Country Profile: Luxembourg

RE-DISS
Reliable disclosure systems for Europe

Last updated: 15/10/2012

1 Implementation of Tracking Systems

1.1 Electricity Disclosure

Electricity disclosure is legally implemented in Luxembourg by the electricity law from 2007 and the grand-ducal regulation on electricity disclosure from 2010.[1] Detailed regulations have been published by the national regulator Institut Luxembourgeois de Régulation (ILR), which is the Competent Body both for disclosure and for GO, in September 2010.[2]

The disclosure information comprises shares of the following fuels:

- Renewable Energy Sources
  - Wind
  - Hydro
  - Solar
  - Biomass
  - Other Renewable Energy Sources
- Fossil
  - Lignite
  - Hard Coal
  - Natural Gas
  - High-efficient CHP
  - Other Fossil
- Nuclear
- Non Identifiable

As explicit tracking instruments, not only cancelled official GO can be used, but also national generation contracts or other certificates which are established by independent organisations or a competent authority. Therefore, no statistics are available on the total use of explicit tracking. Furthermore, ILR is auctioning the disclosure attributes of supported generation, which then can be explicitly disclosed by the successfully bidding suppliers.

As implicit tracking mechanism, ILR annually publishes a residual mix which is based on ETSO-E production mix and from which all RES is deducted.

Suppliers' disclosure statements have to comprise the product mix, the total supplier mix and the national reference mix (i.e., the total of all product mixes delivered to consumers in Luxembourg as shown in Table 1). Reference period is the calendar year, and figures have to be published with invoices as of September 1st of the following year. The supplier's mix does not only have to cover national supply, but also supply by the respective company to end-consumers in other domains. In case no reliable figures for such international supply mix are available, or that no explicit information for the product mix can be

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1 Loi du 1er août 2007 relative à l'organisation du marché de l'électricité, Art. 49;
Règlement grand-ducal du 21 juin 2010 relatif au système d'étiquetage de l'électricité

2 Règlement E10/23/ILR du 21 septembre 2010: Concernant la détermination de la composition et de l'impact environnemental de l'électricité fournie.

Project supported by the European Commission through the „Intelligent Energy-Europe" Programme

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provided by the supplier, the residual mix as published by ILR and shown in Table 2 is applied for these volumes.

1.1.1 Disclosure Figures

ILR publishes as specification of the national regulation on disclosure the annual supply mix for the total delivery of electricity by suppliers to end-consumers in Luxembourg.[3] The national supply mix for 2011 is published as shown in Table 1.

Table 1: National Supply Mix for Luxembourg for 2011 as published by ILR

Energy Source Category		Share in National Mix
Fossil		**54,80%**
	Hard Coal	4,80%
	Lignite	4,20%
	Natural Gas	28,90%
	High-Efficient Cogeneration	3,40%
	Other Fossil	13,50%
Nuclear		**24,40%**
Renewable		**20,20%**
	Biomass	0,90%
	Wind	2,60%
	Hydro	16,30%
	Solar	0,40%
	Other Renewable Energy Sources	0,00%
Others and Non-Identifiable		**0,60%**
TOTAL		**100,00%**

As default mix for non-explicitly tracked products, ILR provides a default residual mix based on the European ENTSO-E mix with all EE shares being deducted.

[3] Règlement E12/13/ILR du 6 juillet 2012 portant publication de la composition et de l'impact environnemental du mix national pour l'année 2011

Table 2: Default residual mix for 2011 as published by ILR (European ENTSO-E mix minus RES attributes)

Energy Source Category		Share in National Mix
Fossil		**64,57%**
	Hard Coal	13,27%
	Lignite	11,73%
	Natural Gas	18,64%
	High-Efficient Cogeneration	0,00%
	Other Fossil	20,93%
Nuclear		**34,99%**
Renewable		**0,00%**
	Biomass	0,00%
	Wind	0,00%
	Hydro	0,00%
	Solar	0,00%
	Other Renewable Energy Sources	0,00%
Others and Non-Identifiable		**0,44%**
TOTAL		**100,00%**

1.1.2 Environmental Information

ILR provides default environmental values for CO_2 and nuclear waste for each energy source and technology, based on Probas database from German Umweltbundesamt. National average values are published together with national disclosure figures (see paragraph 1.1.1). For 2011, this has been 359,13 g CO_2 per kilowatt hour and 1,48 mg nuclear waste per kilowatt hour.

