

LEGAL FRAMEWORK CONDITIONS

FOR EXTENDING GUARANTEES OF ORIGIN TO HEATING AND COOLING

Issuing Body Webinar
Guarantees of Origin for Heating and Cooling

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Overview of the legal framework for guarantees of origin (GOs)

- 1) European legal framework: RED I + RED II + EN 16325 + Proposal RED III, EED
- 2) Legal framework in Germany for GOs for electricity
- 3) GOs in district heating
 - From legal framework to implementation / What is needed, what is missing?
 - Purpose 1: Consumer market for green district heating
 - Purpose 2: Verification with guarantees of origin
 - Purpose 3: Facilitating regulatory enforcement

RED I (2009/28/EC)

- Determination of purpose and core elements of GOs (**Art. 15**):
 - **Demonstrate to final customers** that a certain proportion or quantity of **energy** has been **produced from renewable sources**. Ensure that the origin can be guaranteed on the basis of objective, transparent and non-discriminatory criteria (para. 1).
 - Member States shall ensure that **GOs are issued** at the request of a **producer of electricity (heating/cooling optional)** from renewable energy sources (para. 2 (1)).
 - No more than one GO shall be issued for each unit of energy (para. 2 (1)). **Ensure** that each unit of energy from renewable sources is taken into account only once (**no double marketing**) (para. 2 (2)).
 - A **GO may be transferred** independently from the energy unit to which it relates (para. 2 (4)).
 - **Electronic issuance, transmission and cancellation are** to be monitored by the Member States or designated competent bodies (para. 4 and 5).
 - GO minimum information, rules on the basic recognition of GOs from other Member States (para. 6 and 9).

EUROPEAN LEGAL FRAMEWORK

RED II (2018/2001/EU)

- Important new regulations for GOs (**Art. 19**), implementation by 30.06.2021.
 - **Extension of the scope of application of GOs:** mandatory to be issued "at the request of a producer of energy from renewable sources" (para. (1)).
 - Therefore, it must now also be stated whether a GO "concerns electricity or **gas, including hydrogen, or heating or cooling**" (para. 7).
 - Member states' GO systems shall **comply with the European Standard CEN - EN 16325** (para. 6).
 - Consideration of the market value of GOs in the context of financial support for renewable energy (para. 2 (3 and 4)).

CEN - EN 16325

- Under ongoing revision (due to extension of the scope).
- Forms the **framework for the GO systems to be established** (requirements for registration, issuance, transfer and cancellation; accounts, user rights, measurement procedures, auditing, registry operators and audit bodies).

CEN - EN 16325

- **Chapter 5.4** of the standard contains **specifications for the heating/cooling sector** (discussion status):
 - Heating and cooling are not to be treated in separate GO systems, but in a GO system for thermal energy.
 - Additional information on the GO, whether issued for energy from a plant that supplies or extracts thermal energy to or from the respective system: Cancellation and disclosure rules can distinguish between heat and cold.
 - Optional information: **network identification number** on GOs.
 - Linked to the issue of cross-network cancellation of GOs (for disclosure purposes).
 - Potential **option for member states: Only allow for cancellations GOs with the same network identification number**, i.e. GOs that were issued for thermal energy that was actually distributed via the same heating grid.

Update: Proposal RED III (COM 2021/557)

As a consequence of the emphasis of PPAs it is proposed to remove the option for member states not to issue GOs for producers who received public support (Art. 19 para. 2 and 8)

LEGAL FRAMEWORK IN GERMANY FOR GUARANTEES OF ORIGIN FOR ELECTRICITY

Electricity disclosure according to § 42 EnWG (Energy Industry Act) and §§ 78 ff. EEG (Renewable Energy Sources Act)

- Implementation of RED I and the Directive 2003/54/EC concerning rules for the internal market in electricity:
 - Electricity suppliers are **required to provide information on the shares of individual energy sources**.
 - Electricity suppliers **disclose the share of electricity from renewables to final consumers**:
 - for **which** either **GOs have been cancelled** in accordance with Section 79(4) of the EEG
 - or which is financed from the „EEG-Umlage“ (Renewable Energy Sources Act surcharge).
 - No GOs for EEG-subsidised electricity: Green attributes already distributed via EEG allocation method, therefore no additional allocation to individual consumers is currently possible for this electricity share (no double claiming of green characteristics).

