

Last updated: date (25/07/2015)

## 1 Implementation of Tracking Systems

A full disclosure scheme is implemented in the Slovak legislation with disclosure of energy mix and of environmental impacts (CO<sub>2</sub> and radioactive waste).

### 1.1 Electricity Disclosure

The obligation for suppliers to disclose their electricity supply mix has been transposed in legislation through Act n°251-2012 dated 31<sup>st</sup> July 2012 as amended on Energy and on amendment of certain laws in section 34, which states the following:

“(2) The electricity supplier shall be obliged:

(...)

c) to provide information to the electricity consumer about the shares of individual types of primary energy sources in the electricity purchased or produced by the producer for the purpose of its supply to electricity consumers, including electricity consumers outside the defined territory, for the previous year, upon the provision of this information the supplier shall also take account of electricity purchased or produced in other Member States and in third countries; the supplier shall provide such information on request also to the ministry and the office;

(...)

(3) The information as per subsection 2 items c), d) and h) must be reliable; the electricity supplier is obliged to state such information on issued bills for the supply of electricity or in materials sent together with such a bill and in promotional materials sent to final electricity consumers.

The electricity supplier is obliged to state the information as per subsection 2 item c) in a manner that is comprehensible to electricity consumers and which enables them to compare easily with similar information provided by other suppliers supplying electricity in the defined territory.

Disclosure information concerns energy consumed in the preceding calendar year and it should be provided by December of year n+1 for consumption of year n.

The Competent Authority for electricity disclosure is URSO, the regulatory office for network industries (electricity, gas, water, thermal energy). It should exercise control over compliance (as stated in section 90).”

#### 1.1.1 Disclosure Figures

No disclosure figures were available from URSO. The table below describes the national production mix in terms of the share of energy sources.

Table 1: Compared composition of national mixes as calculated by RE-DISS for 2014

		Production Mix	Final Residual Mix	Total Supplier Mix
<b>Renewables</b>	Total	<b>23,93%</b>	<b>21,00%</b>	<b>21,61%</b>
	Unspecified	1,45%	1,27%	1,26%
	Solar	1,89%	1,66%	1,65%
	Wind	0,03%	0,04%	0,04%
	Hydro&Marine	16,98%	14,89%	15,55%
	Geothermal	0,00%	0,00%	0,00%
	Biomass	3,58%	3,14%	3,12%



<b>Nuclear</b>		<b>57,52%</b>	<b>55,55%</b>	<b>55,12%</b>
<b>Fossil</b>	Total	<b>18,55%</b>	<b>23,44%</b>	<b>23,26%</b>
	Unspecified	0,23%	1,18%	1,18%
	Lignite	6,73%	9,10%	9,03%
	Hard coal	3,89%	5,46%	5,42%
	Gas	6,84%	6,88%	6,83%
	Oil	0,86%	0,81%	0,80%
<b>CO2 emissions (gCO<sub>2</sub>/kWh)</b>		154,67	199,06	197,52

Source: RE-DISS 2015

### 1.1.2 Environmental Information

Section 34 of Act n°251-2012 dated 31<sup>st</sup> July 2012 as amended on Energy and on amendment of certain laws in section 34, also imposes on the suppliers the provision of environmental impacts:

“(2) The electricity supplier shall be obliged:

(...)

d) to provide information to the electricity consumer regarding the impact of electricity purchased or produced by the supplier in the previous year for the purpose of its supply to electricity consumers, including electricity consumers outside the defined territory, on the natural environment, including data about CO<sub>2</sub> emissions and radioactive waste produced upon the generation of this electricity, or to state a reference to a public source of such information; when providing this information the supplier shall take account also of electricity purchased or produced in other Member States and in third countries; the supplier shall provide such information on request also to the ministry and the office;”

### 1.1.3 Suppliers Fuel-Mix Calculations

Methodological Guidelines issued on 3<sup>rd</sup> December 2013 provide guidance on how to determine supplier mix. At the time this profile was written, it was not possible to receive a copy these guidelines.

