

# Member state questionnaire on guarantees of origin and disclosure of electricity

## Questionnaire

This questionnaire has been developed by the CA-RES Working Group 10 (on Guarantees of Origin)

It contains about 50 questions and its purpose is twofold:

To start with it contains 50 important questions to be asked when designing a coherent GO-system, connected in a proper way to electricity disclosure. We recommend basic implementers use these questions to make sure the design of their national system does not contain any loopholes.

Furthermore it is aimed at providing member states with an outline on how to assess the GO system and disclosure of *other* member states. Answers to this questionnaire should be provided before any import of Guarantee of Origin should be considered as full transparency must be provided about operations relating to GO and disclosure (c.f. Art. 15 RES Directive).

General comment: links to relevant legal documents and to websites should be included in this document where possible. Also form templates used in your domain e.g. for applications can be attached.

General Contact Information	Member state response
Country	<i>Sweden</i>
Name and type of the Competent Body for running the GO system(e.g. TSO, NRA, Market Operator, Government Agency)	<i>Swedish Energy Agency, a Government agency is competent body and issuing body.</i>
<i>a. Geographic domain(country or region)</i>	<i>SE</i>
<i>b. Including offshore? (Y/N)</i>	<i>Yes</i>
<i>c. Date this GO- registry</i>	<i>Dec 1st 2010</i>

<i>became legally operational:</i>	
<i>d. Address</i>	Box 310 631 04 Eskilstuna SWEDEN  Visiting Address: Gredbyvägen 10, Eskilstuna, Sweden
<i>e. Contact person</i>	<i>Johan Malinen</i>
If the competent body is not the issuing body, and did delegate or mandate the daily operational business to issue GO, please do specify the contact details of the issuing body and please <i>provide proof of appointment to issue these certificates</i>  <i>(Reference to regulation or formal letter of appointment)</i>	
Transfer to other registries since / or planned to become operational by:	<i>June 1<sup>st</sup> 2017.</i>
Previous Issuing Body(ies)	<i>Grexel (for EECS certificates until May 31st 2017)</i>
<i>a. Operative from - to</i>	
Responsible organisation for disclosure (to be filled out only if not identical to the Competent Body for GO above)	<i>Energy Markets Inspectorate (EI)</i>
<i>a. Address</i>	<i>Energy Markets Inspectorate (EI)</i>

	Box 155 631 03 ESKILSTUNA SWEDEN
<i>b. Contact person</i>	Johan Hjalmarsson
Web link Internet pages (general info page) to the responsible bodies for issuing GO and disclosure.	<a href="http://www.energimyndigheten.se/ug">www.energimyndigheten.se/ug</a>  <a href="http://www.ei.se">www.ei.se</a>

Criteria / Question	Member state response
<b>Implementation of Art. 9 of the Directive 2009/72/EC (on electricity disclosure) by the Member State</b>	
1) Are disclosure laws and procedures in place? (Y/N) <i>If not: please state, when it is intended to have the national framework in place and move to question 8) below?</i>	Yes

Criteria / Question	Member state response
<p>a) <i>What are the laws and regulations? Reference and detailed description, particularly including the linkage between GO and disclosure</i></p>	<p><i>Law on Guarantees of Origin (SFS 2010:601), Ordinance on Guarantees of Origin (SFS 2010:853) and The Energy Agency's rules and regulations regarding Guarantees of Origin (STEMFS 2017:2). Some parts of the Article 15 are covered in the electricity act, (SFS 1997:857) and in the Energy Markets Inspectorate's rules and regulations regarding disclosure of electricity, (EIFS 2013:6).</i></p>
<p>b) <i>When did the regulation(s) regarding disclosure come into force? If not when will they become effective?</i></p>	<p><i>Third legislation (Rules and regulations) came into force on January 1st 2013, however affecting the market players since January 1st 2012, due to the fact that disclosure is carried out one year in retrospect.</i></p>
<p>c) <i>Who is the responsible body for disclosure?</i></p>	<p><i>Energy Markets Inspectorate /Energimarknadsinspektionen (EI)</i></p>
<p>2) <i>How is electricity of renewable energy disclosed? Which tracking system(s) can be applied?</i></p>	<p><i>Through cancellation of GOs or through residual mix calculations. The latter can only be used when selling unspecified renewable electricity, that is, not wind power, hydro power or any other specific energy source. The renewable share used for disclosure then of course must be deducted from the other contracts sold by the supplier.</i></p> <p><i>GOs can also be used to disclose electricity from nuclear power, coal power etc.</i></p>

