

Last updated: date (05/08/2015)

## 1 Implementation of Tracking Systems

### 1.1 Electricity Disclosure

The disclosure obligation has been implemented through Governmental Decision no. 1007/ 2004. The disclosure system was further regulated by ANRE President Order (41/2004) of December 2004. This was implemented based on contract tracking.

The E-TRACK II country report describes the 2004 system in brief distinguishing 3 phases in the disclosure process:

- Producers sent statements with disclosure information to their trading partners
- Authorities calculated national and residual mixes
- Suppliers to end consumers adapted mixes based on their contracts with generators

Producers which sold electricity to OPCOM (the Romanian power market operator) during a year had to supply the information relating to electricity disclosure after the end of the year to OPCOM, which then calculates the mix of the Day Ahead Market (DAM). This information was used by suppliers who bought from the DAM during that year.

In 2009, the system was revised through a new President Order (69/2009, from 7th February 2009) repealing the 41/2004 President Order. This new order provides for regulations that apply to producers and suppliers of electricity, under the supervision of ANRE.

The disclosure period is the calendar year. The basis is still contract-based tracking. ANRE calculates the mix to be disclosed to consumers who belong to the regulated market, this mix is then communicated to end consumers through suppliers. Mixes for consumers from the deregulated market are supplier dependent. Suppliers will have to use the calculation model drafted that is explained in Annex 4 of the President Order and the labelling format for supplier portfolio.

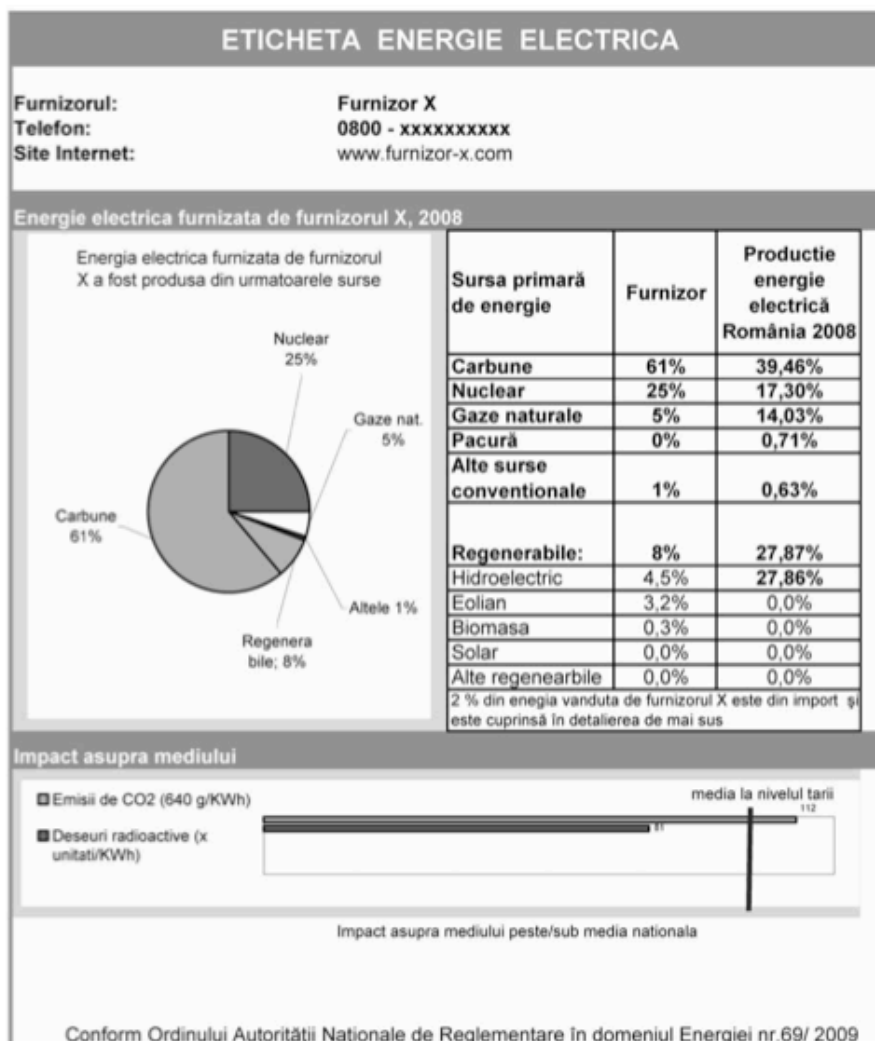
Disclosed sources are the following:

- coal,
- nuclear,
- natural gas,
- oil,
- other conventional sources,
- all RES and the breakdown of : hydro, wind, biomass, solar and other renewable sources

The format of the label is extracted from the President Order 69/2009, Annex1. It comprises the disclosure of the mix in terms of one pie and one table, the latter including the details of the renewables share. The table includes a comparison with the national production mix for the disclosed year. It also includes the CO<sub>2</sub> emissions in g/kWh and the radioactive waste in g/kWh with a comparison of the national average. Finally there is a mention of the share of imports in the disclosed mix.



## Exemplu de etichetă a energiei electrice



Disclosure of product mix is optional. If it is done, it should follow a specific format which provides for the disclosure of 3 columns in the above table product mix / default supplier mix (= overall supplier mix – product mix) / national production mix.

Disclosure values for year X have to be communicated to end consumers by 31<sup>st</sup> July of year X+1.

### 1.1.1 Disclosure Figures

Latest information by ANRE date back from 2007 and are available on the following webpage cf: <http://www.anre.ro/ro/energie-electrica/informatii-de-interes-public/info-piata-energie-electrica/etichetare-energie-electrica>

The table below describes the national mixes in terms of the share of energy sources.

Table 1: Compared composition of national mixes as calculated by RE-DISS

		Production Mix	Final Residual Mix	Total Supplier Mix
<b>Renewables</b>	Total	<b>44,35%</b>	<b>39,24%</b>	<b>44,40%</b>
	Unspecified	0,00%	0,00%	0,00%
	Solar	2,66%	3,43%	2,50%
	Wind	10,12%	12,92%	9,49%
	Hydro&Marine	30,73%	21,82%	31,64%
	Geothermal	0,00%	0,00%	0,00%
	Biomass	0,83%	1,07%	0,78%
<b>Nuclear</b>		<b>17,70%</b>	<b>11,29%</b>	<b>19,22%</b>
<b>Fossil</b>	Total	<b>37,95%</b>	<b>49,47%</b>	<b>36,28%</b>
	Unspecified	7,37%	9,58%	6,88%
	Lignite	21,95%	28,63%	20,48%
	Hard coal	4,14%	5,56%	4,64%
	Gas	4,48%	5,69%	4,36%
	Oil	0,00%	0,01%	0,01%
<b>CO2 emissions (gCO<sub>2</sub>/kWh)</b>		388,796	513,43	376,19

Source: RE-DISS 2015

### 1.1.2 Environmental Information

See 1.1

As for the mix, the latest information on ANRE's website dates back to 2007.

On the same webpage as in 1.1, the details of compared emissions per supplier for 2007 are also available, but no comparison for nuclear waste.

### 1.1.3 Suppliers Fuel-Mix Calculations

The supplier mix calculation takes into account the following sources of information:

- Purchases from electricity producers
- Purchases from the Day Ahead Market,
- Purchases on the Balancing market
- Imports.

Contract based tracking is allowed, and clearly regulated. However, the calculation of a national residual mix does not follow RE-DISS recommendations.

Until 31<sup>st</sup> March of year X+1, producers have to communicate to their buyers in the disclosed period and to ANRE, their production mix for year X, as well as the volume of imported or exported production. This communication includes the calculation of the CO2 emission in g/kWh and the nuclear waste generated in g/kWh.

By 15<sup>th</sup> April, ANRE should calculate the national production mix and its environmental impacts on the basis of the information communicated by producers.

For electricity purchased from other suppliers, net sellers should communicate their mix to net buyers. Regarding environmental impacts of the mix, suppliers buying from another supplier should use the national averages calculated by ANRE.

ANRE also has the responsibility to calculate the mix for balancing market and Day Ahead Market by the same date.

Suppliers should use the individual producers' declarations for all electricity purchased to them and the mixes calculated by ANRE for the DAM and the Balancing market.

