Country profiles: Switzerland

RE-DISS II
Reliable disclosure systems for Europe

Last updated: 30/07/2015

1 Implementation of Tracking Systems

Switzerland is neither Member State of the European Union nor a part of the European Economic Area. This means that Switzerland is not obliged to formally implement EU directives. But with respect to the high relevance of international electricity markets for the Swiss electricity sector, Switzerland harmonises its legislation to a large extent. Electricity markets are still only partly liberalised, full liberalisation will be implemented 2018 at the earliest. Legislation on disclosure and RES-GOs is in place. As of 2013, GOs are mandatorily issued for all electricity produced in Switzerland (including nuclear and fossil).[1] At the same time, use of cancelled GOs for electricity disclosure by electricity suppliers is required in case those suppliers still have GOs available in their account. A CHP-GO scheme as defined by the CHP Directive is not planned for the time being, particularly as all CHP plants are covered by the general system for Disclosure GO already. The national TSO Swissgrid was appointed as Issuing Body for GO by the government.

1.1 Electricity Disclosure

The non EU Member State Switzerland has regulated disclosure in its Energy Law (particularly Article 5a; status 1 January 2014) and in its Energy Ordinance (particularly Articles 1a – 1c; status 1 April 2014). This has been further specified in the national Guidelines for Disclosure published by SFOE, the Federal Office of Energy. SFOE provides comprehensive information including Excel templates for calculation of the supplier mix and standard contracts for assignment of the ecological benefit of electricity production on its website.

The tracked information comprises no environmental indicators, but a detailed list of fuels including sub-categories which have to be listed if specific information can be provided. The categories include hydro, other renewables (subcategories: solar, wind, biomass and geothermal), nuclear, fossils (subcategories: oil, gas, coal), waste (in waste incineration plants and landfills). It also allows for "non verifiable".[2] In case the share of "non-verifiable" production exceeds 20% of a supplier's share, he has to explain the reasons for this high share together with the disclosure statement. An extra category is available for electricity supported under the feed-in tariff for RES. Furthermore, the origin of electricity is divided into domestic and foreign production.

Suppliers have to decide consistently for all their consumers whether they would like to disclose the company specific fuel mix or the respective product mixes. The company mix, however, would have to refer only to supply activities of that company within Switzerland. For both references, a template is provided by the Swiss Energy Ordinance (see Figure 1). All fuel mix information has to be based on explicit tracking, no implicit tracking mechanism is in place. Eligible tracking mechanisms for supplier specific disclosure information particularly include national GOs and GOs from other countries, which have to be used with priority if available to the supplier (i.e. if they are in the GO registry account of the supplier). If no GOs are available[3], other evidence, including tracking certificates or contract-based tracking may be used. For all tracking information, production period has to be in line with the disclosure and consumption year. Disclosure information has to be updated annually by the end of year X+1 with reference to the last calendar year.

[1] Plants <30kVA are exempted from this obligation.

[2] In 2014, a research project charged by SFOE had been analysing options for further development of electricity disclosure in Switzerland, including options for implementation of a residual mix. This might lay out the ground for future implementation of residual mix information. Furthermore, a report by the Federal Council about full disclosure of all end-consumed electricity with GO is due to be published by the end of 2015.

[3] Such non-availability of GO can happen due to export of GO or by "retention" of GO by other market participants. To a minor extent, also for production from plants <30kVA a non-availability of GO might occur.

