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1 Implementation of Tracking Systems

1.1 Electricity Disclosure

Obligation to disclose was transposed through the Decree-Law No.73 of 18th June 2007 that was transformed into a law on 3rd August 2007 (law No.125/07). Article 5 states that electricity suppliers have to specify in or with the bills and in promotional materials made available to final customers the contribution of each energy source to the overall fuel mix of the supplier over the two preceding years and to indicate where the information concerning the environmental impacts of such production lies. A secondary regulation, was supposed to be proposed by the Authority for Electricity and Gas (AEEG) and adopted by the Ministry of Economic Development 90 days later, however this was not the case.

The so called "Fuel Mix Disclosure Decree" was actually issued on 31st July 2009 and was published in the official journal (Gazzetta Ufficiale, GU) on 25th August 2009. GSE (Gestore dei Servizi Energetici), a publicly-owned company which promotes and supports renewable energy sources in Italy, is also the competent authority for disclosure and guarantees of origin in Italy.

The Decree gives the calculation procedure for producers' residual mix and suppliers' mix. A transition period is foreseen until the end of 2011. As of 2012 the calculation is fully applied for that year and for the preceding two years.

Suppliers' mix has to be disclosed using the following format :

	Composition of the energy mix used for the production for the energy sold in the two preceding years		Composition of the national energy mix used for the production of electricity fed into the Italian electricity system in the two preceding years	
	Year (n)	Year (n-1)	Year (n)	Year (n-1)
Primary sources of energy	%	%	%	%
Renewable energy				
Coal				
Natural Gas				
Oil				
Nuclear				
Other sources				

The disclosure period is the calendar year. Electricity suppliers have to send such information at least every 4 months with the invoices, in their web sites and in any promotional materials made available to final customers. In case a supplier covers 2 different countries, the supplier mix it has to show in Italy should only concern Italian consumers and not the ones from the other country as well.

Tracking tools that are available in Italy are national GOs (CO-FER), foreign GOs, reliable tracking systems, such as CIP 6/92 production (renewable plants under a specific tariff), and if all these elements are not available, then there is a national residual mix which is calculated by GSE. Article 31 of the decree from the 06th July 2012 stipulated new provisions concerning GO and disclosure. It stipulated that

only GOs can be used to track the renewable energy origin. Provisions to track through CIP/ 6/92 are cancelled as well as bilateral contracts.

Disclosure of individual products is possible, but not fully integrated for the moment with the overall disclosure scheme, in the sense that the end consumer that has not subscribed to a specific product gets the average supplier mix and not a default product mix (e.g.: the overall supplier mix minus the green product sold to other consumers).

A deliberation from the regulator was issued on 9th August 2011 concerning green products. It states that disclosure of green electricity sold under contracts signed from 1st October 2011 onwards have to be based exclusively on GOs. A transition period is foreseen in the sense that for all contracts that were signed before that date, green attributes can be based on other tracking instruments: voluntary certificates, e.g. RECS, for the whole duration of the contract. During a transitional period, some green products will be based on GOs and others on voluntary certificates. Disclosure process follows the following steps and schedule:

- Until 31st of March, producers communicate production data to GSE as well as issued GOs that they have transferred to other market players. For the transitional year 2011, this date was 30th June.
- Until 30th April, GSE calculates CIP 6/92 production mix and producers' individual residual mix. In 2011 this date was 5th September.
- By 31st March (31st May in 2011) suppliers communicate their data on sales and imports to GSE.
- By 30th April GSE calculates the national residual mix (for 2011, this date was postponed to 5th September).
- GSE calculates suppliers' own supply mix using the figures communicated to GSE and by 30th April, suppliers have to disclose it to their end consumers along with the national average production mix fed into the electricity grid (for 2011, this date was postponed to 5th September).

(NB this schedule is slightly different in respect to the provisions of the Decree from 31st July 2009).

1.1.1 Disclosure Figures

GSE, in accordance with the provisions of Article 6, paragraph 5 of the Fuel Mix Disclosure, has determined, in partnership with Terna, the transmission system operator, an estimate of the fuel mix used for the production of electricity fed into the Italian power system, including imported electricity, in 2008 and 2009 according to the decree.