Import mix should conform to Eurostat figures, regarding EU 28 (as is specified in the calculation example in Annex 5 of President Order 69/2009).

#### **1.1.4 Acceptance of GOs**

The National Regulation Authority in the Field of Energy recognises the guarantees of origin issued by the authorities of other EU Member States or, in case of rejection, a specific procedure must follow to inform and justify the decision in front of the European Commission.

### **1.2 Guarantees of Origin for Electricity from Renewable Energy Sources and High-Efficient Cogeneration**

#### **1.2.1 RES-GO System**

GO for RES were implemented through Electricity Laws 2003 and 2007. ANRE, the Romanian Energy Regulatory Authority is appointed as the competent authority for GO. At the time these GO were not linked with disclosure, but with target monitoring of RES-E production share in national gross consumption.

Law 220/2008, in its second publication on August 2010, establishes a clear linkage of GO with disclosure (art.2, S). The transfer of guarantees takes place separately or together with the physical transfer of electricity. The guarantee of origin can also be transferred to the participants to the energy market from other EU Member States. The transfers of guarantees of origin do not influence the statistical transfers, joint projects or support schemes regarding the final gross consumption of energy from RES.

GO were issued until 2010 but no exports or imports have taken place. For 2010, 2011 and 2012, no more GO were issued.

In July 2011, a new law was taken with effect beginning of 2012, which establishes new regulations for GO in order to comply with Directive 2009/28.

The framework for RES-GO described in these regulations is the following:

- Issuing is voluntary, and made on written request by producer, not more than 30 days after end of production period. The issuing is made on the basis of the information on production coming from the TSO and DSOs.
- For each unit of energy, only one GO can be issued
- Support information is coded, as well as expiration date
- Production period can last 1, 3 or 6 months
- GO not linked to support, nor to physical electricity
- GO has to be deducted from supplier mix if transferred to a third party
- GOs are issued for net production.

- Information on GO for the previous year should be put by ANRE on their website by 31st March
- ANRE has to withdraw a GO after notification of use by the supplier.

A guarantee of origin is issued in electronic format for each unit of energy (1MWh) of RES-E produced and delivered to the grid and contains the following information:

- date of issue, issuing body and country of origin, as well as a unique identification number.
- energy source from which the electricity was produced and the starting and final production date;
- the identity, location, type and capacity of the installation where the energy was produced;
- whether and to what extent the facility has received support for investments;
- whether and to what extent energy unit benefited in any way support a national scheme and the type of support system;
- the date on which the installation was put into operation;
- In issuing guarantees of origin, fractions greater than or equal to 0.5 MWh rounded by adding 1 MWh, and the lowest of 0.5 MWh are not considered.

ANRE has the responsibility to operate the electronic registry. There is no plan for now to be connected to the EECS system, as there is no demand for exports or imports, but this could change.

### 1.2.2 CHP-GO System

According to electricity law, ANRE has the right to issue GO for electricity produced in cogeneration of high efficiency. The framework for CHP GO is described in the Governmental Decision no.1461/2008 published in the Official Gazette of Romania no. 813/4.XII.2008. Secondary legislation has been passed (Ordin 61 2015 from 1<sup>st</sup> April 2015) which details the methodology to calculate the number of HE CHP GOs

There is no CHP GO registry in Romania yet, but the intention is to unify it with the RES-GO registry.

### 1.2.3 Statistics

GO statistics are available in the annual report from ANRE. During 2011 and 2012, no GOs were issued. In 2013 some GO were issued, they are detailed in a report on the ANRE website (<http://www.anre.ro/ro/cauta?s=origin>).

## 1.3 RES-E Support Schemes

There is a quota obligation on suppliers in Romania, which they have to fulfil by purchasing green certificates from producers of renewable electricity, or they should pay a penalty. Plants that receive green certificates can also receive a GO for the same unit of electricity. Green certificates are issued by the TSO to the producers. Details of the system are available in Law 220/2008 republished in the Official Gazette of Romania part 1, n° 577 August 13<sup>th</sup> 2010 and modified by Law 122/2015 from 3<sup>rd</sup> June 2015.