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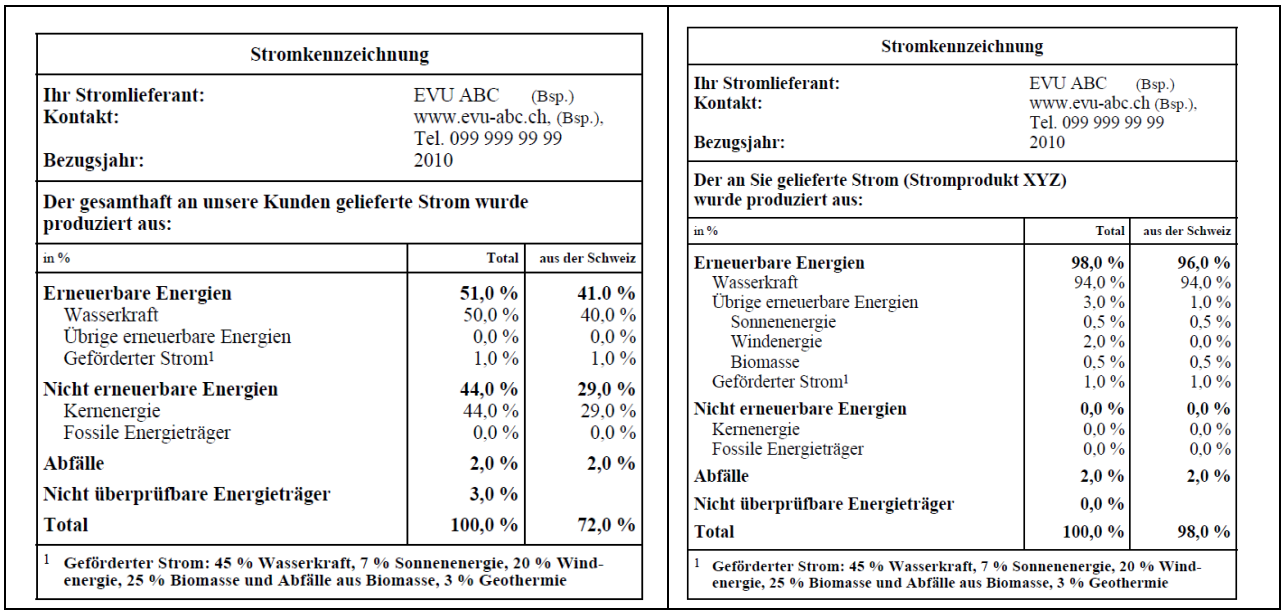

Stromkennzeichnung

Ihr Stromlieferant: EVU ABC (Bsp.)
Kontakt: www.evu-abc.ch, (Bsp.), Tel. 099 999 99 99
Bezugsjahr: 2010

Der gesamthaft an unsere Kunden gelieferte Strom wurde produziert aus:

in %	Total	aus der Schweiz
Erneuerbare Energien	**51,0 %**	**41.0 %**
Wasserkraft	50,0 %	40,0 %
Übrige erneuerbare Energien	0,0 %	0,0 %
Geförderter Strom[1]	1,0 %	1,0 %
Nicht erneuerbare Energien	**44,0 %**	**29,0 %**
Kernenergie	44,0 %	29,0 %
Fossile Energieträger	0,0 %	0,0 %
Abfälle	**2,0 %**	**2,0 %**
Nicht überprüfbare Energieträger	**3,0 %**	
Total	**100,0 %**	**72,0 %**

[1] Geförderter Strom: 45 % Wasserkraft, 7 % Sonnenenergie, 20 % Windenergie, 25 % Biomasse und Abfälle aus Biomasse, 3 % Geothermie

Stromkennzeichnung

Ihr Stromlieferant: EVU ABC (Bsp.)
Kontakt: www.evu-abc.ch (Bsp.), Tel. 099 999 99 99
Bezugsjahr: 2010

Der an Sie gelieferte Strom (Stromprodukt XYZ) wurde produziert aus:

in %	Total	aus der Schweiz
Erneuerbare Energien	**98,0 %**	**96,0 %**
Wasserkraft	94,0 %	94,0 %
Übrige erneuerbare Energien	3,0 %	1,0 %
Sonnenenergie	0,5 %	0,5 %
Windenergie	2,0 %	0,0 %
Biomasse	0,5 %	0,5 %
Geförderter Strom[1]	1,0 %	1,0 %
Nicht erneuerbare Energien	**0,0 %**	**0,0 %**
Kernenergie	0,0 %	0,0 %
Fossile Energieträger	0,0 %	0,0 %
Abfälle	**2,0 %**	**2,0 %**
Nicht überprüfbare Energieträger	**0,0 %**	
Total	**100,0 %**	**98,0 %**

[1] Geförderter Strom: 45 % Wasserkraft, 7 % Sonnenenergie, 20 % Windenergie, 25 % Biomasse und Abfälle aus Biomasse, 3 % Geothermie

Figure 1: Templates provided by the Swiss Energy Ordinance for disclosure of a supplier mix (left) or disclosure of a product mix (right), respectively.

1.1.1 Disclosure Figures

As no residual mix information is used at all, no central national disclosure figure is available. But according to the new legislation all supplier mix information has to be published on www.stromkennzeichnung.ch as central website.[4]

Furthermore, the SFOE publishes national disclosure figures every two years based on an analysis of the published supplier mixes. The national monitoring report for electricity disclosure in 2013 (the first year of "comprehensive" GO coverage) reveals an average supplier mix in Switzerland as is shown in Table 1.

Table 1: Total average supplier mix in Switzerland in 2013 (Zurbruegg 2015[5])

	Total [%]	Swiss Origin
Renewables	**54,5**	**46,0**
Hydro	50,7	42,8
Other renewables	1,4	0,8
Solar	0,3	0,3
Wind	0,6	0,1
Biomass	0,5	0,5
Geothermal	0,0	0,0
Supported electricity	2,4	2,4
Non-renewable	**30,9**	**27,6**

[4] Publication is coordinated by VSE, the Swiss electricity branch organisation, in cooperation with Swissgrid, the national TSO.