Table 1: National energy mix disclosure figures for 2008 and 2009

Composition of the national energy mix used for the production of electricity fed into the Italian electricity system in 2009		
Primary sources of energy	2008	2009
Renewable energy	26,8%	33,5%
Coal	13,3%	12,6%
Natural Gas	47,8%	43,0%
Oil	3,9%	3,4%
Nuclear	1,3%	1,5%
Other sources	6,8%	6,0%

Source: GSE

These figures were used by all suppliers for 2008 and 2009 consumption mix as information to end consumers. For disclosure on the year 2010, suppliers had to use the above figures for 2009 and had to indicate the following average national mix for 2010 along with their own supplier mix.

Table 2: National energy mix used for the production of electricity fed to the grid in 2010

Composition of the national energy mix used for the production of electricity fed into the Italian electricity

system in 2010	
Primary sources of energy	2010
Renewable energy	35,2%
Coal	12,8%
Natural Gas	43,1%
Oil	1,7%
Nuclear	1,2%
Other sources	6,0%

Source: GSE (<http://www.gse.it/attivita/MIX/DatiPubblicazioni/Pagine/PubblicazioniMix.aspx>)

For disclosure mix in 2012, on 2010 and 2011 consumption, they have to use the table contained in the Decree from 31st July 2009.

GSE supplies on its website the following national residual mix for 2010 and the following CIP 6/92 mix:

Table 3: Composition of the national energy residual mix for 2010

Composition of the national energy residual mix used in 2010	
Primary sources of energy	2010
Renewable energy	26,4%
Coal	16,9%
Natural Gas	51,5%
Oil	2,2%
Nuclear	1,3%
Other sources	1,7%

Source: GSE

Table 4: Composition of the average mix of plants covered by CIP6/92 in 2010

Composition of the average mix of plants covered by CIP6/92 in 2010	
Primary sources of energy	2010
Renewable energy	15,8%
Coal	0,0%
Natural Gas	40,7%
Oil	0,0%
Nuclear	0,0%
Other sources	43,5%

Source: GSE

CHP should be disclosed from 2012 onwards, focusing on high efficiency cogeneration. Regulations are in preparation.

1.1.2 Environmental Information

Neither radioactive waste nor CO₂ emissions are disclosed. The latter information should have been disclosed by the Ministry of Economic Development (in collaboration with the competent entities) within the disseminating results of studies on the environmental impact of electricity production, taking into account LCA and external costs analysis. Such studies haven't been published yet.

1.1.3 Suppliers Fuel-Mix Calculations

Before calculating the suppliers' mix, by the 31st March, GSE receives information from producers on electricity produced in volume, broken down into the following categories: renewable energy, coal, natural gas, oil, nuclear, other sources. At the same time, producers also communicate the number of CO-FERs (national guarantees of origin) that they have transferred to other market players. GSE then calculate the producers' individual residual mix by reducing the initial production mix of the volume of CO-FERs that have been issued and transferred. CO-FERs that have been issued but not transferred are included in the producer's residual mix.

Every year, before the 31st March, suppliers have to communicate to GSE, through an online questionnaire available on GSE's website, volumes of total sales, of CIP 6/92 sales, of imports and of electricity sold as a renewable electricity product, with detail of every product (name and volume).

GSE determines the supplier's mix on the basis of the following information:

- a) data transmitted to GSE through website (as described above)
- b) imported and cancelled GOs on the supplier's account of GSE's online platform
- c) national GOs cancelled on the same account.

This will not be true anymore for disclosure on year 2012, as CIP 6/92 and bilateral contracts are not recognised anymore as reliable tracking systems for RES electricity. Only GOs will have to be used.