Tracking instruments that are used are contracts and EU average production mix for imports. GOs are intended to be used for disclosure but no disclosure provisions are known that include them in calculation processes.

### 1.1.4 Acceptance of GOs

Obligation to recognise GOs from other Member states is stated in part 11 of § 7a (RES) and part 11 of §8a (CHP) of law 309-2009 from 19 June 2009 consolidated on 31/12/14 on the promotion of renewable energy sources and high-efficiency cogeneration and on amendments to certain Acts. These GOs should be used as GOs issued in the Slovak Republic. It is stated that “non-acceptance of guarantees of origin of electricity renewable energy in another Member State must be based on objective, transparent and non-discriminatory criteria.”

No such criteria had been defined at the time information for drafting this report was collected.

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

Guarantees of Origin for RES and CHP are regulated in law 309-2009 from 19 June 2009 on the promotion of renewable energy sources and high-efficiency cogeneration and on amendments to certain

Acts. This law was consolidated on 31<sup>st</sup> December 2014 and a few provisions concerning GOs were changed.

Slovakia is not represented in the AIB and does not use the AIB Hub for imports or exports of GOs.

### 1.2.1 RES-GO System

Paragraph 7a of this law deals with guarantees of origin of electricity from renewable energy sources. On URSO's website, it is stated that : "Guarantees of electricity origin from RES are issued by the Office as a certificate that the electricity was generated from renewable energy sources, and is used to prove that the respective share of electricity was generated from renewable energy sources according to §7a of Act No. 309/2009 Coll. on promotion of renewable energy sources and of high-efficiency combined generation and on amendments to certain acts."

The consolidated Law specifies that GOs are an electronic document and establishes the link with disclosure. The registry is under Excel format. GO are expired 12 months after being issued. Cancellation is foreseen in order to prove origin to end users.

Supported electricity (Feed in Tariff) can receive GO.

GOs are issued upon request of a producer. URSO should issue the certificate within 30 days after request if documentation is complete. The application should contain at least the following information:

- for a legal person, business name, address and the name and surname of the statutory authority or the names and surnames of the statutory body and with a natural person-entrepreneur business name and place of business;
- the place, date of commissioning or date of reconstruction or upgrading of the production device,
- the period for which the certificate is required
- location, type and installed capacity
- the point of delivery,
- specification of the renewable energy source
- in the case of electricity generation from biogas share input of harvested biomass used in biogas production,
- the level of support of the state

A GO for contains :

- the identity of the manufacturer of electricity from renewable energy sources to which the GO is issued
- the start and end dates of the production period,
- the type, location and total installed capacity of the facility,
- the commissioning date or date of re-construction or upgrading of technological power equipment,
- the specification of the renewable energy source from which the electricity is produced,
- the location of the plant
- the amount of electricity produced from renewable energy sources for the period for which the certificate is issued,
- the amount of investment support or other support scheme
- the date and country of issue
- an identification number

### 1.2.2 CHP-GO System

Paragraph 8a of the law n°309-2009 from 19 June 2009 on the promotion of renewable energy sources and high-efficiency cogeneration and on amendments to certain Acts, consolidated on 31/12/14 describes guarantees of origin for high efficiency cogeneration plants.

The guarantee of origin of electricity from high-efficiency cogeneration contains:

- the energy source from which the electricity was produced,
- start and end dates of electricity,
- an indication, location, technology, installed electric power equipment, installed heat capacity of the facility and the total installed capacity in which the electricity was produced,
- the amount and calorific value of the fuel that was used in the process of conversion to usable energy;
- the quantity of heat produced and performed mechanical work,
- the place, date of entry into service or date of reconstruction or upgrade of technological part of the energy equipment and technology cogeneration
- the uses mechanical work and useful heat produced together with electricity produced from high efficiency cogeneration,
- data on the monthly balance of production and supply of electricity and heat production and supply for the previous year if the device was operating in the previous year,
- Calculation of primary energy savings
- amount of electricity produced from high-efficiency cogeneration, to which the guarantee of origin of electricity produced from high-efficiency cogeneration requires
- the percentage expressed support for the state budget,
- specification of the cost of electricity production and the cost of producing one megawatt hour,
- the amount of investment assistance or other support from national support scheme, and the type of aid when it gained power equipment manufacturer,
- the date of issue and the State in which the guarantee of origin of electricity produced from high-efficiency cogeneration issued,
- identification number,
- other information on the purpose, administered by the Office.

### 1.2.3 GO statistics

There are no statistics available.

## 1.3 RES-E Support Schemes

As regulated by Law n°221/2013, RES electricity is supported through Feed in Tariffs (FiT) consisting in two parts: a guaranteed price and a premium. All RES technologies are eligible to the guaranteed price, for plants up to 125 MW. Only plants up to 5MW and 15 MW for wind are eligible to the premium. The guaranteed price is calculated by URSO according to the technology.

A FiT contract will last for 15 years, starting on the commissioning date of the plant or on the date of upgrading. Plants under 500 kW can claim the FiT throughout their lifetime.

RES-E technologies also benefit from the exemption of excise tax. All renewable energy sources used for the production of electricity can benefit from it.

## 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

- 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 [29]: If contract based tracking is allowed in a country, it should be regulated clearly.
- BPR [30]: Such regulations should ensure that:
  - 5- The rules of the tracking system are transparent and comprehensive and are clearly understood by all participants in the system.
  - 5- Double counting of attributes and loss of disclosure information is minimised within the contract based tracking scheme and also in the interaction of the contract based tracking scheme to GO and other RTS (if applicable). As a precondition for this, the contract based tracking scheme should be able to provide comprehensive statistics about the volumes and types of electricity attributes which are tracked through it.
  - The relevant information for disclosure purposes should be available in time to meet the timing requirement
- 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 [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.

### 2.3 Proposals regarding GOs

- 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 [7a &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 [10.1]: GOs should generally be issued only for the net generation of a power plant, i.e. gross generation minus the consumption of all auxiliaries related to the process of power production. For hydro power plants involving pumped storage this means that GOs should be issued only for the net generation which can be attributed to natural inflow into the reservoir.
- BPR [10.2]: Verification mechanisms should be implemented for ongoing control of registered data (e.g. reaudits, random checks, etc...)

- BPR [10.3]: Correct accounting of RES share of combustion plants should be assured by adequate measures such as those recommended by the EECS Rules (cf part N5.3.2).
- 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 [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

- 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

- 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
- 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 [39b]: Suppliers offering two or more products which are differentiated regarding the origin of the energy should be required to give product-related disclosure information to all their customers, including those which are buying the “default” product of the supplier.
- BPR [40]: There should be clear rules for the claims which suppliers of e.g. green power can make to- wards 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], [10.1], [10.2], [10.3], [11a], [12.1], [12.2], [13.3], [13.4], [13.5], [13.6], [13.7], [14a], [15a], [16], [17], [18], [21],

Problem	Country-specific proposal
	[23], [24], [29], [30], [31], [32], [36], [38],
Double counting of attributes in implicit tracking mechanisms	BPRs: [5a], [5b], [6], [9b], [11a], [13.3], [13.4], [13.5], [13.6], [23], [24], [25], [26a], [26b], [27], [28], [29], [30], [32], [43], [44]
Double counting within individual supplier's portfolio	BPRs: [39b], [42]
Loss of disclosure information	BPRs: [3b], [11a], [15b], [19]
Intransparency for consumers	BPRs: [10.2], [11a], [11b], [11c], [13.3], [13.4], [13.5], [13.6], [23], [39b], [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]

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*Note: This Country Profile expresses the interpretation of the RE-DISS project team of the qualitative data collected from the respective Competent Bodies of the domain and/or other sources.*