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## 1 Implementation of Tracking Systems

### 1.1 Electricity Disclosure

Disclosure is implemented by the “FOR 1999-03-11 nr 301: Regulations on metering, settlement and coordinated action in power sales and billing of network services” (Forskrift om måling, avregning og samordnet opptreden ved kraftomsetning og fakturering av netjtjenester). The regulation came into force in 2007. The Norwegian Water Resources and Energy Directorate (Norges vassdrags- og energidirektorat, NVE) is the competent body and responsible for the publication and calculation of the national electricity residual mix which is used as default mix for disclosure for each calendar year. Electricity suppliers who do not prepare an individual electricity disclosure based on guarantees of origin are obligated to give a reference to this residual mix at NVE’s website in order to inform their customers about how the electricity they sold in the previous year was generated.

National disclosure includes the respective percentage of the fuels renewable, nuclear and fossil. In 2011, the disclosure was for the first time based on the RE-DISS figures (first published in June 2012). The residual mix calculation method, however, was changed for the 2012 disclosure, moving from the Shifted Transaction-Based Method (STB) in 2011 to the Issuance-Based Method (IB) in 2012. Thus, GOs issued in year x are withdrawn from the national production mix of year x (if not expired before March 31<sup>st</sup> year x+1), which means that GOs issued after April 1<sup>st</sup> year x can be used for disclosure in year x+1.

#### 1.1.1 Disclosure Figures

In June 2014, NVE published the Norwegian electricity disclosure (residual mix) and the Norwegian production mix for 2013 side by side as shown in Figure 1 below.

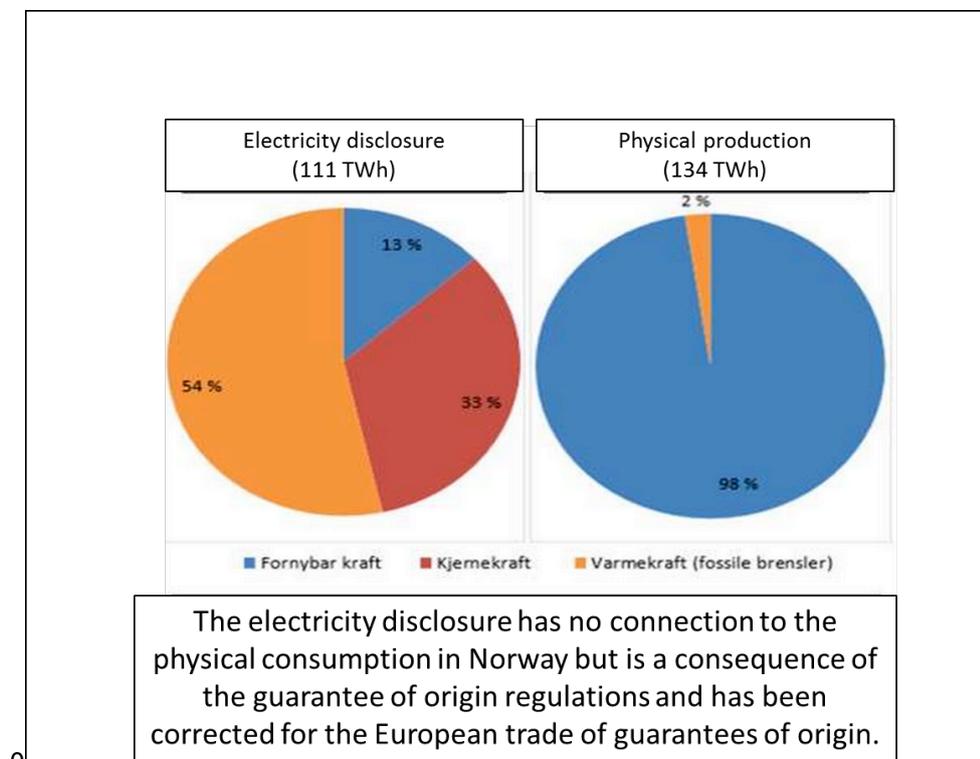


Figure 1 Norwegian electricity disclosure (left) and production mix (right) (<http://www.nve.no/no/Kraftmarked/Sluttbrukermarkedet/Varedeklarasjon/Varedeklarasjon-2013/>).



The Norwegian electricity disclosure (residual mix) relates to all electricity consumption not being covered by Guarantees of Origin (untracked consumption) and accounts for about 86% of the overall Norwegian electricity consumption ([http://www.reliable-disclosure.org/upload/65-RE-DISS\\_2013\\_Residual\\_Mix\\_Results\\_v1-0\\_2014-05-15.pdf](http://www.reliable-disclosure.org/upload/65-RE-DISS_2013_Residual_Mix_Results_v1-0_2014-05-15.pdf)). The shares of the different energy sources in the residual mix are also provided in Table 1.

Table 1: Attributes of the national residual mix 2012 as published by NVE in May 2013.