The process followed by GSE to calculate the suppliers' individual mix is the following:

- Regarding CIP6/92 volumes sold by the suppliers, the production mix of the same year of all CIP 6/92 plants is applied. Not all suppliers can disclose CIP6/92 electricity. This will not be possible for disclosure on year 2012.
- Regarding volume of imports (including imports from non member countries) net of imports covered by GOs, the EU 15 energy mix is applied (source Eurostat). Imported GOs can only be used if there has been a physical import of electricity associated to it, this is verified by GSE. If a supplier imports more electricity than he needs, this will end up in the national residual mix calculation. This provision is still valid for disclosure for year 2011 and will cease to be true for disclosure related to the mix of year 2012. GOs will be accepted independently of physical transfers.
- Regarding energy coming from the Italian market net of volumes covered by national GOs (CO-FER) replaced by GOs after the 1st January 2013, the national residual mix is applied. This national residual mix is calculated by GSE.
- For the volumes covered by GOs (from abroad and national) the renewable origin is applied.

Calculation of the residual mix is done by GSE in accordance with Article 6, paragraph 3 of the Decree from 31st July 2009.

The residual mix is determined on the basis of the electricity produced and fed into the grid in Italy, to which are included imports (Italy is a net importer of electricity) that are not covered by foreign GOs with EU 15 production mix attributes (as published by Eurostat). CO-FERs that have been transferred are deducted from the national production mix.

Renewable electricity production even supported through Feed in Tariff, Feed in Premium or green certificates can get CO-FER and after 1st January 2013 GOs. Support is recorded on the certificate.

CO-FERs cannot be exported. Discussions are going on regarding the relevancy of connecting national GOs to the EECS system.

RECS certificates are not accounted for in the calculation of residual mix. If they are exported, they are not deducted from the national residual mix. RECS certificates will still be issued and tradable until 31st March 2013 as foresees the contract between GSE and RECS market parties. Discussions are going on the necessity to provide for a longer transition period before RECS is phased out in Italy.

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

1.2.1 RE-GO System

The GO qualification has been introduced at the beginning of 2004 by article 11 of the Legislative Decree 29/12/2003 n. 387. GSE responsibility for the entire process of issuing GO for electricity produced by the renewable sources is specified in the Decree itself. The GO system has entered into full operation at the beginning of 2005 after the issue of the first GO in March 2005. In March 2011 a decree (Decreto Legislativo: Attuazione della direttiva 2009/28/CE sulla promozione dell'uso dell'energia da fonti rinnovabili, recante modifica e successiva abrogazione delle direttive 2001/77/CE e 2003/30/CE from the 3rd March 2011) transposed the provisions of the new RES Directive. So following this decree, by 1st January 2013 no more GOs can be issued according to the old RES directive. Article 31 of decree from 06/07/2012 foresees that GSE will issue new regulations on the procedures for the issuing, transferring and cancelling of GOs according to directive 2009/28 and according to article 34 of decree from march 2011. They will replace CO-FERs from 1st January 2013.

CO-FERs report all elements required by Directive 2009/28 even the support received. A GO is issued for 1MWh of net electricity fed into the grid.

CO-FERs that are issued and not cancelled expire and cannot be used anymore.

GSE maintains the registry for the issuing of CO-FERs. It now enables to record imports, transfers and cancellation. Exports are not foreseen. GOs received from abroad can be integrated into the registry.

CO-FERs issued in Italy report all support received (FIT, Feed in Premium, Conto Energia and green certificates).

On GSE's website, one can find the technical procedure to ask for the emission of a CO-FER (document titled: "Procedura per la gestione ed emissione delle Certificazioni d'Origine per impianti alimentati da fonti rinnovabili").

Guarantees of origin which will be issued under the new regulations as well as the current CO-FERs will only be used for disclosure. Regarding disclosure for 2012, they will be the only way to disclose Green attributes in the supply mix. They can be used only in reference of disclosure year in which the energy they certify was produced.

1.2.2 CHP-GO System

CHP GOs were implemented with the legislative Decree from 8th February 2007, n.20 transposing Directive 2004/8/CE on the promotion of cogeneration, which was published in the official journal (GU) n°54 from 6th March 2007.

The Legislative Decree 08/02/07 n. 20 defines cogeneration of high efficiency in line with the work of the comitology process, but states that these definitions will apply to Italy from 31st December 2010, in accordance with the article 12 of EU provisions. CHP GOs are issued for net electricity fed into the grid.