[5] Zurbruegg, Ruedi: Gesamterhebung Stromkennzeichnung 2013: Analyse der gesamtschweizerischen Stromkennzeichnung 2013 sowie Vergleich der in der Schweiz produzierten Elektrizität mit der in der Schweiz verwendeten Elektrizität; charged by SFOE, Cham 2015

	Total [%]	Swiss Origin
Nuclear	30,1	27,3
Fossil	0,8	0,3
Oil	0,0	0,0
Methane	0,8	0,3
Coal	0,1	0,0
Waste	1,2	1,1
Non-verifiable	13,4	
Total	**100,0**	**74,8**

1.1.2 Environmental Information

No environmental indicators are provided in the framework of electricity disclosure in Switzerland. However, the Federal Office for the Environment FOEN provides life-cycle values for CO_2 emissions of Switzerland's electricity mix.[6]

1.1.3 Suppliers Fuel-Mix Calculations

The supplier is responsible for the calculation of his fuel mix based on the eligible explicit tracking instruments. In order to support the work of the suppliers, SFOE provides Excel templates for this calculation. All eligible tracking information by producers and wholesale traders has to be delivered to the electricity supplier by 30th of April of the following year. Disclosure information has to be provided to final consumers at least once a year.

1.1.4 Recognition of GOs

There is no explicit regulation in place defining the procedure for recognition or rejection of GOs. GOs from other ENTSO-E countries are recognised when there is no evidence that the GO system in that country does not conform to the criteria in the EU directive (veracity, reliability, accuracy). There is no pre-emptive country list.

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

1.2.1 RES-GO System

Switzerland is not an EU Member State and is thus formally not obliged to implement EU Directives. Despite its status as non EU Member State Switzerland has regulation in place which accords to the EU GO regulation in order to be compatible with the electricity market framework and has implemented the EECS standard of the AIB. All EECS GO (both for RES-E and for other fuels) are handled in the same registry. The main regulations are laid out in the national Ordinance on the Proof of Production Type and Origin of Electricity (*Herkunftsnachweis-Verordnung*, latest version 1 January 2014).

The Swiss government has appointed TSO Swissgrid as Issuing Body, which has prepared a description on the rules and procedures of RES-GO ("*Leitfaden zur Beglaubigung von Anlagen und Produktionsdaten"*, latest version January 2014). The GOs are issued for periods of either a month (obligatory for plants >30kVA), a quarter or a year. The purpose of GOs is disclosure. However, it also serves as documentation for participation under the feed-in support scheme. The use of a GO is

[6] In 2014, a research project charged by SFOE had been analysing options for further development of electricity disclosure in Switzerland, including options for implementation of a residual mix and environmental information. This might lay down the ground for future provision of environmental indicators.

generally limited to twelve months after the end of the respective production period, but for production in the months January, February, March and April this is extended until end of May of the following year. GOs which have not been cancelled by then expire.

GOs are kept in an electronic registry which is available for registered RES producers, GO traders and public authorities. GOs can be transformed into "paper GO" on request. This paper GO accords to a cancellation statement, as for this transformation the specific cancellation purpose has to be specified and is indicated on the paper GO. Therefore the GO can only be freely transferred within the registry. Cancellation is mandatory for disclosure, which is limited for GOs not being older than from the preceding year. For registration of plants and verification of production, accredited organisations have to be involved. In order to be eligible for imports, GO have to come from an EU or ENTSO-E member country.

1.2.2 CHP-GO System

No CHP-GO system in accordance with the CHP Directive has been proposed so far. However, as all production from plants with an installed capacity larger than 30kVA has to be covered by GO, this of course also covers electricity from CHP plants.

1.2.3 GO Statistics

Imports 2014:	11,77 TWh;
Issued 2014:	63,37 TWh
Exported 2014:	7,21 TWh
Cancelled 2014:	54,25 TWh
Expired 2014:	50,37 TWh[7]

1.3 RES-E Support Schemes

The major national support scheme is a feed-in scheme introduced in 2009. The electricity volumes covered by that mechanism are documented by means of non-tradable national GOs and are allocated on a pro-rata basis towards final consumers.

2 Proposals for Improvement of the Tracking System

2.1 Proposals regarding general regulation on tracking systems

See proposals made under sections **Error! Reference source not found.** and **Error! Reference source not found.**.

