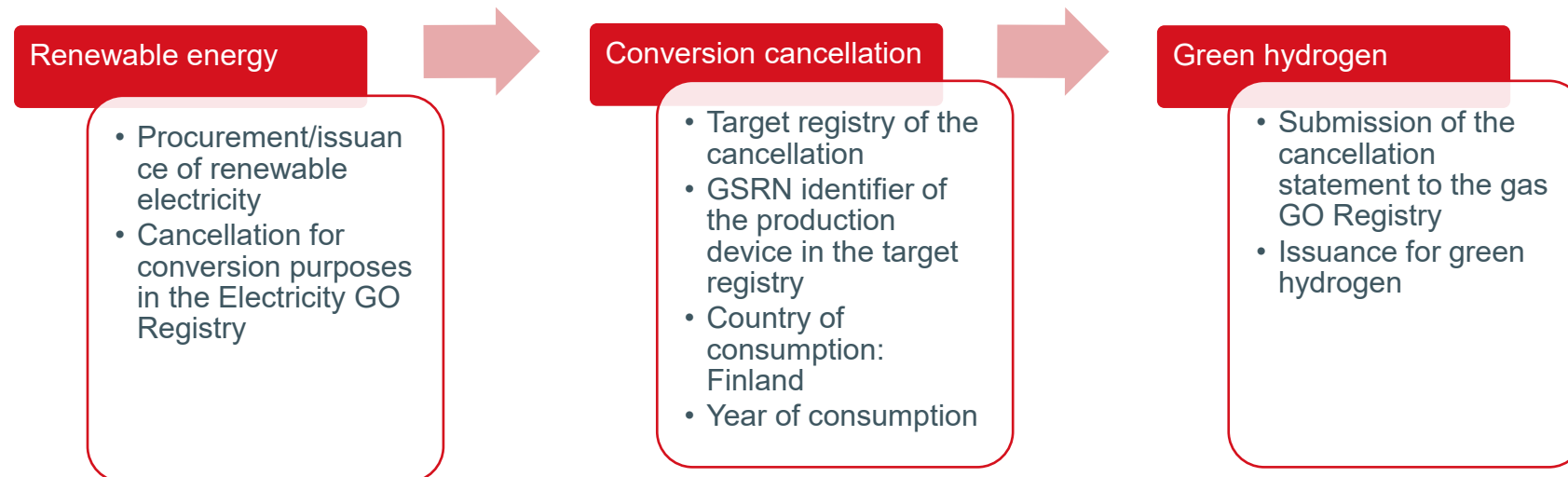
917 TWh 01-08/2026



Conversions

Conversion

- Conversion of energy from one energy carrier into another
 - Issuance of Guarantees of Origin (GO) for the resulting energy carrier
- Conversion Guidelines (Energy Authority) [Konversio-ohje+2.3.2022.pdf](#) (Finnish only)
- Case: Green Hydrogen



Conversion: EECS/National Guarantees



Metering and Powers of Attorney

Indicating Meters in Diagrams

- Correctly indicating meters in diagrams streamlines and speeds up the processing procedure
 - According to the current instructions, meters must be named in the verification document and indicated accordingly in the diagram so that the formula used to calculate net production can be interpreted unambiguously
- **Smooth and efficient verification is important**

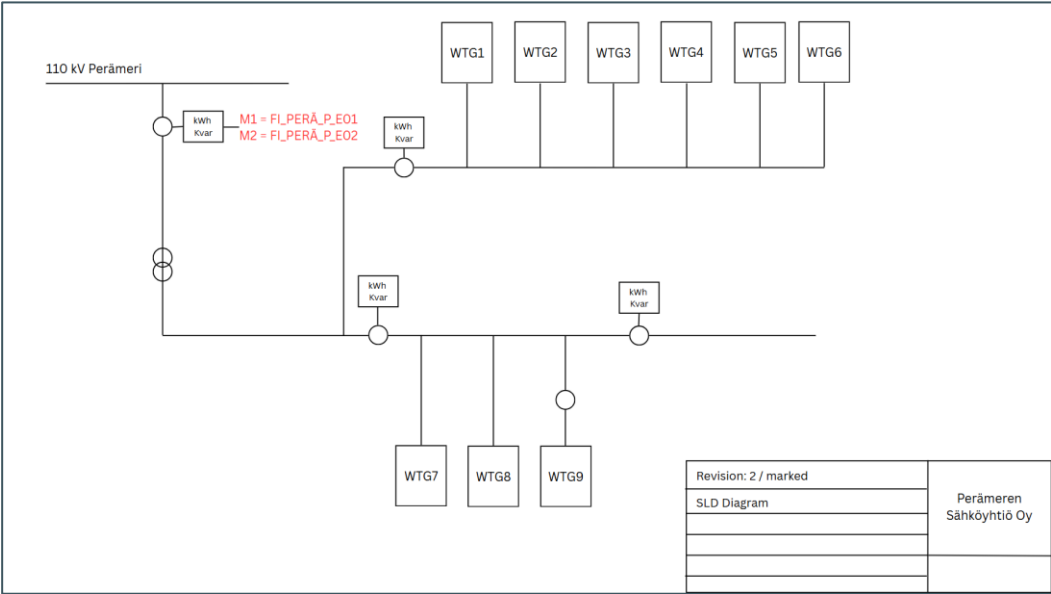
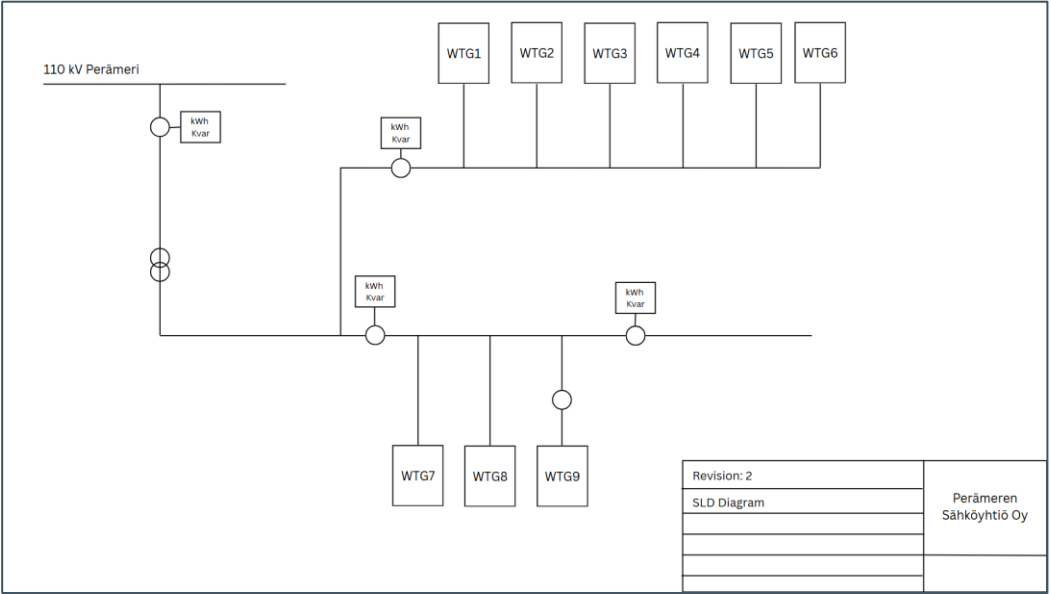
Voimalaitoksen sähkö- ja höyrypääkaaviot, joista ilmenee voimalaitoksen liityntä sähköverkkoon sekä tapa, jolla voimalaitoksen tuottaman energian mittaus on järjestetty	
• Luettelo liitteenä olevien voimalaitoksen kaavioista (minimissään sähkö- tai höyrypääkaaviot) ! Merkitse kaavioihin alla kuvatut mittauspaikat	• Sähköpääkaavio 1
Verkonhaltija täyttää:	
Verkonhaltijan yhteystiedot:	Perämeren Sähkøyhtiö Oy
Tietojen varmentaminen voimassa (alkupvm)	1.5.2026
Voimalaitoksen tuottaman energian mittaustapaa koskevat tiedot siten, että niistä ilmenee mittauspaikat, mittaustietojen laskentatavat voimalaitoksen tuottaman sähkön omakäyttö mukaan lukien, mittaustietojen luotettavuuden varmistamistapa sekä mittaustietojen ilmoittamistapa	
• Mittauspaikat ! Luettelo ja nimeä nettotuotantomittauksessa käytettävät mittarit	M1=FI_PERÄ_P_E01_S M2=FI_PERÄ_P_E01_U
• Mittaustietojen laskentatavat ! Nettotuotannon laskentakaava hyödyntäen em. mittauksia	Nettotuotanto = M1-M2