GO Registry operation for electricity is run by the Federal Environment Agency (UBA)

Relevant: GO framework and disclosure framework have a connection at EU level that continues to the national level in Germany

GUARANTEES OF ORIGIN IN DISTRICT HEATING

What is needed for implementation of heating/cooling GOs ?

- Introduction of a **registry** to ensure that GOs can be issued to renewable heat producers.
- The registry must be run **electronically** and in accordance with the **European standard** - since the current version of EN 16325 only covers electricity, it must in any case meet the requirements of Art. 19 of RED II.
- It is not mandatory to have a legal framework in the form of federal law, nor is it mandatory to have a state-run registry: a designated competent body can be responsible for issuing the GOs.

But what is missing? A clear regulation that connects the GO provisions with the provisions of disclosure in the field of heating/cooling at the EU level (EED does not link disclosure with GOs)

This continues at the German level:

(FFVAV implementing Art. 21 para. 1 RED II resp. Art. 10a para. 2 lit. c EED) **Billing must contain Information** about

- a) The **current and percentage share** of the **energy sources** and heating or cooling technologies used **in the total energy mix**, averaged over the past year,
- b) the **annual greenhouse gas emissions associated with the energy mix**; for customers supplied with district cooling or district heating from technically interrelated district cooling or district heating systems with a total nominal thermal capacity below 20 megawatts, this obligation shall not apply until January 1, 2022

GUARANTEES OF ORIGIN IN DISTRICT HEATING

*The **supplier shall also make available** in an easily accessible form, on its website and in the billing, **information on the primary energy factor** of its technically interconnected district heating or district cooling system and on the **percentage of renewable energy used** in its technically interconnected district heating or district cooling system within the meaning of section 3(2) of the Buildings Energy Act of August 8, 2020 (BGBl. I p. 1728), as amended.*

States disclosure requirements but does not mention the role of GOs in this? -----

With no legal framework for GOs in heating/cooling so far in existence in Germany, in **our research we started to address potential purposes of GO use and derive potential legal challenges from these:**

Purpose 1: Consumer market for green district heating

- Consumer market should contribute to the **development** and **expansion of** renewable energies (Recital 53 RED I; Recital 56 RED II).
- **Consumer motivation** as in the electricity market (high environmental awareness, making one's own contribution, supporting the expansion of renewable energies, regional anchoring of supplier) **can be used for the heating market: raising financing potential.**

GUARANTEES OF ORIGIN IN DISTRICT HEATING

Purpose 1: Consumer market for green district heating

- But: does consumer motivation also work if the **green attribute** of heat distributed in local, self-contained grids is **traded Europe-wide** for cancellation purposes, as in the case of the pan-European electricity grid?
 - Here only: Legally determined? Not to be inferred from REDs (however, EU Commission supported usability of GOs from non-interconnected producers for disclosure in a preliminary position, Q&A-Follow-up CA-RES-Dialogue Nov. 2019); RED II standard: objective, transparent, non-discriminatory and in accordance with EU law.
 - Exclusion of the possibility of cancelling GOs from other networks = internal market impairment (Art. 34 TFEU)?
 - Cross-border reference, goods characteristic of GOs (+).
 - Potential hindrance to trade (+), indirect; but: applies equally to all domestic suppliers of GOs.
 - And: Sales of **domestic GOs and GOs from other Member States are affected in the same way**: Network border, not Member State border is the relevant factor.
 - Within a cross-border heating network: GOs from both Member States admitted for cancellation in the same way.
 - Excluding the cancellation of GOs from other networks does therefore not constitute discrimination.
- Conclusion: Legally secure allocation of green attributes via GOs (in the same grid) could enable a consumer market for green heat products with its positive effects.