Criteria / Question	Member state response
<p>3) Is the amount of energy corresponding to GOs transferred by an electricity supplier to a third party deducted from the share of energy in its energy mix for the purposes of disclosure? (Art. 15 (8) 2009/28/EC)</p>	<p><i>Yes, it is the suppliers who are responsible for that according to the Energy Markets Inspectorate's rules and regulations regarding disclosure of electricity, (EIFS 2011:4).</i></p>
<p>4) In some countries domestic GOs or certificates different from EU 2009/28 GOs are being used. Does this concept exist within your country and do you treat them differently when it comes to disclosure – if so, how?</p>	<p><i>Both EECS certificates and national GO (SEGO) are being used. SEGO cannot be exported to other domains. There is no difference in terms of disclosure between the two types of GO.</i></p> <p><i>Ex-domain cancellation can be used for the UK market.</i></p>
<p>5) Do you apply the RE-DISS residual mix calculations for untracked electricity? If not how is electricity of unknown origin disclosed? <i>Describe; preferably use a written formula</i></p>	<p><i>Yes. AIB figures are being used.</i></p>
<p>6) Who is responsible to calculate the residual mix??</p>	<p><i>The Energy Markets Inspectorate (EI).</i></p>

Criteria / Question	Member state response
<p>7) <i>Do you apply the RE-DISS recommendations on deadlines within the disclosure process mentioned hereafter (Y/N) if not: What are the deadlines for this step in the disclosure process?</i></p>	<p>Yes</p>
<p><i>a. Deadline for cancellation of GOs</i></p>	
<p><i>b. Date when the residual mix will be published</i></p>	
<p><i>c. Publication of the fuel mix of the previous year by supplier.</i></p>	
<p><b>The issuing member state has implemented Art. 15 of the Directive 2009/28/EC</b></p>	

Criteria / Question	Member state response
<p>8) On what legal basis is Art. 15 of the RES Directive implemented?</p> <p><i>What are the laws and regulations? Reference and detailed description (meaning web link or pdf) of law AND applicable regulations or by-laws. Preferably also with guidance on which articles do apply.</i></p>	<p><i>Law on Guarantees of Origin (SFS 2010:601), Ordinance on Guarantees of Origin (SFS 2010:853) and The Energy Agency's rules and regulations regarding Guarantees of Origin (STEMFS 2017:2). Some parts of the Article 15 are covered in the electricity act, (SFS 1997:857) and in the Energy Markets Inspectorate's rules and regulations regarding disclosure of electricity, (EIFS 2013:6).</i></p>
<p>a. From which production date did the national GO fulfil all criteria of Directive 2009/28? (Or when is it planned to have this framework in place?)</p>	<p><i>December 1st 2010.</i></p>
<p>b. If applicable: Which requirements have not yet been implemented?</p>	
<p>9) What is the procedure for issuing a GO (Art. 15 (2) 2009/28/EC)</p> <p><i>Describe the process how a production device will be registered and in which way the production data will be collected. Please elaborate on the question in which way there is an independent check or audit on this information and by whom.</i></p>	<p><i>The production device must through application to the Energy Agency receive the right to have GOs issued for its production of electricity. Issuing is then carried out once a month, usually the 15th.</i></p> <p><i>Check-up by an independent auditor is normally not necessary, unless the PD is large, gross metered and/or produces electricity by combustion of fuels.</i></p>

Criteria / Question	Member state response
<p>10) What is the regulation for the expiry and “use” of certificates as stated in article 15(3) of the RES Directive 2009/28/EC</p> <p><i>Describe and Specify (please elaborate especially on the definition of production period – month, calendar month, year, etc?)</i></p>	<p><i>If the GO is not cancelled within 12 months from the end of the production period, it will expire.</i></p>
<p>11) Is the appointed competent body the only competent body in your country? (Art. 15 (4) 2009/28/EC)</p>	<p>Yes</p>
<p>a. <i>If there is more than one, how are responsibilities separated from each other and/or how are geographic regions defined?</i></p>	<p>-</p>
<p>12) If the daily operations have been handed over to another body do you supervise the issuance, transfer and cancellation of GO? (Art. 15 (4) 2009/28/EC)</p> <p><i>Please explain: how is it done (what kind of measures have been taken) and by whom (competent body , regulator?)</i></p>	<p><i>The competent body supervises the issuance of GOs and that the information provided on the GO is in line with the characteristics of the corresponding production utility. Cancellation of GOs is supervised by the Energy Markets Inspectorate (regulator).</i></p>