Example

Verkonhaltija täyttää:

Verkonhaltijan yhteystiedot:	Perämeren Sähköyhtiö Oy
Tietojen varmentaminen voimassa (alkupvm)	1.5.2026
Voimalaitoksen tuottaman energian mittaustapaa koskevat tiedot siten, että niistä ilmenee mittauspaikat, mittaustietojen laskentatavat voimalaitoksen tuottaman sähkön omakäyttö mukaan lukien, mittaustietojen luotettavuuden varmistamistapa sekä mittaustietojen ilmoittamistapa	
- Mittauspaikat ! Luetteloi ja nimeä nettotuotantomittauksessa käytettävät mittarit	M1 - FI_PERÄ_P_E01_S M2 - FI_PERÄ_P_E01_U
- Mittaustietojen laskentatavat ! Nettotuotannon laskentakaava hyödyntäen em. mittauksia	Nettoenergia = M1-M2

Finextra Oy



Smooth Processing of Powers of Attorney

- Power of attorney must include the company details of the power plant owner and the account holder
- For an already registered power plant, it is advisable to verify the GSRN number in the registry
- If the previous power of attorney for the power plant has a fixed term, the expiry date of the previous power of attorney should be confirmed with the power plant owner. This ensures that the new power of attorney takes effect immediately afterwards and that there is no interruption in issuance

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POWER OF ATTORNEY

In relation to the Finnish electricity Guarantees of Origin and electricity EECS Certificates in Domain Finland.

We **Tuulipuiston Omistaja Oy**
NAME OF THE OWNER OF THE PRODUCTION DEVICE
Tuulinen tie 1, 93430, Simo
FI000000
ADDRESS AND VAT NUMBER OF THE OWNER

hereby give

Tilinhaltija Oy
NAME OF THE EMPOWERED ORGANIZATION
Tilinhaltijan tie 1, 00100 Helsinki
FI100000
ADDRESS AND VAT NUMBER OF THE EMPOWERED ORGANIZATION

the Power of Attorney to

- Act on our behalf as the registrant of
- Perform any subsequent work and activity needed for registration of
- Request the issuance of Finnish Guarantees of Origin (electricity) and EECS certificates for
- Deliver production declarations for
- Receive issued Finnish Guarantees of Origin (electricity) and EECS certificates on our behalf for, and
- Be the sole point of contact for Finextra regarding

The Production Device **Tuulinen Tuulipuisto**
Tuuleekotie 2, 03430 Simo
GSRN 00000000000000000000
NAME, ADDRESS, AND GO REGISTRY GSRN (IF AVAILABLE) OF THE PRODUCTION DEVICE

This Power of Attorney is valid From **04.09.2026** -
Until ☐ **further notice**

This Power of Attorney authorizes Finextra to issue Guarantees of Origin for production periods that align with the validity of this document.

Place : **Simo** Date : **04.09.2026**

SIGNATURE
Name: 
Position: **CEO**
Company: **Tuulipuiston Omistaja Oy**

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Processing Electricity Guarantees of Origin for Hybrid Power Plants

Background

- In this presentation, a hybrid power plant means an entity comprising electricity production units, electricity storage facilities and/or electricity consumption sites connected to the transmission or distribution network
- From the perspective of GO administration, the treatment of electricity storage facilities at hybrid power plants is currently a new and partly challenging and complex issue
- All the above-mentioned sites must have separate energy metering
- GOs for renewable electricity are not issued in situations where mixed-source electricity charged from the grid into an electricity storage facility is subsequently fed back into the grid
- Operating model presented below is based on the registry operator's current interpretation of the Energy Guarantees of Origin standard and of electricity delivered to the market
- Energy Authority is responsible for interpretation of the legislation

SFS-EN 16325:2025 Guarantees of Origin for Energy

- In Finland, GOs are issued only for energy produced by a production device
 - As an optional arrangement, the standard allows storage facilities to be included in the GO system through cancellation before storage and re-issuance after storage
- For production devices, it is mandatory to indicate whether the GO were issued after an electricity storage facility. → In Finland, the answer for electricity is “no”
- Whenever a power plant is registered, the registry operator must be informed whether an electricity storage facility is located within the power plant site