GUARANTEES OF ORIGIN IN DISTRICT HEATING

Purpose 2: Verification with GOs

- Possible application for GOs as a **proof of the fulfilment of regulatory requirements**, e.g. for building owners according to GEG (Buildings Energy Act):
 - A new building may not surpass a certain level of primary energy demand in relation to the demand of a reference building. When calculating the annual primary energy demand, **PEF** are included for energy quantities spend outside the building (extraction, conversion, distribution). With a low PEF less thermal insulation required.
 - PEF for individual energy sources are specified in the GEG (0 for RES - 1,1 for fossil fuels) - in the case of heating networks, a PEF is determined individually for each heating network – taking into account all the contributing sources (fossil fuel based and RES plants) by certain rules ("One network, one factor").
 - The additional option of assignment of green attributes with GOs to purchasers would enable product- or building-related PEF with advantages for grid operators (determination of grid PEF time consuming) and building owners (favourable individual PEF saves money for thermal insulation).

Example of product- or building-specific PEF determination by means of GO:

If a building draws a green heat product that is 100% backed by GOs from geothermal or solar thermal from the grid, a PEF of 0.0 could be applied to the building's annual primary energy demand calculation.

GUARANTEES OF ORIGIN IN DISTRICT HEATING

Purpose 2: Verification with guarantees of origin

- Further regulatory requirements for building owners according to GEG:
 - **Obligation to use renewable energies for heating and cooling** on a pro rata basis.
 - District heating connection is provided as a compliance option - combined with further **requirements for the heat distributed in the heating network (minimum percentages depending on the type of RES)**.
 - Compliance could be proven by proof of purchase of a green heat product (backed by GOs).

Important: in the case of product-related verification, it must be ensured that the green property allocated to individuals via the product reference may not also be allocated to the overall network and may not also be used by other customers for verification purposes (no double accounting).

GUARANTEES OF ORIGIN IN DISTRICT HEATING

Purpose 2: Verification with guarantees of origin

- Requirements for **owners of existing buildings** due to state law regulations:
 - Owners of existing buildings must, according to the Hamburg Climate Protection Act,
 - cover **15 % heat energy demand from RES in the case of replacement of the heating system** from 30.06.2021, or
 - proof as substitute measure the connection to a heating network, which fulfills the 15 % RES coverage.
 - Potential simplification through the verification by means of GOs/green heating products.
 - Hamburg regulation exemplary: federal states entitled under GEG to stipulate the use of RES for existing buildings (already in place in Baden-Wuerttemberg and Thuringia).

GUARANTEES OF ORIGIN IN DISTRICT HEATING

Purpose 2: Verification with guarantees of origin

- Regulatory **requirements for heating network operators**:
 - Berlin Energy Transition Act: **Specification of technological standards and CO2-factors** for local and district heating by authority regulation.
 - Decarbonisation roadmaps and implementation strategies with **mandatory RES shares in heating grids**.
 - Potential for simplified verification by means of GOs or registry query: comparison of the quantity of GOs issued with the total quantity of heat supplied via the grid.
- Provision of evidence within the framework of **funding programmes**
 - **Requirements for RES shares in heating networks also exist in federal funding schemes, e.g.:**
 - Promotion of the connection to a heating grid (25 % RES, or 55 % RES in the grid) and systemic promotion in new buildings with a grid supply of at least 55 % RES (KfW 55-EE, KfW 40-EE) according to BEG.
 - Promotion of heat generation systems/heating grids according to KfW EE-Premium or new construction/transformation of heating grid systems 4.0 according to BEW.
 - Here too: **potential for simplified verification by means of GOs or registry query**.

GUARANTEES OF ORIGIN IN DISTRICT HEATING

Purpose 3: Facilitating regulatory enforcement

- Authorities of German federal states („Bundesländer“) are responsible for the implementation of the GEG; the act contains extensive powers of shaping the process for declarations of compliance.
- **Control of compliance** with the state law requirements for building owners and heat network operators is also a matter for the states.
- It could **facilitate** these tasks if compliance could be verified by means of automated queries of GOs cancellations at the registry.

At this stage of our research project, we are currently looking into the question of how these possible applications can be fitted into the existing legal framework or to what extent legal changes would be required.

Thank you for your interest!

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