Criteria / Question	Member state response
13) Ownership and type of organisation of the issuing body (e.g. private company, government department, energy regulator, TSO ...)	<i>The competent body and issuing body is a Government authority (Swedish Energy Agency).</i>
a. <i>Is the company independent of production, trade or supply activities? (Art. 15 (4) 2009/28/EC)</i>	Yes
<p><b>The issuing member state ensures that no more than one GO is issued in respect of each unit of energy produced and that</b></p> <p><b>The same unit of energy from renewable sources is taken into account only once (Art. 15 (2) 2009/28/EC).</b></p>	
14) What kind of GOs can be used for disclosure and in what way? <i>Describe; e.g. relationship between CHP-GO and RES-GO</i>	<i>GOs issued under the directives 2009/28/EC and 2012/27/EU (Energy efficiency directive) can be used.</i>
a. <i>If there are more than one, what kind of measures have you taken to prevent multiple issuance of GO for the same amount of energy? Please describe</i>	<i>Only one GO is issued per MWh. Every GO is marked with a unique identification number.</i>

Criteria / Question	Member state response
<p>15) Can renewable energy be disclosed in any other way than using GOs (e.g. bilateral contracts or other types of certificates, like industry based schemes)?</p>	<p><i>Yes, through the residual mix calculations. If the electricity supplier bought electricity at an electricity exchange or from companies located outside the European Union disclosure may be based on information that the pool and/or selling companies have provided.</i></p>
<p>a. <i>If so, what kind of measures have you taken to ensure that the same unit of energy is taken into account only once?</i></p>	
<p>16) Do other registry systems in your domain exist which can be used for disclosure purposes (e.g. private certificate schemes)?</p>	<p><i>No</i></p>
<p>a. <i>If so, how do you align the databases?</i></p>	
<p>17) What technical measures have you taken to prevent double counting of GOs?</p>	<p><i>One single registry. Cancellation of GOs after use.</i></p>
<p>18) When importing GOs: What measures have you taken to ensure that exported GO are not used anymore in the exporting or any other state? <i>Please specify</i></p>	<p><i>Exported GO can of course be used in the importing country. Imported GO must be of EECS standard, hence equipped with a unique identification number and subject to automatic check-ups by the AIB hub.</i></p>

Criteria / Question	Member state response
19) Have exported and cancelled quantities of electricity been deducted from the residual mix?	<i>Yes, in the calculations performed by RE-DISS. The rules and regulations on disclosure came into force January 1st 2013, however affecting the market players since January 1st 2012, due to the fact that disclosure is carried out one year in retrospect.</i>
<b>The issuing member state ensures the function of GO (Art. 15 (2) 2009/28/EC).</b>	
20) Are GOs only being used for disclosure? (Y/N) <i>If no please specify some more by answering the questions below</i>	Yes
a. <i>What type(s) of support scheme(s) are in place?</i> <i>Please describe the support schemes that have been notified to the commission and that can be applicable to producers of renewable energy.</i>	<i>The main national support scheme for supporting renewable electricity production is the green electricity certificate system.</i>
b. <i>Are GOs also used as a proof for national support schemes?</i>	No
c. <i>Do GOs have any other function within the scope of the national support scheme?</i>	No
d. <i>How do these support and disclosure schemes inter-relate? Describe e.g. how supported electricity is disclosed.</i>	<i>The electricity certificate system and GOs share registry, but are in any other case completely separated. If a production utility receives elcertifikat for its production, this is noted on the GO.</i>