Definition 3.41: Net energy production

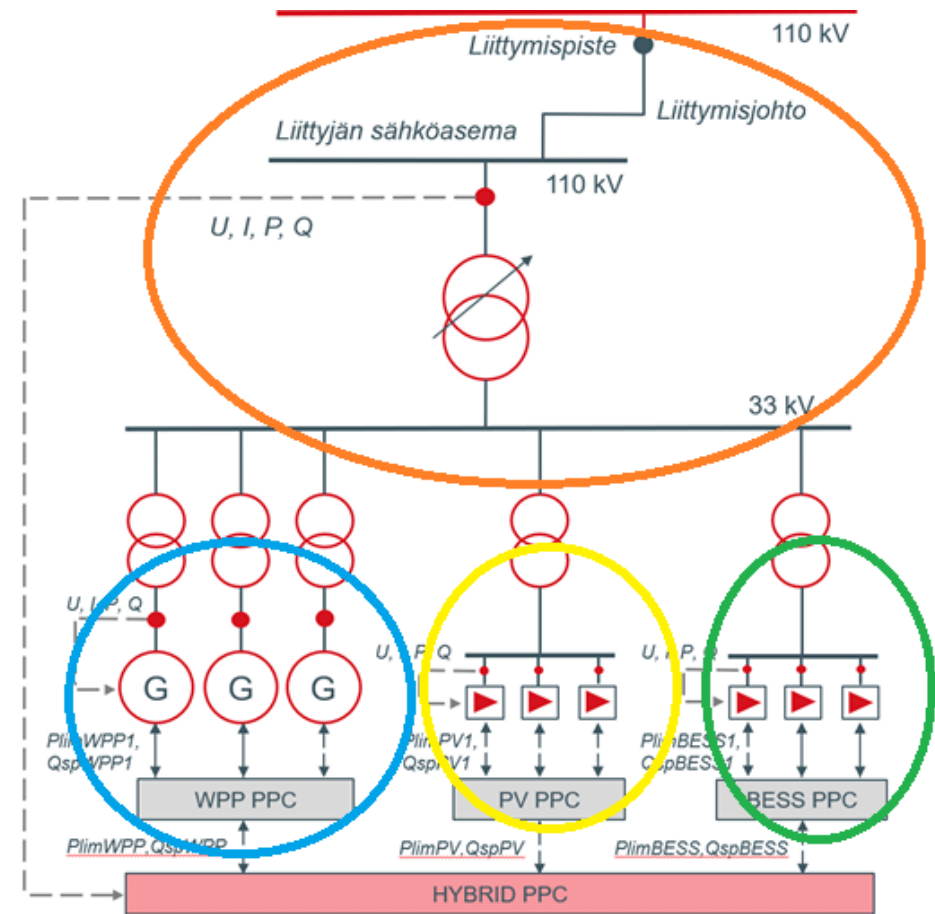
- “gross energy production as evidenced by measured values collected and determined by an authorised measurement body with reference to its import meters and export meters and minus the demand of any production auxiliaries and minus losses and energy consumption that occur before the resulting energy becomes available for trade.”
- SFS Store <https://store.sfs.fi/fi/>

Electricity Storage in Imbalance Settlement

- GOs are issued for electricity made available for trade, meaning the quantity of electricity reported for commercial imbalance settlement
- Terms and conditions for the treatment of energy storage facilities in imbalance settlement
 - Effective from 1 November 2026: Fingrid Oyj's General Terms for Imbalance Settlement
 - <https://www.fingrid.fi/globalassets/dokumentit/en/electricity-market/reserves/valid-from-01.11.2026-fingrid-oyj-general-terms-and-conditions-concerning-imbalance-settlement.pdf>

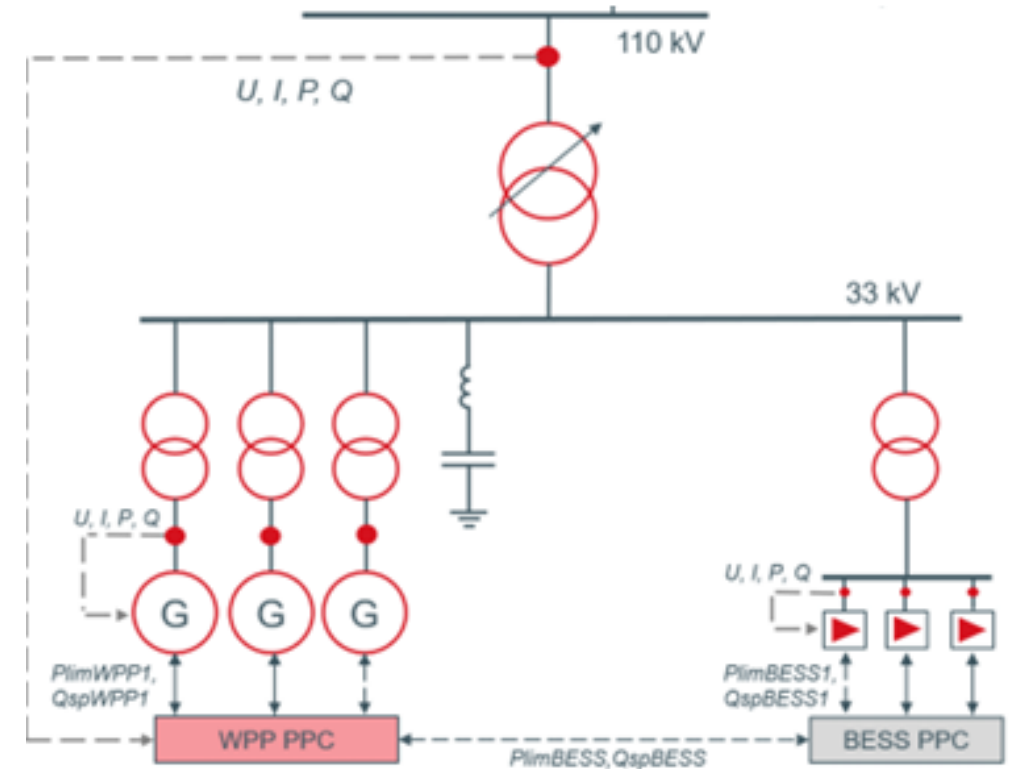
Example 1: Hybrid Power Plant Divided into Several Separate Units

- If a hybrid power plant includes, for example, two different production technologies, such as wind and solar, and an electricity storage facility, they must be separated from one another to ensure that GOs are correctly issued for the different production technologies
- Electricity production units and electricity storage facilities, including consumption, must be separated into individual Metering Grid Areas, or MGAs, in commercial imbalance settlement
- Production units and electricity storage facilities may be separate economic operators. They may also have different owners or balance responsible parties in commercial imbalance settlement. In this case, electricity GOs are issued to the electricity production units



Example 2: Hybrid Power Plant as a Single Entity

- Operator may also treat the hybrid power plant as one entity in imbalance settlement. In this case, GOs are issued at the grid connection point. This solution also fulfils the standard's requirement concerning electricity delivered to the market
- Share of renewable electricity is verified through separate metering of all sites and calculations based on the relevant time series. This ensures that no GOs are issued for any mixed-source electricity transferred from the grid
- A party registering the power plant is responsible for the net production calculation formulas and submits the production time series to the registry operator



Changes to Technology and Energy Source Codes

General

- Code structure for AIB EECS GOs is being updated to correspond to the codes in the EN 16325 standard
- Changes will be made to the technology codes of production devices and to the energy source, or fuel, codes
- Discontinued codes can no longer be used for the issuance of EECS GO from 1 January 2027 onwards
- Certificates already issued using discontinued codes can be transferred through the AIB Hub until 1 January 2028
- In addition, the descriptive texts displayed in registry user interfaces will change for certain codes

Changes to Technology Codes

Solar Power

- For solar power, the previous structure described the type of solar panel. The new description indicates the installation method
- T010101 Solar / Photovoltaic / Classic silicon → Solar / Photovoltaic / Building-integrated
- In the GO Registry, solar power plants' technology codes will be changed to a code that is one level less specific
 - T010100 Solar / Photovoltaic / Unspecified
- Account holders may add a more specific level and submit the change for approval
 - Building-integrated
 - Open space
 - Agri
 - Road integrated
 - Floating