RES-LEGAL ([www.res-legal.eu](http://www.res-legal.eu)) describes the following. "Electricity generators may sell electricity on the wholesale market (art. 14 par. 1 Law No. 220/2008 as referred to in art. 1 par. 16 Emergency Ordinance No. 88/2011). Electricity generated by small-scale installations may be sold to the electricity suppliers for a guaranteed price, but the support mechanism has not been adopted so far (art. 14 par. 2 Law No. 220/2008 as referred to in art. 1 par. 16 Emergency Ordinance No. 88/2011 and in art. 1 par. 9 Law No. 134/2012)." Law 122:2015 stipulates that the support system for small scale installations should be prepared within 90 days following the date when the Law came into force.

## 2 Proposals for Improvement of the Tracking System

### 2.1 Proposals regarding general regulation on tracking systems

To improve the tracking system in place the following BPRs should be applied:

- BPR [23]: Other Reliable Tracking Systems (RTS) should be defined where appropriate based on criteria of added value, reliability and transparency
- BPR [24]: RTS can comprise, where applicable:
  - Homogeneous disclosure mixes for regulated market segments where no choice of supplier of different products exists,
  - Support systems whose interaction with disclosure requires a certain allocation of the attributes of supported generation (e.g. a pro-rata allocation to all consumers in a country where RES electricity is supported by a feed-in tariff),
  - Contract based tracking

### 2.2 Proposals regarding Disclosure

Romania should introduce all BPRs dealing with Residual Mix.

- BPR [25]: All countries should provide a Residual Mix (RM) as a default set of data for disclosure of energy volumes for which no attributes are available based on cancelled GO or based on other Reliable Tracking Systems. The use of uncorrected generation statistics (e.g. on national or UCTE, Nordel etc. levels) should be avoided.
- BPR [26a]: The calculation of the Residual Mix should follow the methodology developed in the RE-DISS project.
- BPR [26b]: As part of this methodology, competent bodies from all countries in Europe should cooperate in order to adjust their Residual Mixes in reflection of cross-border transfers of physical energy, GO and RTS.
- BPR [27]: For purposes of this cross-border adjustment, competent bodies should use data provided by RE-DISS. They should also support the collection of input data for the related calculations by the RE-DISS project team.
- BPR [28]: As a default, the Residual Mix should be calculated on a national level. However, in case that electricity markets of several countries are closely integrated (e.g. in the Nordic region), a regional approach to the Residual Mix may be taken. This should only be done after an agreement has been concluded amongst all countries in this region which ensures a coordinated usage of the regional Residual Mix.
- BPR [31]: In cases that suppliers of electricity intend to use contract based tracking in order to fulfil claims made towards consumers regarding the origin of a certain electricity product (e.g. a green energy product), GO should be used instead of contract based tracking (see also BPR [36]).
- BPR [32]: If a country implements a system where generation attributes are allocated to suppliers and consumers of electricity “ex post” based on the contracts concluded in the electricity market, then such a system should fulfill the requirements mentioned above in order to qualify as a Reliable Tracking System (see item [21])
- BPR [33]: Electricity disclosure should be based on calendar years.
- BPR [34]: The deadline for cancelling GO for purposes of disclosure in a given year X should be 31 March of year X+1 (see BPR 5b).
- BPR [35]: The timing of the calculation of the Residual Mix should be coordinated across Europe:
  - By 30 April X+1 all countries should determine their preliminary domestic Residual Mix and whether they have a surplus or deficit of attributes.

- By 15 May X+1, the European Attribute Mix should be determined.
- By 31 May X+1, the final national Residual Mixes should be published.
- As of 1 July X+1 the disclosure figures relating to year X can be published by suppliers.
- BPR [36]: All countries should clarify the relation between their support schemes for RES & cogeneration on the one side and GO and disclosure schemes on the other side. Where necessary, the support schemes should be defined as RTS

### 2.3 Proposals regarding GO

The following BPR should be implemented related to GO in Romania:

- BPR [1a]: Metered production periods for issuing GOs should not be longer than a calendar month.
- BPR [1b]: Metered production periods for issuing GOs should not run across the start and end of disclosure periods. Longer intervals up to one year are acceptable for very small plants, for example (new 1b on BPR)
- BPR [2]: If possible, issuing of GOs should be done directly after the end of each production period.
- BPR [3a]: Lifetime of GO should be limited to 12 months after the end of the production period.
- BPR [3b]: GOs that have reached this lifetime should be collected into the Residual Mix
- BPR [4]: An extension to this lifetime can be granted if a GO could not be issued for more than [six] months after the end of the production period for reasons which were not fully under the control of the plant operator. In this case, the lifetime of the GO might be extended to [six] months after issuing of the GO.
- BPR [5a, 5b]: Cancellations of GO relating to production periods in a given year X which take place until a given deadline in year X+1 should count for disclosure in year X. Later cancellations should count for disclosure in year X+1. (In case that disclosure periods differ from the calendar year (see item [31]), the deadline should be defined accordingly.) Deadline is set on 31 March X+1 (BPR [5a, 5b]).
- BPR [6]: The same allocation rule should apply for expired GO (see item [3]): The date of expiry thus determines the disclosure period for which information from expired GO will be used.
- BPR [7a, 7b, 8]: The implementation of GO in all countries in Europe should be based on the European Energy Certificate System (EECS) operated by the Association of Issuing Bodies (AIB). In case that national GO systems are established outside of EECS, then EECS should at least be used for transfers between registries. (BPR [7 a&b]). Reliable linkages should be established with countries which are not EECS members. (BPR [8]).
- BPR [9a]: Market participants of the respective domain should be provided the possibility to export their GOs and thus participate in the European internal market for electricity.
- BPR [9b]: So-called ex-domain cancellations of GO, where a GO is cancelled in one registry and a proof of cancellation is then transferred to another country in order to be used there for disclosure purposes, should only be used if there is no possibility for a secure electronic transfer and if there is an agreement on such ex-domain cancellations between the competent bodies involved. Statistical information on all ex-domain cancellations should be made available in order to support Residual Mix calculations.
- BPR [10.2]: Verification mechanisms should be implemented for ongoing control of registered data (e.g. reaudits, random checks, etc...)
- BPR [11a]: The GO system should be extended beyond RES & cogeneration to all types of electricity generation, which should all be handled in one registry.

- BPR [11b]: GOs should be issued for all electricity production, unless an RTS applies for that production, e.g. for the disclosure of supported electricity
- BPR [11c]: Competent bodies should consider to make the use of GOs mandatory for all electricity supplied to final consumers.
- BPR [12.1]: All types of GO should be handled in one comprehensive registry system per country. (For an exception from this recommendation see the coexistence of national GO systems and EECS)
- BPR [12.2]: Technical changes to plants need to be registered as soon as is reasonably practicable
- BPR [13.2]: A GO should be considered as having been used only once it has been electronically cancelled.
- BPR [13.3]: After cancellation, no further cancellation, transfer or export of the given GO should be possible.
- BPR [13.4]: After expiry, no further cancellation, transfer or export of the given GO should be possible.
- BPR [13.5]: An exported GO should be marked as removed from the exporting registry.
- BPR [13.6]: Processes in the registry should exclude duplication of GOs.
- BPR [13.7]: Registries should be audited on a regular basis.
- BPR [14a]: There should be no issuing of more than one GO for the same unit of electricity.
- BPR [15a, 15b]: This also applies to CHP plants which are using RES as the energy source: Only one GO should be issued per unit of electricity. This GO should combine the functionalities of a RES-GO and a cogeneration GO.
- BPR [16]: In the medium to longer term, GO should be the only “tracking certificate” used. Any other tracking systems of a similar purpose and function as GO should be closely coordinated with GO and eventually converted to GO.
- BPR [17]: Besides GO, only Reliable Tracking Systems (which may include contract based tracking) and the Residual Mix should be available for usage for disclosure. No other tracking mechanisms should be accepted.
- BPR [18]: Green power quality labels should use GO as the unique tracking mechanism.
- BPR [19]: European countries should clarify whether and under which conditions the use of GOs by end consumers is allowed. Such GO use should not be based on ex-domain cancellations performed in other countries. If consumers are allowed to use GOs themselves, a correction should be implemented in the disclosure scheme which compensates for any “double disclosure” of energy consumed...