2.2 Proposals regarding Disclosure

To improve the disclosure system in place it is recommended that the following RE-DISS Best Practice Recommendations are applied:

- BPR [5]: Cancellations of GOs 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. This would require revision of the timeline which currently applies within Switzerland.
- BPR [16]: GO should be the only "tracking certificate" used. Any other tracking system of a similar purpose and function as GO should be converted to GO.

[7] One should not that this amount of expired GOs includes "old" GOs from several years, as the reporting period includes the first expiry date. Thus, the number of expired GOs does not correlate to the other statistics of the reporting year.

- BPR [17]: Besides GOs, 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 GOs as the unique tracking mechanism.
- BPR [22]: Full disclosure schemes should be implemented, including the disclosure of CO_2 emissions and radioactive waste.
- BPR [23]: (Other) Reliable Tracking Systems (RTS) should be defined where appropriate based on criteria of added value, reliability and transparency.
- BPR [29, 30]: As contract based tracking is (under certain conditions) allowed besides GO as explicit tracking instrument, it should be regulated so that
    - The rules of the tracking system are transparent and comprehensive and are clearly understood by all participants in the system.
    - 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 GOs 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 requirements for the coordinated calculation of a European Residual Mix. This means that this information has to be collected centrally in order to have a national residual mix calculated by end of April of year X+1.
    - 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), GOs should be used instead of contract based tracking.
- BPR [25-28]: Instead of allowing for an “unknown” share in the disclosure statement, the Swiss Government should provide a Residual Mix as a default set of data for disclosure of energy volumes for which no attributes are available based on cancelled GOs or based on other Reliable Tracking Systems (RTS).
    - 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, GOs and RTS.
    - For purposes of this cross-border adjustment, SFOE should use data provided by RE-DISS.
- BPR [34], [35]: Timing of Disclosure:
    - The deadline for cancelling GOs for purposes of disclosure in a given year X should be 31 March of year X+1.
    - 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 [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 GOs. 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.

- BPR [39a, b]: 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. For the Swiss regulation, this is relevant in case that e.g. a green product is marketed towards some consumers, but the respective supplier chooses to disclose the supplier share in line with the national disclosure legislation, and additionally discloses the green product share on a voluntary basis only to the "green" consumers.
- 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.

2.3 Proposals regarding RES-GO

- BPR [3]: The lifetime of GO should be limited to 12 months after the end of the production period in order to be in line with the EU RES Directive.[8] GO which have reached this lifetime should expire and be collected into the Residual Mix.
- BPR [9]: 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 relating to a disclosure year should be made available differentiated by energy source[9] in order to support Residual Mix calculations.

Furthermore, it shall be noted that the participating domains of the RE-DISS project have decided that the Best Practice Recommendations should also include the following recommendations, which should generally be considered by all Competent Bodies in order to assess relevance for their individual domains:

- Member States should clearly regulate the use of GO directly by end consumers.
- If using cooperation mechanisms, Member States should take care of regulating the attribution of GO concerning electricity concerned by these mechanisms.

2.4 Proposals regarding CHP-GO

A CHP-GO system should be implemented in Switzerland following the RE-DISS BPR on GOs.

[8] One should note that the existing regulation to extend this expiry date for production that takes place early in the year, is in principle feasible for exclusion of double counting. However, in order to allow for a sound calculation of the European Attribute Mix and national Residual Mixes in Europe, a shift of the cut-off date to end of March of year X+1 would be needed.

[9] This information should be provided using a structure for energy sources which corresponds to the highest hierarchy level of fuel codes in the EECS Fact Sheet 5 (see http://www.aib.net.org/portal/page/portal/AIB_HOME/EECS/Fact_Sheets)

2.5 Proposals regarding the Recognition of GO

- BPR [21]: Within the rules set by the respective European Directives, Switzerland should consider their criteria for the acceptance of imported GOs for purposes of disclosure.

2.6 Matrix of disclosure related problems and country-specific proposals

The following proposals refer to the RE-DISS Best Practice Recommendations which apply to Switzerland, based on BPR V2.2.

Problem	Country-specific proposal
Possible double counting in different explicit tracking instruments	BPRs: [9], [17], [18], [23], [29], [30], [38]
Double counting of attributes in implicit tracking mechanisms	BPRs: [9], [21], [23], [25], [26], [27], [28], [29], [30]
Double counting within individual supplier's portfolio	BPRs: [39], [40], [41]
Loss of disclosure information	BPRs: [3b], [22]
Intransparency for consumers	BPRs: [23], [25], [26], [27], [28], [29], [30], [34], [35], [38], [39], [40], [41]
Leakage of attributes and/or arbitrage	BPRs: [3a], [9], [28], [34], [35]
Unintended market barriers	BPRs: [7]