1.1.3 Suppliers Fuel-Mix Calculations

See paragraph 1.1 above.

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

1.2.1 RE-GO and CHP-GO System

Legislation which should fully implement the GO-specific regulations of the Renewables Directive 2009/28/EC has been proposed, but is not officially decided yet. However, a national RES GO system is already implemented within EECS with the national regulator ILR as officially appointed Competent Body. Regulations on RES GO are currently defined in the grand-ducal regulation from 2008 on renewable electricity.[4]

GO are issued electronically within EECS for net production and for a standard volume of 1 MWh, and only on demand by the producer for the specifically requested period. So far, no expiry regulation has been put in place. No limitations apply in terms of unbundled use of the GO, which can be used for electricity disclosure only after cancellation in the ILR registry.

[4] Règlement grand-ducal du 8 février 2008 relatif à la production d'électricité basée sur les sources d'énergie renouvelables. Art. 3.

There is no legal framework for CHP-GO so far. No GO for non-RES-E are issued in Luxembourg.

So far, no clearly defined regulation is applied in terms of recognition of foreign GO. This is done based on a case by case check by ILR.

1.2.2 GO Statistics

Table 3: National EECS GO Statistics for Luxembourg as published by AIB for 2011

Transaction Type	Volume [MWh]
Issue	**375**
Export	**26.830**
Import	**933.702**
Cancel	**514.365**

1.3 Other RES-E Relevant Support Schemes

Luxembourg applies a feed-in system for support of RES-E production. No GO are issued for plants which operate under the national support system. The attributes of supported electricity are auctioned by ILR to domestic suppliers; residual quantities are allocated on a market share pro-rata basis to suppliers.

2 Proposals for Improvement of the Tracking System

The following proposals are made in accordance with the RE-DISS Best Practice Recommendations,[5] which have been agreed by the Participating Domains of the RE-DISS Project.

2.1 Proposals regarding Disclosure

1. Cancellations of GO relating to production periods in a given year X which take place until 31 March of year X+1 should count for disclosure in year X. Later cancellations should count for disclosure in year X+1. (BPR [5])
2. GO should be the only “tracking certificate” used. Any other tracking systems of a similar purpose and function as GO should be converted to GO. (BPR [16])
3. Besides GO, only Reliable Tracking Systems and the Residual Mix should be available for usage for disclosure. No other tracking mechanisms should be accepted. (BPR [16])
4. Green power quality labels should use GO as the unique tracking mechanism. (BPR [18])
5. (Other) Reliable Tracking Systems (RTS) should be defined where appropriate based on criteria of added value, reliability and transparency. RTS can comprise, where applicable:
    a. Homogenous disclosure mixes for regulated market segments where no choice of supplier or different products exists,
    b. 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),
    c. Contract based tracking.

    (BPR [23], [24])
6. The calculation of the Residual Mix should follow the methodology developed in the RE DISS project. As part of this methodology, ILR should ensure that double counting between GO they have issued, other Reliable Tracking Systems in use in their country and the Residual Mix is excluded. ILR should cooperate with competent bodies from all countries in Europe in order to adjust their Residual Mixes in reflection of cross border transfers of physical energy, GO and

[5] Version 2.0 (draft), 7 September 2012

RTS. For this purpose, ILR 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 [26], [27])

7. If contract based tracking is further allowed in Luxembourg, it should be regulated clearly. Such regulations should ensure that
    a. The rules of the tracking system are transparent and comprehensive and are clearly understood by all participants in the system.
    b. 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.
    c. The relevant information for disclosure purposes should be available in time to meet the timing requirements according to the RE-DISS Best Practice Recommendations.