Similarly as for RES GOs, on the GSE website, a document recapitulates the procedures to follow to ask for a CHP GO (Document titled: Procedura tecnica per il rilascio della Garanzia d'Origine dell'elettricità prodotta da cogenerazione ad alto rendimento).

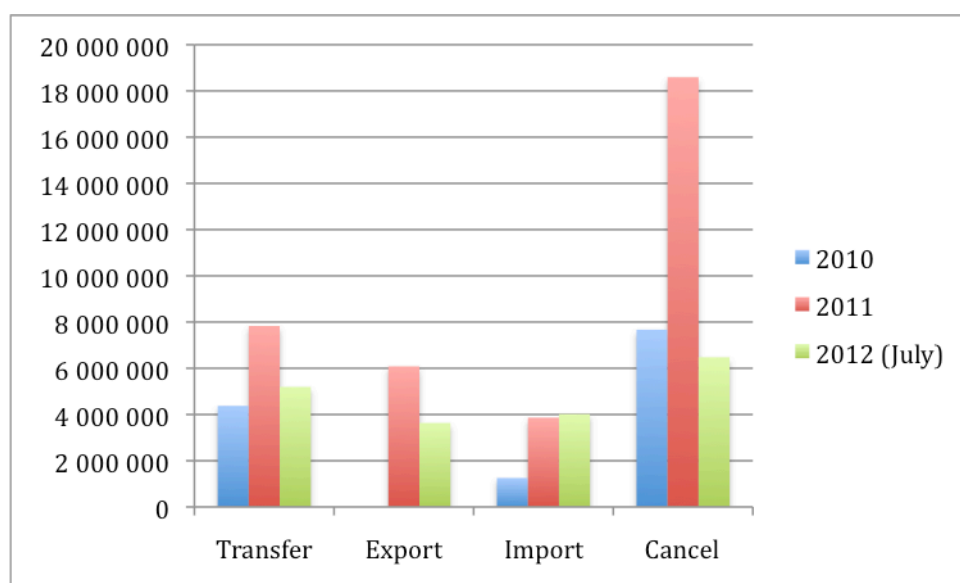
Currently there is no operational registry for the issuing, transferring and cancelling of CHP GOs.

1.2.3 EECS

GSE is a founding member of the Association of Issuing Bodies (AIB) and is the Italian issuing body for EECS RECS certificates. Currently there are no Italian EECS GOs, nor EECS CHP GOs but GSE considers integrating the EECS system for GOs in 2013.

Data on the activity in 2010-2011-2012 for GSE as a RECS issuing body is the following :

Graph 1: Activity for EECS RECS in Italy in 2010, 2011 and 2012



1.2.4 GO Statistics

Data for the issuing of CO-FER for 2010 are the following:

- Number of CO-FER issued: 28,106,005
- Number of CO-FER cancelled: 24,824,821
- Number of foreign GOs imported and cancelled for Disclosure purposes: 12,888,791

Data for the issuing of CO-FER for 2011 are the following:

- Number of CO-FER issued: 21.572.943
- Number of CO-FER cancelled: 16.781.105
- Number of foreign GOs imported and cancelled for Disclosure purposes: 6.622.692

1.3 Other RES-E Relevant Support Schemes

There are five types of support schemes in place in Italy:

- « “CIP-6” is a resolution (no. 6) adopted by the “Comitato Interministeriale Prezzi” (Interministerial Committee on Prices - CIP) in 1992. Under this resolution, GSE purchases the electricity generated by plants using RES and other eligible sources (based on an appropriate agreement) and trades it in the market. GSE is the “dispatching user” of CIP-6 generating units. As such, GSE pays balancing and transmission charges (associated with trading in the energy market) to Terna and other grid operators. » (GSE website) Production of CIP6/92 has a specific status in disclosure calculations as it is allocated only to certain traders and suppliers.
- Green certificates: importers and producers are obliged to inject each year a certain amount of electricity from renewable origin into the grid. They can produce renewable electricity themselves or they have to buy Green Certificates. Importers have to show imported GOs to be exempted from the purchasing of Green Certificates. 2012, regarding 2011 imports, will be the last year for importers to benefit from such exemption and to this end GSE will only accept GOs issued under the 2009/28 directive. As of 2015 Green Certificate mechanism will no longer be in force and will be replaced by a feed-in premium as established in the ministerial decree of 6th July 2012.
- Feed in tariff: RES-E plants (excluding solar ones) which have a nominal real power of less than 1 MW (200 MW for on-shore wind plants) commissioned after 31st December 2007 may grant a feed-in tariff for electricity actually injected into the grid over a period of 15 years. It represents an alternative to the Green Certificates scheme and is differentiated by type of source. To benefit from the support, producers must first ask GSE to qualify their plants as RES-E (“IAFR – Impianto Alimentato a Fonti Rinnovabili”) (Source GSE website).
- Feed in premium for:
 - PV and thermodynamics : “The feed-in premium scheme (“Conto Energia”) provides support for both photovoltaic solar sources (over a period of 20 years) and thermodynamic solar ones. The feed-in premium for thermodynamic solar plants (introduced in Italy by the Ministerial Decree of 11 April 2008) is granted for a period of 25 years on the basis of the electricity generated (also by hybrid plants) from all-solar sources. » (Source GSE website)
 - RES power plants with a capacity > 1MW and ≤ 5 MW opting for a premium instead of a fixed tariff being able to sell the electricity produced and injected to the grid on their own. Such a scheme apply to power plants commissioned after 1st January 2013.
- Dutch auctions for RES power plants with a capacity > 5 MW.

2 Proposals for Improvement of the Tracking System

2.1 Proposals regarding general regulation on tracking systems

2.2 Proposals regarding Disclosure

Since the E-TRACK II project, a lot of progress has been made. Below, the recommendations that were made at the time on the Italian system. For each recommendation, is given the status as of October 2012.

E-TRACK II recommended to introduce the following disclosure regulations :

- Choose one body (GSE) for centralising disclosure calculations : done
- Introduce principle of explicit tracking based on certificates or contract based tracking for own conventional production capacities + residual mix : done. GOs are now used in parallel to a residual mix .
- Introduce mandatory redemption of GO upon use: done for disclosure of supplier mix
- Introduce a supplier residual mix that does not include green products: not done
- Introduce regulations for taking into account contracts (bilateral agreement made on the electricity market or OTC) when calculating the residual mix: bilateral contracts are not accepted anymore for renewable electricity.
- Introduce regulations for allocation of attributes for FIT electricity and production supported by green certificates : done
- Calculation of residual mix to follow the E-TRACK recommendations : many recommendations have been followed, but still some progress to be done (cf below on RE-DISS BPR)
- Clearly state the use of GO / RECS / Green certificates / imported GOs for the exemption of green quota : done. GOs are not eligible anymore for green quotas.

On top of the remaining recommendations stated above, the refining of disclosure procedure leads to formulate the following RE-DISS BPR :

1. Green power quality labels should use GO as the unique tracking mechanism. (BPR [18])
2. Any such rejection 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. (BPR [20])
3. 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 (BPR [21])
4. Full disclosure schemes should be implemented, including the disclosure of CO2 emissions and radioactive waste. (BPR [22])
5. Other Reliable Tracking Systems (RTS) should be defined where appropriate based on criteria of added value, reliability and transparency. (BPR [23])
6. RTS can comprise, where applicable:
 - Homogenous disclosure mixes for regulated market segments where no choice of supplier or 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 (BPR [24])
7. The calculation of the Residual Mix should follow the methodology developed in the RE-DISS project. 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 [26])
 8. 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 [27])
 9. 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 [35])
 10. 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 item [24]) (BPR [38])
 11. 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 [39])
 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])

2.3 Proposals regarding GO

2.3.1 Proposals regarding the RE-GO System

Since the E-TRACK II project, a lot of progress has been made. Below, the recommendations that were made at the time on the Italian system are presented. For each recommendation, the status as of October 2012.