Changes to Energy Source Codes

Discontinued Codes - Forestry

- F01010302 Renewable / Solid / Wood / Forestry by-products & waste
- Currently used by 46 production devices
- Code that is one level less specific has already been used by many power plants
- Other possible replacement codes:
 - F01010304 (Forestry waste and residues)
 - F01010305 (Saw products and other forest industry products)
 - F01010306 (Forest industry waste and residues)

Discontinued Codes - Agriculture

- F01010502 Renewable / Solid / Biomass from agriculture / Agricultural by-products & waste
- Currently used by 12 power plants
- Code that is one level less specific has already been used by some production devices
- Other possible replacement codes:
 - F01010508 (Manure)
 - F01010509 (Agricultural waste and residues)

Discontinued Codes - Gaseous Fuels

- F01030000 Renewable / Gaseous / Unspecified / Unspecified
 - Closest codes are F01030100 Landfill gas and F01030200 Sewage gas.
 - Another alternative is F01000000 Renewable / Unspecified / Unspecified / Unspecified.
- F01030400 Renewable / Gaseous / Gas from organic waste digestion / Unspecified
 - Replacement alternatives are the same as for code F01030000.

Updated Code Descriptions 1/2

- F01010000, F01010101 & F01010400
 - Level 2: Solid → Solid biomass
- F01010201
 - Level 2-3: Solid / Industrial and commercial waste → Solid biomass / Industrial and commercial waste and residues
- F01010300 & F01010301
 - Level 2-3: Solid / Wood → Solid biomass / Biomass from forestry and forest industry

Updated Code Descriptions 2/2

- F01010500
 - Level 2-3: Solid / Biomass from agriculture → Solid biomass / Biomass from agriculture
- F01010501
 - Level 2-4: Solid / Biomass from agriculture / Agricultural products → Solid biomass / Agricultural biomass / Agricultural products (unspecified)
- F01020000 & F01020200
 - Level 2: Liquid → Liquid biomass
- F03010100 & F03010101
 - Level 3: Radioactive fuel → Nuclear fuel

Actions

Actions During the Remainder of the Year

- Finextra can implement the changes to solar power technology codes as a bulk update
- Updated energy source code descriptions do not require any action by account holders
- Descriptive texts in the user interface will be updated during the remainder of the year
- For the discontinued agriculture and forestry codes, Finextra proposes using a less specific code and adding it to the energy source mix of the relevant production devices.
- For gaseous fuels, Finextra will propose using a more specific code where the code accurately reflects the fuel that is actually used
- Otherwise, the remaining alternative is the unspecific code F01000000
- Changes must be completed during the remainder of the year so that discontinued codes are not used for issuance carried out in January 2027
- Finextra will contact the relevant account holders about the changes by email

Possible Changes to the Guarantee of Origin Legislation Concerning Electricity

Ministry of Economic Affairs and Employment, Outi Vilén
Energy Authority, Mervi Suni
Finextra, Kaija Niskala

Status Update

Ministry of Economic Affairs and Employment, Outi Vilén

Status Update

Guarantees of Origin Afternoon 1.10.2026

Chief Specialist Outi Vilén



Työ- ja elinkeinoministeriö
Arbets- och näringsministeriet

The Guarantee of Origin Act and Its Amendment



- Act on Guarantees of Origin for Energy entered into force in 2021
 - Act implemented the Guarantee of Origin provisions of the Renewable Energy Directive, RED II
- Need for amendments arises from the revision of the Renewable Energy Directive, RED III, the new Gas Market Directive, the Government's decision and the revision of the Guarantee of Origin standard, which entered into force in summer 2025. The Renewable Energy Directive made compliance with the standard mandatory, and the scope of the standard has now been significantly expanded
- In relation to the legislation as a whole, the proposed changes are mainly minor, and most of them are technical



Proposed Amendments

Calculation of the Amount of Energy Eligible for Guarantees of Origin (3 a §)



- Guarantee of Origin is issued for the Net Energy Production
- Net Energy Production means the total amount of energy produced by a production device, less the energy consumed by the production auxiliaries and any other energy not consumed by production auxiliaries that is used, for example, to cover losses before the energy is available to the market
- There are some exceptions to the deduction of energy consumed by production auxiliaries. For example, energy used for waste treatment or for treating digestate at a gas production plant does not need to be deducted
- Amendments result from changes to the standard. In addition, the intention has been to clarify the definition of auxiliary consumption

Exceptions to the Obligation to Verify the Origin of Gas and Hydrogen Using Guarantees of Origin (8 ja 9 §)



- Under the current act
 - the renewable origin of gas and hydrogen does not need to be verified using Guarantees of Origin if the gas is supplied for consumption through a gas pipeline that is not part of a natural gas network subject to the licensing requirement laid down in Chapter 2 of the Natural Gas Market Act (587/2017), and no Guarantees of Origin have been applied for in respect of the gas
 - The renewable origin of gas and hydrogen does not need to be verified using Guarantees of Origin when the energy is used on the same property, or a corresponding group of properties, where the energy was produced, and no Guarantees of Origin have been applied for in respect of the energy
- It is proposed that the exception be limited to biogas only
- In the case of biogas, the biological origin of the feedstocks makes it clear that the production is based on renewable sources. In the production of synthetic gas, however, the feedstocks may be renewable or non-renewable, and the renewable nature of the gas is therefore not equally clear

Additional Conditions for Issuing Guarantees of Origin (11 §)



- New conditions for issuing Guarantees of Origin for energy:
 - The energy was produced no earlier than the day following the registration of the production device
 - The energy was produced in an energy production device with a capacity of at least 50 kilowatts
 - The energy has been measured either by a party approved by the registry operator or by a network operator pursuant to § 22 of the Electricity Market Act or § 17 of the Natural Gas Market Act
- Minimum capacity has been set, for administrative reasons, within the discretion allowed by the Directive
- Other additional conditions result from changes to the standard

Disclosure Obligations for Gas and Hydrogen Suppliers (20 a – 20 d §)



- Suppliers must disclose on invoices the shares of renewable, low-carbon and fossil gas and hydrogen in the gas or hydrogen purchased by the final customer
- In invoices, invoice attachments or on their websites, suppliers must provide information on the shares of renewable, low-carbon and fossil gas and hydrogen in all gas and hydrogen sold by the supplier in Finland during the previous year
- In invoices, invoice attachments or on their websites, suppliers must provide information on the greenhouse gas emissions arising from the gas and hydrogen sold during the previous year, expressed as carbon dioxide equivalents, as well as the method used to calculate the emissions
 - For gas, emissions from production and transmission must be specified separately from emissions arising during use
 - For hydrogen, emissions arising from hydrogen production and transmission must be reported
- Changes concern the implementation of the Gas Market Directive

Classification of Heat Produced by Waste Incineration Plants



- Proposal aims to implement the Government decision taken in the 2025 mid-term policy review session:

“In waste incineration, it will be ensured that only non-recyclable waste is incinerated. Heat generated through the treatment of non-recyclable waste may then be classified as waste heat.”