    (BPR [29], [30])
8. 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 in addition to the contract. (BPR [31])
9. The deadline for cancelling GO for purposes of disclosure in a given year X should be 31 March of year X+1. (BPR [34])
10. ILR should strive to coordinate the timing of the calculation of the Residual Mix with other competent bodies across Europe according to the following timeline:
    a. By 30 April X+1 all countries should determine their preliminary domestic Residual Mix and whether they have a surplus or deficit of attributes.
    b. By 15 May X+1, the European Attribute Mix should be determined.
    c. By 31 May X+1, the final national Residual Mixes should be published.
    d. As of 1 July X+1 the disclosure figures relating to year X can be published by suppliers.

    (BPR [35])
11. 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 related to the national support scheme. (BPR [38])
12. 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 [40])
13. 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 [41])
14. 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 [42])

2.2 Proposals regarding GO

15. The metered production periods for purposes of issuing GO should not be longer than a calendar month and where possible should not run across the start and end dates of the disclosure

periods. Longer intervals up to one year are acceptable e.g. for very small plants. If possible, issuing of GO should be done without delay after the end of each production period. (BPR [1], [2])

16. The lifetime of GO should be limited to 12 months after the end of the production period. GO which have reached this lifetime should be collected into the Residual Mix. 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 [3], [4])
17. The GO system should be extended beyond RES & cogeneration to all types of electricity generation. This also includes implementation of a Go system for HE-CHP. (BPR [11])
18. Any rejection of GO should only relate to the actual use of cancelled GO for disclosure purposes in the respective country and should not restrict the transfers of GO between the registries of different countries. This means that the decision about the recognition of a GO should not hinder its import into Luxembourg. Within the rules set by the respective Directives, Luxembourg should consider their criteria for the acceptance of imported GO for purposes of disclosure.
    a. These criteria should address imports at least from all EU member states, other members of the European Economic Area (EEA) and Switzerland. The parties to the Energy Community Treaty should be considered as well, as soon as GO imports from these countries become relevant.
    b. The criteria should specify the electronic interfaces, specifying data format and contents of GO to be imported, which the respective country accepts for imports of GO (such as the EECS Hub and any other interfaces accepted).
    c. Conditions for the recognition of GO from other countries should be that they were issued based on Art. 15 of Directive 2009/28/EC or compatible national legislation, and that they meet the explicit requirements set in Art. 15, e.g. regarding the information content of the GO.
    d. The recognition of GO from other countries should be rejected in case that these countries have not implemented an electricity disclosure system.
    e. The recognition of GO from other countries should be rejected in case that the county which has issued the GO or the country which is exporting the GO have not implemented adequate measures which effectively avoid double counting of the attributes represented by the GO. Such adequate measures should ensure the exclusivity of the GO for representing the attributes of the underlying electricity generation, implement clear rules for disclosure, establish a proper Residual Mix (see chapter 5) or equivalent measures, and ensure their actual use. Furthermore, the adequate measures should ensure that attributes of exported GO are subtracted from the Residual Mix of the exporting country and cannot be used for disclosure at any time in the issuing or the exporting country by explicit mechanisms, unless the GO is re-imported and cancelled there.

    European countries should establish a register of their decisions taken regarding the acceptance of imported GO, which gives guidance to other competent bodies and also provides transparency for market actors.

    (BPR [20], [21])

2.3 Matrix of disclosure related problems and country-specific proposals

Problem	Country-specific proposal
Possible double counting in different explicit tracking instruments	2, 3, 4, 5, 17
Double counting of attributes in explicit and implicit tracking mechanisms	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 17
Double counting within individual supplier's portfolio	
Loss of disclosure information	6, 7, 16
Intransparency for consumers	4, 11, 12, 13, 15, 17
Leakage of attributes and/or arbitrage	1, 9, 10, 15, 16
Unintended market barriers	18