Attributes	%
Renewables	13 %
Nuclear	33 %
Thermal (fossil fuels)	54 %

### 1.1.2 Environmental Information

The disclosure statement itself includes the following environmental information related to the residual mix, based on the RE-DISS figures:

- CO<sub>2</sub>-emissions: 500 g /kWh
- Radioactive waste: 1 mg/kWh

### 1.1.3 Suppliers Fuel-Mix Calculations

Suppliers can choose to either refer to the website of NVE which centrally provides the national disclosure information or to create an own product which has to be based on cancelled GOs.

### 1.1.4 Acceptance of GOs

Imported GOs are not treated differently from national GOs when it comes to disclosure. The criteria for foreign GOs to be accepted for disclosure is that they must be redeemed in the register handled by Statnett. This criterion has been in place since 2007 and is transparently published in secondary legislation (Forskrift nr 301 om måling, avregning m.v).

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

### 1.2.1 RES-GO System

National RES-E production with a share of approximately 99% already exceeds the national target of 90% of domestic production by 2010, which is defined in Annex IV to the EEA Agreement. In December 2011, the RES Directive (2009/28/EC) became part of the EEA agreement, defining a total RES target for Norway of 67,5 % by 2020.

The RES-E GO scheme is operational according to EECs since 01/09/2006 with the national TSO Statnett acting as Issuing Body. Legal basis is the Norwegian Energy Act "Endringer i Energiloven" and the national regulation for Guarantees of Origin from electricity "Forskrift om opprinnelsesgarantier for produksjon av elektrisk energi" (FOR 2007-12-14 nr 1652). The latest update of the regulation for Guarantees of Origin from electricity formally implemented the RES Directive 2009/28/EC by beginning of 2012. This regulation clarifies formally that Norwegian GOs shall contain all standard information according to the 2009 RES Directive and the new EECs rules, like plant specifications and production period, and include support information. They are automatically issued on a weekly basis and remain valid (according to the new proposed regulation on GO) for 1 year after the end date of production of the

corresponding energy unit. After this period, they are automatically expired. The certificates are held in the national EECS registry maintained by Statnett, which is accessible for account holders through login and password. All GOs are freely transferable (both linked and de-linked) within Norway and with cross-border transactions.

### 1.2.2 CHP-GO System

CHP generation does not play a relevant role in Norway. However, general CHP GO regulation is in place by the national regulation for Guarantees of Origin from electricity "Forskrift om opprinnelsesgarantier for produksjon av elektrisk energi" (FOR 2007-12-14 nr 1652) with its last revision made end of 2011.

Besides RES-E GO and CHP GO, the regulation also allows GOs to be issued for energy sources other than renewable or for CHP. It is not possible to issue more than one GO per MWh electricity production. The CHP GO scheme and the GO scheme for other energy sources besides RES are not operational yet due to lack of demand.

### 1.2.3 GO Statistics

The GO scheme is operated according to the EECS provisions laid out in the national EECS "Electricity Domain Protocol for Norway, Release 1", prepared by Statnett.

### 1.2.4 EECS Statistics

GOs are not only used for domestic disclosure but are also exported in large volumes. The following table summarises Norwegian EECS transaction statistics for 2010 to 2013.

Table 2: EECS GO statistics for Norway (MWh).

	Issue	Export	Import	Cancellation
<b>2010</b>	103.925.208	85.524.565	8.877.070	28.514.371
<b>2011</b>	114.651.797	99.444.845	14.370.635	35.675.568
<b>2012</b>	135.695.995	13.4539.492	18.765.310	22.373.385
<b>2013</b>	123.724.210	115.385.368	14.325.296	24.747.403
<b>2014</b>	132.183.851	116.880.496	27.670.840	29.917.140

## 1.3 RES-E Support Schemes

The main support scheme in Norway since 2001 has been project based investment support for wind power, administered by the government owned company ENOVA. In 2012, a joint quota obligation support system has been introduced together with Sweden, the Norwegian-Swedish certificate scheme. GOs are not used for support purposes and can be traded independently from the support certificates.

## 2 Proposals for Improvement of the Tracking System

### 2.1 Proposals regarding general regulation on tracking systems

The tracking system in place in Norway is mainly in line with the RE-DISS BPR. However, some proposals for improvements are specifically recommended, as shown in the next sections.

## 2.2 Proposals regarding Disclosure

According to the RE-DISS Best Practise Recommendation, the following proposal regarding Disclosure is suggested:

- BPR [28]: NVE and Statnett should cooperate with other competent bodies from the other Nordic countries in order to harmonise whether their Residual Mix should be based on a national or a Nordic approach. For this purpose, competent bodies should use data provided by RE-DISS.

## 2.3 Proposals regarding RE-GO

The RE-GO system in place in Norway is very much in line with the RE-DISS BPR.

## 2.4 Proposals regarding CHP-GO

No specific recommendations apply.

## 2.5 Proposals regarding Acceptance of GO

Norway 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 [21]. Norway should cooperate with other European countries in order to 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.

## 2.6 Further proposals regarding Disclosure

No further proposals are suggested.

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

Problem	Country-specific proposal
Possible double counting in different explicit tracking instruments	
Double counting of attributes in explicit and implicit tracking mechanisms	BPR: [28]
Double counting within individual supplier's portfolio	
Loss of disclosure information	
Intransparency for consumers	
Leakage of attributes and/or arbitrage	BPR: [28]
Unintended market barriers	BPR: [21]

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