- Alternative presented during the consultation round, under which pre-sorting would have been a condition for issuing Guarantees of Origin for waste heat, has been found to be unfeasible
- Details of the implementation are still under preparation

Other Amendments



- New definitions and amendments to existing definitions
- Enabling the supervisory authority to use a calculation performed by another party for the electricity residual mix
- Consideration of possible restrictions imposed by the standard on the cancellation of Guarantees of Origin
- Obligation for the operator of an energy production device to provide information concerning the device to the assessment body renewing its verification
- Removal of the possibility to disclose electricity of known origin based on fossil energy sources according to the actual production method
- Renewable energy communities must be provided with reduced registration fees and simplified registration procedures.
- Extension of the supervisory authority's right to obtain information
- Reporting obligations concerning the Union Database, UDB
- Clarification of the timing of Guarantee of Origin cancellations

Timetable for the Legislative Amendment



- Objective is to submit the Government proposal to Parliament in October
- Amendments would mainly enter into force at the beginning of 2027
 - Certain amendments requiring preparation and updates to registry operators' terms of service would take effect from 1 July 2027
 - Obligation to disclose carbon dioxide emissions from gas and hydrogen would take effect from 1 January 2028
- Objective is for the amendments to the Government Decree on Guarantees of Origin to enter into force at the beginning of 2027

Status Update

Energy Authority, Mervi Suni

STATUS UPDATE

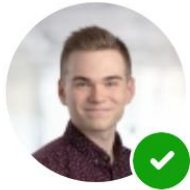
Possible Changes to the Guarantee of
Origin Legislation Concerning Electricity

Fingrid Guarantees of Origin Afternoon

1.10.2026

Mervi Suni, Head of Unit
Sustainable Energy, Subsidies and
Guarantees of origin

Guarantee of Origin Specialists



Henri Vaitomaa

- Specialist



Oona Niemi

- Legal Counsel



Jaakko Puistosalo

- Specialist



Mervi Suni

- Head of Unit



Saara Sumu

- Specialist



Roland Magnusson

- Procurement Specialist

Registry
of GOs
for
heating
and
cooling



Impacts of the Government Proposal on Energy Authority as the Operator of the Heating and Cooling Registry



- New Guarantee of Origin standard was approved in spring 2025: CEN-EN 16325:2025.
 - It has been published in Finnish and English in the SFS online store
 - The standard now also covers heating and gas
- Guarantees of Origin may only be issued for energy produced after the production device has been registered
- For multi-fuel plants, the registrant must submit a report on the energy sources used every two years
 - Another reliable procedure may be introduced nationally
 - Government proposal: As new information, the verification certificate would have to state the composition and quantity of feedstocks of biological origin, or of both biological and fossil origin, supplied to the energy production device
- Government proposal is still being specified in relation to waste heat
- Renewable energy communities must be provided with reduced registration fees and simplified registration procedures



Impacts of the Government Proposal on Energy Authority as the Supervisory Authority

Energy Authority acts as the national supervisory authority responsible for supervising compliance with the Guarantee of Origin Act and the provisions issued under it

Changes introduced by the Government proposal

- Energy Authority would be allowed to use the electricity residual mix calculated by AIB instead of calculating it independently
- Energy Authority's right to obtain information would be extended to energy users. Currently, it only applies to energy suppliers
- As the supervisory authority, Energy Authority would in future be required to comply with the CEN-EN 16325 standard
- Disclosure obligations would be supervised by the Energy Markets Department of Energy Authority. Disclosure obligations concerning gas and hydrogen would be introduced as a new requirement

After the Legislation Has Been Adopted, Energy Authority Will:



- approve Fingrid's and Gasgrid's terms of service;
- update:
 - the terms of service of the Heating and Cooling Guarantee of Origin Registry;
 - instructions for parties participating in the Heating and Cooling Guarantee of Origin Scheme;
 - instructions on verifying and disclosing the origin of electricity;
 - Conversion Guidelines together with Fingrid and Gasgrid;
 - verifier guidelines; and
- organise information webinars where necessary



THANK YOU

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Upcoming Changes to the Terms of Service for Electricity Guarantees of Origin

Finextra, Kaija Niskala

Current Situation

12.10.2026

- Changes concerning electricity Guarantees of Origin are minor
- Finextra has two separate sets of terms of service:
 - EECS GO, based on the AIB EECS Rules
 - National GO, based on the EN 16325 standard
- Content of the terms of service will remain generally similar to the current content. They will describe the essential operating procedures, but not every detail of the EECS Rules and the EN 16325 standard. Additional instructions will be available in the registry and/or published on the website where necessary

EECS and National Guarantees of Origin

- Power plant may participate either in the EECS GO scheme or in the national GO scheme
 - Moving from one scheme to the other is possible at the beginning of a calendar year
- Both types of GOs will be held in the same electronic registry
 - They will be distinguished using the identifiers “EECS:GO” and “FI:GO”
 - GOs cannot be transferred between the two schemes. For example, EECS GO cannot be converted into national GO
 - Only EECS GO can be transferred through the central Hub between AIB countries
- Conversions: only EECS GO may be used as input for issuing EECS GO

Issuance Following the Registration of a Production Device

- GO may be issued no earlier than the day following the registration of the production device, in accordance with EN 16325
- If a new production device wishes to receive GO immediately after production begins, potentially including production during commissioning, its registration must be completed and approved by the registry operator before issuance
- This requires the party registering the production device to plan ahead and participate actively in the registration process
- Registry operators, the Energy Authority, Gasgrid Finland and Finextra, have jointly discussed how “registration” should be defined, including which mandatory information must be completed
- Finextra will add instructions to its website and the registry, as well as to My Fingrid for production devices connected to the main grid

Renewable Energy Communities

- RED III and the legislative proposal require the GO Registry operator to introduce:
 - simplified registration procedures; and
 - reduced registration fees for renewable energy communities
- Information concerning renewable energy communities is held in Fingrid Datahub
 - Datahub is preparing an information system change that will enable the information to be compiled and transferred to Finextra's registry
 - => This approach may be used to simplify the registration procedure to the extent possible
- Reduced registration fees will be taken into account in the pricing of the service

Verification - Matters Requiring Clarification

1/2

- Free allocation certificates
 - Certificates have not fully met the requirements of the Guarantee of Origin Act
 - Verification based on a free allocation of emission allowances should follow the same format as a GO verification certificate
 - During the application for free allocation process, production device owners should anticipate whether they also intend to join the GO scheme
 - Finextra will provide additional information and instructions
- EECS verification
 - Network operator or the network operator specified in the imbalance settlement arrangements?