## 2.4 Proposals regarding Acceptance of GO

The following BPRs should lead to further reflexion on the criteria on the basis of which to refuse GOs from other Member States or EFTA countries.

- BPR [20a]: European countries should choose one of the two following options and apply it consistently for all foreign GO :
  - Rejection of GOs only relates to the cancellation of GOs and subsequent use for disclosure purposes in the respective country and should not restrict the transfers of GOs between the registry of the considered country and the registries of their countries. This means that the decision about the recognition of a GO should not hinder its import into the considered country.
  - Rejection of GOs implies blocking their import to the national registry
- BPR [20b]: The choice of one or the other option should be transparent for all market parties and clearly communicated.



- BPR [21]: Within the rules set by the respective Directives, Member States should consider to reject the recognition of GO from other countries for disclosure in case that these countries have not implemented adequate measures which avoid double counting, e.g. a proper determination of a Residual Mix for disclosure.

## 2.5 Further proposals regarding Disclosure

Disclosure could further be improved by the implementation of the following BPRs:

- BPR [38]: All electricity products offered by suppliers with claims regarding the origin of the energy (e.g. green or low-carbon power) should be based exclusively on cancelled GO. No other tracking systems should be allowed, with the exception of mechanisms defined by law, e.g. a pro-rata allocation of generation attributes to all consumers which is related to a support scheme (see BPR [22]).
- BPR [40]: There should be clear rules for the claims which suppliers of e.g. green power can make towards their consumers. There should be rules how the “additionality” of such products can be measured (the effect which the product has on actually reducing the environmental impact of power generation), and suppliers should be required to provide to consumers the rating of each product based on these rules.
- BPR [41]: Claims made by suppliers and consumers of green or other low-carbon energy relating to carbon emissions or carbon reductions should also be regulated clearly. These regulations should avoid double counting of low-carbon energy in such claims. A decision needs to be taken whether such claims should adequately reflect whether the energy purchased was “additional” or not .
- BPR [42]: In case that suppliers are serving final consumers in several countries rules must be developed and implemented consistently in the countries involved on whether the company disclosure mix of these suppliers should relate to all consumers or only to those in a single country.
- BPR [43]: The following recommendations should be followed with respect to the relation of disclosure to cooperation mechanisms (Art 6 - 11 of Directive 1009/28/EC):
  - a) If EU MS or MS or any other country agree on Joint Projects, such agreements should also clarify the allocation of attributes (via GO, RTS or Residual Mix) issued from the respective power plants
  - b) If EU MS agree on Joint Support Schemes, such agreements should also clarify the allocation of attributes (via GO, RTS or Residual Mix) issued from the power plants supported under these schemes
- BPR [44]: Suppliers should follow the RE-DISS methodology for the calculations of their disclosure figures.

## 2.6 Matrix of disclosure related problems and country-specific proposals

Problem	Country-specific proposal
Possible double counting in different explicit tracking instruments	BPRs: [7a], [7b], [8] [9b], [10.2], [11a], [12.1], [12.2], [13.2], [13.3], [13.4], [13.5], [13.6], [13.7], [14a], [15a], [16], [17], [18], [21], [23], [24], [31], [32], [38],
Double counting of attributes in implicit tracking mechanisms	BPRs: [5a], [5b], [6], [9b], [11a], [13.2], [13.3], [13.4], [13.5], [13.6], [21], [23], [24], [25], [26a], [26b], [27], [28], [32], [43], [44]

Problem	Country-specific proposal
Double counting within individual supplier's portfolio	BPRs: [42]
Loss of disclosure information	BPRs: [3b], [11a], [15b], [19], [22]
Intransparency for consumers	BPRs: [10.2], [11a], [11b], [11c], [12.2], [13.2], [13.3], [13.4], [13.5], [13.6], [23], [40], [41], [42],
Leakage of attributes and/or arbitrage	BPRs: [1a], [1b], [2], [3a], [5a], [5b], [6], [9b], [19], [28], [34], [35],
Unintended market barriers	BPRs: [4], [7a], [7b], [8], [9a], [9b], [11b], [11c], [20a], [20b], [21]

**Disclaimer:**

The sole responsibility for the content of this document lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission is responsible for any use that may be made of the information contained therein.