Criteria / Question	Member state response
The Registry system is electronic, accurate, reliable and fraud-resistant (Art. 15 (5) 2009/28/EC).	
21) Do you have an electronic registry?	Yes
<i>Please identify the developer and operator</i>	<i>Grexel</i>
<i>a. What technology is being used (e.g. database, spreadsheet ...)?</i>	<i>Database</i>
22) Do you issue, transfer and cancel GOs for the standard size of 1 MWh? Please also specify if there are any exceptions to the general rule.	Yes
23) Are the EECS-Rules implemented by the issuing body?	Yes.
24) What measures have you taken to ensure sufficient IT-security? <i>Describe and specify. Please elaborate especially on the way to get access to accounts (fraud resistance)</i>	<i>Access to registry accounts is only possible for official representatives of the account holder, and their identity is verified by electronic ID.</i>
25) What measures have you taken to ensure validity of the GO content? <i>Describe (e.g. electricity is only measured by gauged electric meter; audits of production data, on site inspections)</i>	<i>Ad hoc inspections, hourly metering.</i>

Criteria / Question	Member state response
26) What measures have you taken to ensure that only one GO is issued for each unit of energy produced?	<i>There is only one registry, and it only issues one GO per MWh.</i>
27) Do you have written procedures for operating your GO system? If so, please specify.	<i>Thorough information can be found at <a href="https://cesar.enerqimyndigheten.se/TopLevelMenuAspxPages/UserManual.aspx">https://cesar.enerqimyndigheten.se/TopLevelMenuAspxPages/UserManual.aspx</a></i>
28) What measures have you taken (or would you be prepared to take):	
<i>a. to limit financial risk to other issuing bodies as a result of (e.g.) trading disputes between accountholders?</i>	<i>None</i>
<i>b. to limit fraudulent behaviour? (e.g. multiple issuing, transfer and cancellation – for example, inspection of plant)</i>	<i>Inspection of plants, desk inspections. Comparison with the elcertifikat registry can be carried out to detect fraudulent behaviour.</i>
29) Which parts of your operations are (or might be) outsourced, and to whom?	<i>The technical service of the elcertifikat- and GO- registry is outsourced to Grexel.</i>

Criteria / Question	Member state response
<p>30) Do you (plan to) issue separate GOs for domestic and international markets? If so, how are these related and how do you prevent double counting?</p>	<p><i>For domain Sweden, both national GO (SEGO) and EECS certificates can be used. Only EECS certificates can be exported. Both SEGO and EECS can be cancelled ex-domain for UK.</i></p>
<p>31) Can certificates be altered once they have been issued? If yes, how, and in what circumstances?</p>	<p><i>No, but they can be withdrawn if they are still in an account in the CESAR registry, and if they contain errors.</i></p>
<p>32) Please describe the regulation for metering of electricity production for issuing of GO in your domain .</p> <p><i>Please describe, including information on the authorised measurement body, way of provision of meter readings, estimation and profiling, as well as measurement of input/output for combustion fuels</i></p>	<p><i>Metering of electricity within the licensed grid shall be in accordance with (EIFS 2016:2). Outside the licensed grid, requirements are basically the same. Measurement values have to be sent to the TSO using the EDIEL standard. If production is too high related to the maximum output of the utility, the metering values will not be accepted.</i></p> <p><i>Co-firing plants have to give in a declaration over the use of different fuels (expressed as energy content in the respective fuel as a percentage of total fuel input) every month.</i></p> <p><i>PD of multiple types (e.g. PV and wind) has to fill in a production unit declaration, indicating the distribution of production between the different energy sources every month.</i></p>
<p>c. Do you issue on any basis other than meter readings? <i>Please describe (if "yes")</i></p>	<p><i>No</i></p>
<p>d. Do you issue certificates for nett or gross output?</p>	<p><i>Gross output is possible for SEGO. For EECS only nett metering is valid for issuing.</i></p>