Verification: Matters Requiring Clarification 2/2

- Standard requires power plants using biofuels to be verified every two years.
 - *“the Registrant shall provide to the Issuing Body a report from a Production Auditor at least once every two years.”*
 - *“by another mechanism in the Domain GO Scheme that regularly ensures verification, by a party independent of the Registrant, recognized by the Issuing Body, of the accuracy of the composition and amounts of Inputs fed into the Production Device that have been reported through the Consumption Declarations in the preceding period.”*
- Assessment body regularly verifies the accuracy of the composition and quantity of feedstocks supplied to the production device, as stated in fuel declarations concerning the preceding period.

Cancellation of a Guarantee of Origin

- According to the wording of the standard, a GO may only be cancelled for disclosure purposes and to demonstrate the origin of energy consumed during a period starting **within 12 months after the last day on which the Output to which the GO relates was produced and ending either before the date of cancellation of the GO or at the end of the consumption period during which the Cancellation takes place**. The maximum length of the consumption period is one calendar year
- Wording of the standard only allows GO to be cancelled for a consumption period that begins on the day following the final production date of the GO. In practice, a GO could only be cancelled for the part of the relevant production year following the production month, or for the entire following calendar year
- Text should read: “the period begins **no earlier than** 18 months before the final production date”
- This has been submitted as a correction proposal in the ongoing revision of the standard
- If the current practice were changed, a change to the registry system would be required
- Unclear provision should be clarified. Can the current cancellation practice continue?

Approval Process for the Terms of Service



Finextra
prepares the
terms of service

Cooperation on the
preparation of the terms
of service and the
consultation process

Finextra submits the
terms of service to
the Energy Authority
for approval

The Energy
Authority launches
the consultation
process

The Energy
Authority
approves the
terms of service

The AIB Electricity
Scheme Group
approves the EECS
Domain Protocol



Customer Presentation

Fortum Power and Heat Oy, Joni Vuorela

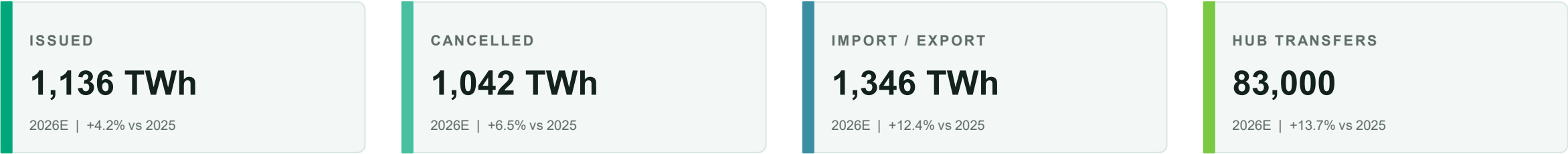
FORTUM- FINEXTRA WEBINAR

Green Desk 2026

Electricity GO market size in 2026

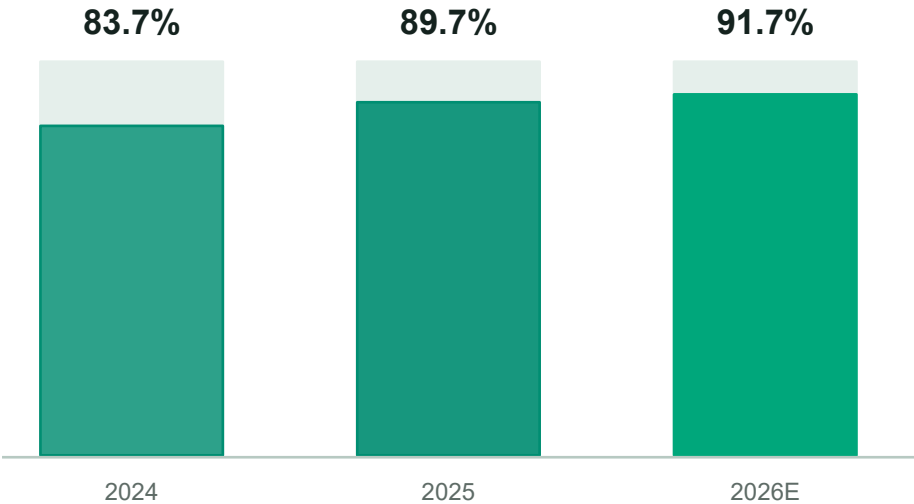
Data as of 9 September 2026

European EECS market pulse | 2025 actuals and 2026 estimate



Demand is catching up with supply

Cancellation-to-issuance ratio (Issued/Cancelled)



63% of cancellations are claimed in the top five countries.

Market signal

91.7%

Estimated 2026 cancellation-to-issuance ratio

Cross-border activity is growing reinforcing liquidity and market integration.

Concentrated demand, directional flows

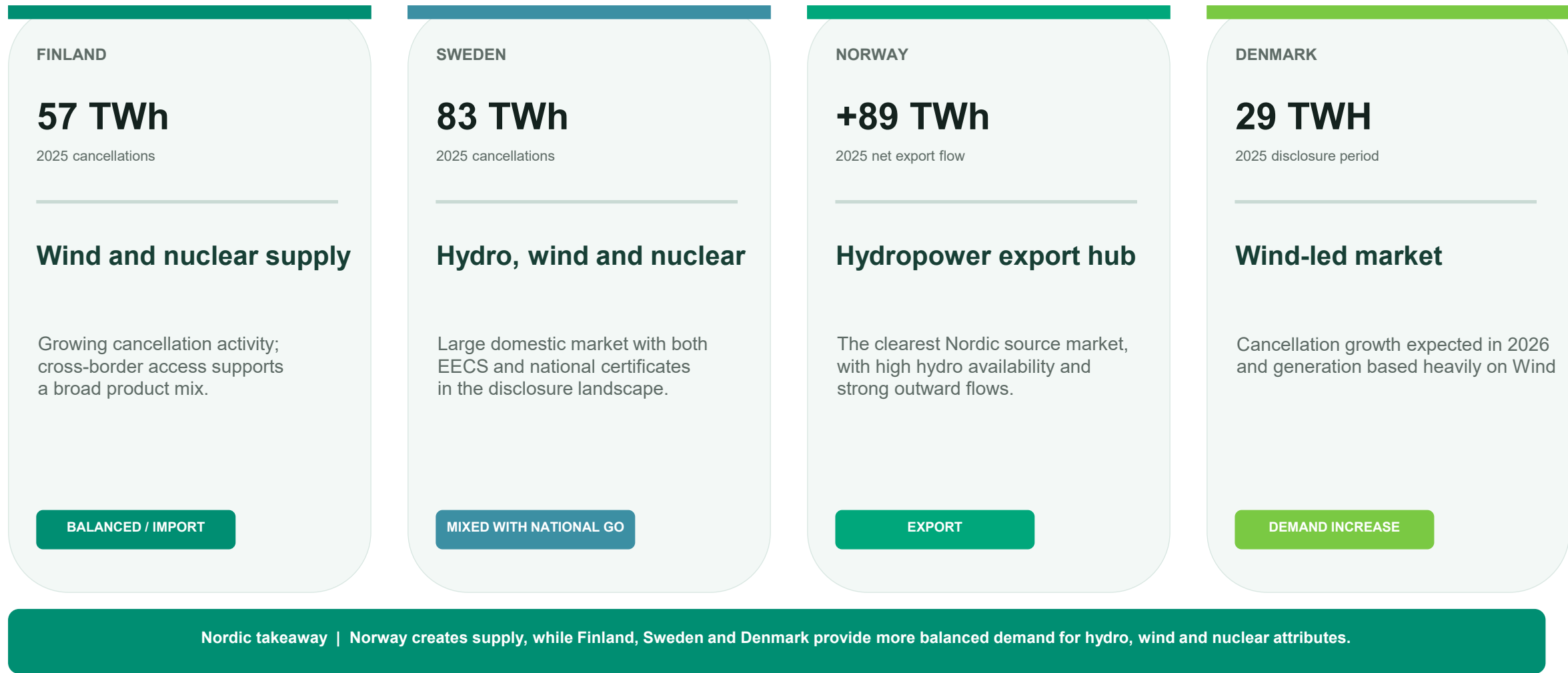
2025 cancellations | net cross-registry flow