E-TRACK II recommended to make following improvements to GOs :

- Issuing and handling of GO in electronic form only : done
 - Life cycle: Issuing, transfer, cancellation : done
 - Cancellation always linked to Disclosure : done
- Make Italian GO fully compatible with European standards (EECS): still to come
- Earmarking of GO when production receives support : done

- One single GO for electricity from CHP plants using renewable energy (One central registry for CHP and RE-GO) : still to be done
- Coordinate GO et RECS registries (no possibilities to issue two certificates for the same MWh) : still to be done, but most probably RECS certificates will disappear with the implementation of EECS-GOs.
- Imports of GO are accepted only if the country issuing the GO is using a Residual Mix for purposes of Disclosure : no regulation in this respect
- Imports of GOs should be used in the Italian disclosure system : done

On top of the remaining recommendations stated above, the refining of GO procedure leads to formulate the following BPRs below:

14. If possible, issuing of GOs should be done DIRECTLY after the end of each production period (BPR [2])
15. Lifetime of GO should be limited to 12 months after the end of the production period. GOs that have reached this lifetime should be collected into the Residual Mix (BPR [3])
16. 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 [4])
17. 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. (In case that disclosure periods differ from the calendar year (see item [33]), the deadline should be defined accordingly. (BPR [5])
18. 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 [6])
19. 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])
20. In case that not all European countries are members of EECS, appropriate connections between the EECS system and non-EECS members as well as in between different non-EECS members will need to be established. These include inter alia procedures for assessing the reliability and accuracy of the GO issued in a certain country and interfaces for the electronic transfer of GO. (BPR [8])
21. The GO system should be extended beyond RES & cogeneration to all types of electricity generation. (BPR [11])
22. 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])
23. Only one GO should be issued per unit of electricity, which should combine the functionalities of a RES-GO and a cogeneration GO. (BPR [15])

2.3.2 Proposals regarding the CHP-GO System

At the time being, there is no CHP-GO system for all Italy, and thus a CHP-GO system could be developed.

Thus the following RE-DISS BPR could be taken in the development of the CHP-GO system:

24. Establish and implement a CHP-GO system, fully operational and aligned with the disclosure system in place (BPR [12]);
25. Keep track of CHP-GO in electronic registries (BPR [12]);

26. Only one GO should be issued per unit of electricity, which should combine the functionalities of a RES-GO and a cogeneration GO. (BPR [15])
27. Metering should be performed on a calendar month basis (or even more often). Longer intervals up to one year are acceptable if they do not run across the start and end dates of the disclosure periods (BPR [1]);
28. Issuing of CHP-GO should be done without delay after the end of the metering period (BPR [2]).
29. The lifetime of CHP-GO should be limited to 12 months after the end of the metering period. CHP-GO which have exceeded this lifetime are collected into the Residual Mix (BPR [3]).
30. Cancellations of GO relating to metering periods in a given year X which take place until 31 March of year X+1 should count towards disclosure in year X. Later cancellations should count towards disclosure in year X+1 (BPR [5]).
31. The same allocation rule applies for collections of expired GO (BPR [6]).
32. The implementation of the CHP-GO system should be based on EECS operated by AIB. (BPR [7]).
33. In the case that a CHP-GO system is not implemented based on EECS, it should follow EECS requirements to facilitate making connections between EECs systems and non-EECS systems. If this is not undertaken, an adequate level of ambition as in the EECS system should be achieved and procedures for recognition and electronic transfer of GO to EECS members and other non-EECS member countries should be established. (BPR [8]).

2.4 Matrix of disclosure related problems and country-specific proposals

Problem	Country-specific proposal
Possible double counting in different explicit tracking instruments	12, 21, 26, 1, 4, 5, 6, 10
Double counting of attributes in explicit and implicit tracking mechanisms	2, 4, 5, 7, 8
Double counting within individual supplier's portfolio	11
Loss of disclosure information, Intransparency for consumers	4, 5, 21, 11, 12, 13
Leakage of attributes and/or arbitrage	14-18, 27-31, 19, 20, 32, 33, 21, 9
Unintended market barriers	3, 20