Criteria / Question	Member state response
<p>e. <i>If you issue for gross output, how do you handle onsite demand, pumped storage and auxiliaries?</i> <i>Please describe</i></p>	<p><i>Metering can take place before onsite demand, but not before auxiliaries. Pumped storage is not considered.</i></p>
<p>f. <i>How do you handle the situation that only one meter provides production data for more than one plant? E.g. an accredited organisation to differentiate, a formula by the plant operator, a pro rata etc.</i></p>	<p><i>In this case, all plants connected to the single meter are considered to be one plant with multiple production devices.</i></p> <p><i>If necessary (e.g. due to use of different technology or fuel), the producer can be obliged to give in monthly production declarations for the different production units.</i></p>
<p>33) <i>How do you issue GO for biomass plants (100% biomass)</i> <i>Please describe the approach and explain the reasoning behind it.</i></p>	<p><i>GOs are issued after the fuel mix is reported to the Swedish Energy Agency. In this Case, 100 % biomass GOs.</i></p>
<p>34) <i>How do you issue certificates for co firing plants and on what basis do you allocate biomass?</i> <i>Please describe and explain (e.g. we use a formula to calculate biomass percentage, there will be an audit etc)</i></p>	<p><i>GOs are issued after the fuel mix is reported to the Swedish Energy Agency.</i></p>
<p>36a) <i>How do you issue certificates for waste incinerators and on what basis do you allocate waste (biomass)?</i> <i>Describe and explain</i></p>	<p><i>See above. In addition, combustion of household waste can be considered to be 60 % renewable (and hence 40 % fossil). Any waste that is not to be regarded as household waste or collected fractions of wood or other biomass has to be declared as "Other non-biomass". For waste other than household waste, EU common guidelines for the determination of fossil share of waste adopted under the emissions trading scheme, the EU ETS, are to be used.</i></p>

Criteria / Question	Member state response
<p>37) What are the production periods for production devices in your domain? Are there any exceptions?  <i>Please specify (e.g. "monthly but for small scale PV which will be issued yearly")</i></p>	<p><i>Monthly.</i></p>
<p>a) How often do you issue GOs?  b) <i>What are the procedures regarding backward issuing?</i>  <i>Please describe</i></p>	<p><i>Every month (15th or following weekday).</i>  <i>Limited to six months ex-post if due to producer error.</i></p>
<p>38) How are production device registrations verified in your domain?  <i>Please specify, including information on the general process, verified documents and list of registered parameters</i></p>	<p><i>Owner, address, postcode, property code, grid operator, EDIEL number, Grid Area Code, Utility code (EAN), prior support (investment support), signature.</i>  <i>Inspections are carried out when appropriate.</i></p>
<p>39) What is the frequency and process with which production devices are inspected in your domain? <i>Please describe, including information on conduct of any audits/ad-hoc audits, criteria for selection of auditor, scope of audit, process for addressing corrective action etc</i></p>	<p><i>Both on-site and desk inspections can be used by the agency at any time.</i></p>



Criteria / Question	Member state response
<p>40) How do you handle errors within registered information and within GOs?   <i>Please describe and specify for the categories metering errors, resettlements and other errors.</i></p>	<p><i>It depends on the severity of the error. Metering errors can be corrected through withdrawal and re-issuing of GOs. Info errors are corrected in the registry when discovered.</i></p>
<p>41) Within your domain, do certificates always expire within 12 months of the end of the production period? (Note that expired means something else than cancelled.)</p>	<p>Yes</p>
<p><i>a. If not, when do they expire?</i>  <i>Please specify</i></p>	
<p><i>b. What happens with expired certificates?</i></p>	<p><i>They are cancelled automatically. Attributes of expired GOs are accounted for in the residual mix.</i></p>
<p><b>Issued GOs include the minimum content (Art. 15 (6) 2009/28/EC)</b></p>	
<p>42) Energy source from which the energy was produced</p>	<p>Yes</p>
<p>43) The start and end dates of production</p>	<p>Yes</p>
<p>44) Electricity; heating or cooling</p>	<p>Yes</p>
<p>45) Identification number, location, type and capacity of the installation</p>	<p>Yes</p>
<p>46) Investment support.  <i>Yes/ no ,if yes please mention type and scope</i></p>	<p><i>Yes, amount, point in time</i></p>

Criteria / Question	Member state response
47) Funding by any support scheme <i>Yes/ no ,if yes please mention type and scope</i>	<i>Yes (Elcertifikat)</i>
48) Date when installation became operational	<i>Yes</i>
49) Date of issue	<i>Yes</i>
50) Issuing State	<i>Yes</i>
51) Unique Identification number of GO	<i>Yes</i>
52) Do you use additional information on GOs like labels or additional info on the sustainability of biomass? What measures have you taken to ensure the reliability of the additional information and do you want this information to be transferred between national registries? <i>Please describe and be specific</i>	<i>No labels. But all energy production can receive GOs, even coal, gas, oil and nuclear power. The registration and metering is carried out in the same way as for renewables.</i>
<b>Additional Questions</b>	
53) Are you a member of AIB? Or do you plan a membership of AIB, or to use the Hub without AIB membership?	<i>Yes.</i>