Germany	224 TWh	-131 TWh
Italy	136 TWh	-20 TWh
Netherlands	115 TWh	-14 TWh
Norway	55 TWh	+89 TWh
France	89 TWh	+23 TWh

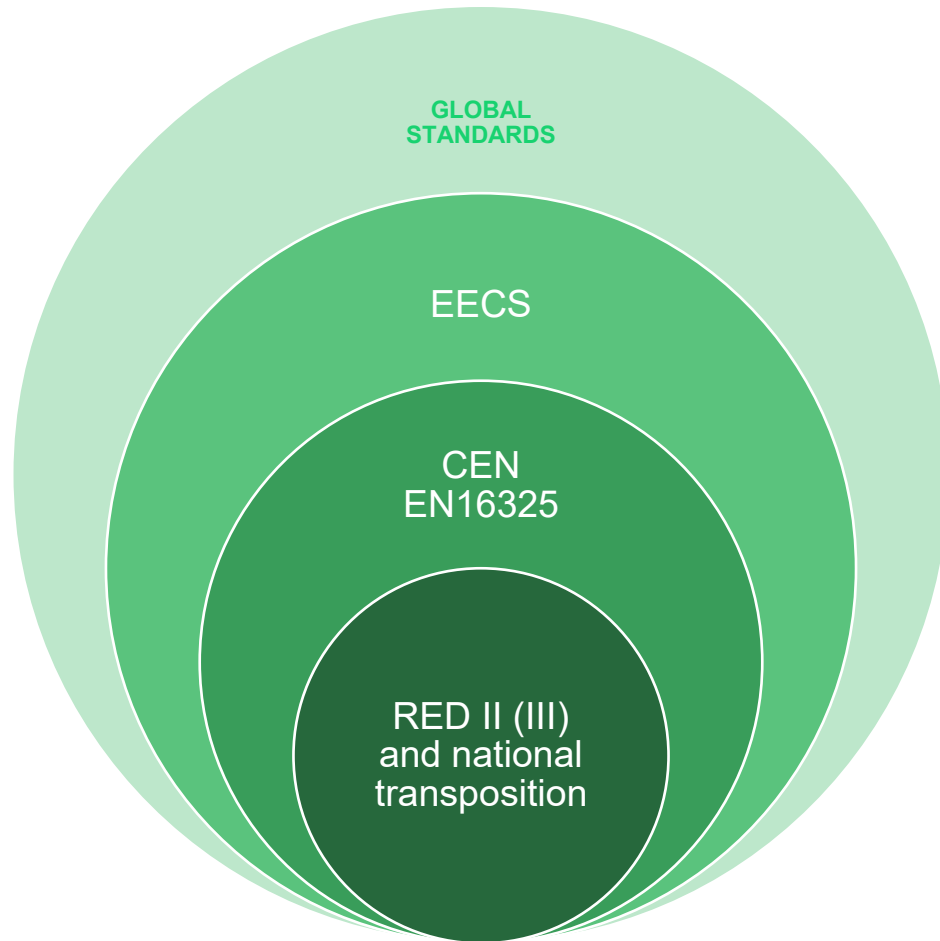
Takeaway | A mature market is still gaining scale, with faster cancellation and cross-border growth tightening the link between supply and end-user claims.

Nordic electricity GO markets

Four connected markets with distinct supply profiles and demand dynamics



Guarantee of Origin legislation, Standards and Global framework



- Global standards and target setting initiatives on company GHG inventory, Product carbon footprint and SBTi targets and validation (GHG-P, ISO etc.)
- “Quality criteria” topics on usability

- EECS
- Uniform standard to make GoOs transferrable and “fit” between Issuing bodies in Europe (EU/EEA)
- Best practices for issuing bodies

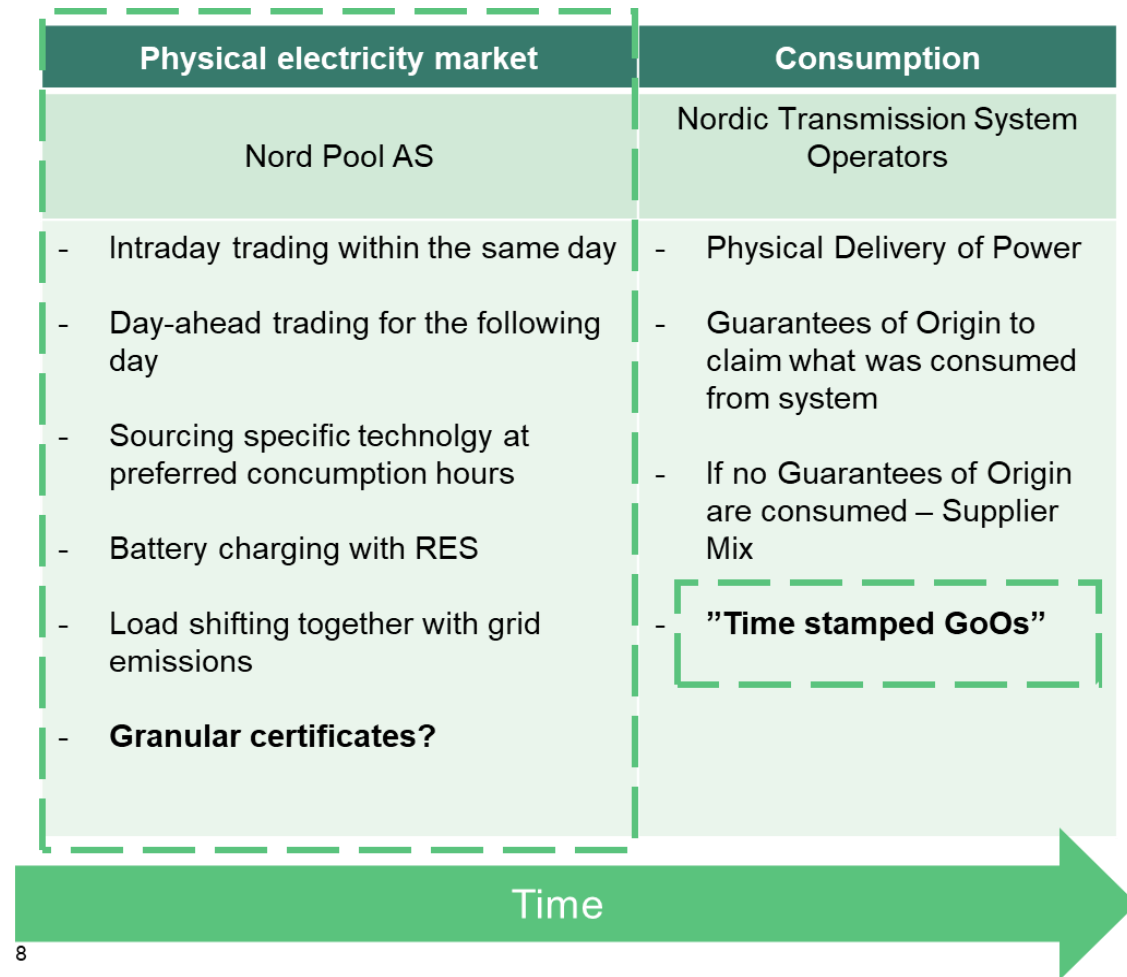
- CEN Standard mandated by RED III
- Technical standard for GoO quality
- For all Energy Carriers

- Legislative backbone
- Creation of GoO instruments
- Relevance to IED and EED (Hydrogen DA, DC sustainability criteria etc.)
- Bilateral recognition between Member States

Revolution or Evolution? "Hourly and deliverability" proposals mix two time horizons which answers different questions

- Regulation and standardization needs to evolve by market needs and demands
- Standards need enable new designs, but not mandate the market development
- It is impossible to design market by standardization- other way around
- Strong alignment needed on "target setting"

- Hourly means occurrence on same delivery "time window"
- Deliverability is proposed to be within price area of generation and consumption
- Multiple problematic outcomes if mandatory (system design, legislation and market conflicts)
- Current system is not restricting this if market participants wish to explore additional solutions



General market principles (Power market)

- **Market exchange between supply and demand, for each commodity**
 - Production portfolio sells to market and sales contract (hedging/consumption) portfolio buys from market
 - Primarily no power contracts causing any commitments (constraints/obligations) to production assets (dispatch)
 - Mainly handled by GoO commitments in PPA like pay-as produced, baseload profile from multiple assets etc.
- **Monetary risks (e.g. market price) analyzed on total portfolio level**
 - Account for possible correlations between individual assets
 - Risk (downside, percentiles) not additive over sub-portfolios (unlike expected value)
 - Unified hedging principles (& pricing of hedging instruments) for both existing asset portfolio and new assets (investments)
 - Physical assets not considered as (efficient) hedging instruments (reason for financial markets existence)
- **Strategic interest promotion for functioning markets**
 - Capacity mechanism (market exchange based) to supplement energy-only market exchanges (to cover LRMC)
 - EU regulation (REMIT, EMIR, MIFID, etc.) aligned with setup of market exchanges (Nordpool, EEX, Euronext)
 - E.g. no asset ear-marking or new-built (additionality) requirements on physical dispatch unless direct connection (rare case)
 - GoO time & geographical resolution is bringing additional complexity already on some set-ups

1) LRMC = Long Run Marginal Cost, with (pre-investment) time horizon where all costs are considered variable (i.e. "fixed" costs included)

Radical impacts if physical production portfolio would be obliged to sell to priority bilateral contract w/o exchange

- **By default it would not be ensured physical production portfolio has flexibility remaining in assets (or economical incentive) to sell the requested (possibly uncertain) volume (power, GO,..).**
 - Because by default physical production portfolio (each asset) is optimized independently against physical markets (market price forecasts).
- **Overall setup would be SIGNIFICANTLY more complex, less transparent and less efficient vs market-based operations.**
 - Some critical experiences on Flow Bases model change in Nordic Physical markets e.g. on transmission allocation
- **Setup would require physical portfolio (own assets) were optimized with additional restrictions reflecting bilateral energy/capacity obligations (possibly with uncertain volumes).**
 - Could be difficult from market conduct point-of-view and lead to accusations of sharing forbidden insider information between market actors.
 - Especially if information from bilateral counterparty would include any pricing information (e.g. down-regulation price for consumption).
 - Could be even accusations of withholding production from market. Even if one could argue bilateral contract causes similar “exclusion” impact to both supply and demand curves, with unchanged market equilibrium price.

Start of the EN 16325 standard revision process

Finextra

Organization of the revision - CEN

- Revision work is being carried out within Working Group 5 (WG5), which operates under Joint Technical Committee 14 (JTC 14)
- In spring 2026, JTC 14 authorised the launch of the revision and established the scope and framework for the work
- Work is led by the Netherlands Standardization Institute, NEN
- Michael Lenzen serves as Convenor
- Lennart de Waart serves as Secretary

Organization of the revision - METSTA

- In Finland the GO standardization effort falls under *Mechanical Engineering and Metals Industry Standardization in Finland* (METSTA)
- Group: METSTA/SR 600 Energy Management and Carbon Capture
- Subgroup: METSTA/SR 600/AR 1 Guarantees of Origin for Energy
- Arttu Rintala has started as Secretary
- Ville Saloranta serves as Assistant Secretary
- Any METSTA member may participate in the revision of the standard
- Group members will provide updates on current matters at the meetings of the national Guarantee of Origin group

Organization of the revision - Finnish Delegation

- Heli Haapea / Gasgrid
- Samuli Konttinen / Fingrid
- Joni Vuorela / Fortum

Revision Timetable

- In May 2026, comments concerning topics to be addressed in the revision were collected under three categories:
 - A. conflicts with EU legislation;
 - B. comments submitted during the final vote in 2025; and
 - C. other well-justified new topics
- Total of 102 comments were received
- At the meeting held in Delft on 14-15 September, one-third of the comments were reviewed
- The next meeting is provisionally scheduled to take place in Brussels on 30 October
- Comments accepted for inclusion in the revision will be assigned to working groups that will prepare the final textual amendments
- Text is expected to be completed in 2027 and, if approved, to enter into force in 2028

Finnish Comments

- Correction for restrictive text about temporal allocation of cancellations
- Removal of import and export restrictions
- Annex E Dissemination level to be informative instead of mandatory
- Removal of shorter audit periods for production devices using biofuels

Highlights from Other Comments

- Energy storage facilities - all comments concerning this topic have been closed
- Conversion - there was a proposal to remove conversion entirely, as RED III provides other means of demonstrating the renewable origin of electricity taken from the grid
- CHP - Allocation of the fuel mix to final energy outputs
 - The standard is unclear as to whether specific fuel shares can be allocated to one final energy output
- UDB - Union Database for gas
 - Current text does not address the transfer or cancellation of Guarantees of Origin in the UDB
 - Several comments have been submitted to correct the situation

Thank You for Participating!

The materials will be published in Finnish and English on Fingrid's website after the event.

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