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## 1 Implementation of Tracking Systems

In Croatia the market is fully liberalised since 1 July 2008. The Croatian RE-GO system went live on 2<sup>nd</sup> February 2015.

### 1.1 Electricity Disclosure

The Act on energy (Official Gazette No. 120/12, 14/14), Art 36 implements primary regulations on determining the origin of electricity and states that further regulations on disclosing information to end customers need to be implemented. The Methodology for determining Origin of electricity (Official Gazette, No. 133/14) came into force on 21<sup>st</sup> November 2014 and implements the disclosure stipulations for Croatia in secondary legislation. Disclosure is limited to electricity origin and does not address CO<sub>2</sub> and radioactive waste. CO<sub>2</sub> and radioactive waste are defined as a general obligation in the Electricity Market Act.

HERA (The Croatia Energy Regulatory Agency) is appointed for creating a Disclosure bylaw by the Act on Energy (the Act on Energy came into force on 06 February 2013). HERA passed the Methodology for determining origin of electricity (Official Gazette, No. 133/14) on November 11th 2014. The Methodology defined HROTE (The Croatian Energy Market Operator) as the body in charge of residual mix calculation and the body responsible for checking if suppliers cancel adequate amounts of GOs. HROTE was appointed as the Issuing Body for GO for the whole Croatian Domain in February 2013 in the Electricity Market Act. HROTE is the one and only appointed competent body for issuing GOs in Croatia. A system for CHP-GO has been implemented as well since it relies on the same production device declaration procedure.

The Regulation on Establishing a System of Electricity Guarantees of Origin (Official Gazette, No. 84/13, 20/14) passed by the Government of Croatia has specified issuing of GOs for the purpose of certification of electricity produced in plants in the Republic of Croatia, in accordance with the Energy Act.

The Methodology for determining origin of electricity prescribes how suppliers disclosure electricity origin to end customers and defines duties of the market operator, DSO and TSO in relation to the residual mix calculation.

A supplier must present: a) product mix; b) supplier mix; c) domestic production mix; d) mix in relation to Feed-in support scheme

#### 1.1.1 Disclosure Figures

The disclosure bylaw has been implemented and clear rules for disclosing information are set.

Disclosure will be supervised by HROTE who will also do annual checks of the suppliers' disclosure statements in relation to data on cancelled GOs and actual supply figures (electricity sales) provided by the DSO/TSO. On top of disclosing information to individual end customers, the Methodology for determining origin of electricity perceives the publication of a short annual publication for informing the general public (all interested parties and end customers) on disclosure.

The Methodology for determining origin of electricity requires suppliers to use only GO and the methodology for selling products related to the origin. The products may use information on the GO (specific years - eg. new installations; specific information - location, source, etc; additional information on the GO - e.g. TUV additional certification) but cannot use other certification/brands/standards that may mislead the customer. Some standards can be used only if they do not relate to the products sold to customers (e.g. ISO 14000 standard family use by the supplier in their operations).

For 2014 no disclosure figures are available, as the disclosure system has been implemented on 21<sup>st</sup> November 2014.



### 1.1.2 Environmental Information

Bylaws on electricity disclosure regulations do not address CO<sub>2</sub> and radioactive waste. CO<sub>2</sub> and radioactive waste are defined as a general obligation in the Electricity Market Act.

### 1.1.3 Suppliers Fuel-Mix Calculations

The Methodology for determining origin of electricity is based on the issuance based calculation of the Residual Mix presented in the RE-DISS BPR 2.1. The European Attribute Mix is not mentioned by name since it is still voluntary, but the provisions of the methodology allow cooperation in defining the exports/imports from internal domains. The Methodology for determining origin of electricity allows the EAM to be used for calculating the residual mix.

### 1.1.4 Acceptance of GOs

Croatia has implemented general restrictions from the RES directive for recognition of GOs.

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

The Regulation on Establishing a System of Electricity Guarantees of Origin (Official Gazette, No. 84/13, 20/14) passed by the Government of Croatia has specified issuing of Guarantees of Origin for the purpose of certification of electricity produced in plants in the Republic of Croatia, in accordance with the Energy Act.

The Rules on Use of the Guarantees of Origin Registry (published on April 16th 2015 on HROTEs web site) lays down the rules for running the Registry of electricity Guarantees of Origin in the Croatian Domain. The Rules have been passed based on the Electricity Market Act.

The Registry has been implemented and became operational on 2<sup>nd</sup> February 2015 implementing a system for issuing, transferring and cancelling GOs for electricity produced from Renewable Energy Sources and High-Efficient Cogeneration.

### 1.2.1 RES-GO System

A GO issued in the Croatian system is an electronic document which has the sole function of providing proof to the final consumer that a given share or quantity of energy was produced from RES as required by Directive 2009/72/EC.

All criteria of Art. 15 RES Directive have been implemented, so all issued GO are in line with the requirements.

In Croatia the RES support system is not based on GOs. The Feed-in system is considered as a Reliable Tracking system since the origin and destination of electricity is pre-determined (end customers receive an ideal portion of electricity produced by generators in the Feed-in System).

Currently, the declaration of production devices (basis for issuing GO) must adhere to the Grid code (Official Gazette, No. 36/06), that includes a Metering code, and technical conditions set in the Ordinance on acquiring the status of eligible electricity producer (Official Gazette, No. 132/13, 81/14, 93/14, 24/15). These technical conditions are needed for implementing requirements for metering net production from RES and CHP.

### 1.2.2 CHP-GO System

A CHP-GO system has been implemented based on the RES-GO system by 2<sup>nd</sup> February 2015.

### 1.2.3 EECS

Croatia is a member of the AIB since 2014.

### 1.3 RES-E Support Schemes

In Croatia the support system is not based on GOs. The Feed-in system is considered as a Reliable Tracking system since the origin and destination of electricity is pre-determined.

## 2 Proposals for Improvement of the Tracking System

### 2.1 Proposals regarding general regulation on tracking systems

Croatia will only use GO as a tracking instrument. The Feed-in system is considered as a Reliable Tracking system since the origin and destination of electricity is pre-determined. If the nature of the Feed-in system changes in the future (i.e. supplier are no longer obligated to buy electricity in an amount proportional to their market share), electricity in the Feed-in system will be tracked using GOs.

BPR [11a]: In the future, Croatia should extend the GO system beyond RES & cogeneration to all types of electricity generation.

### 2.2 Proposals regarding Disclosure

BPR [22]: Full disclosure schemes should be implemented, including the disclosure of CO2 emissions and radioactive waste. Currently Croatia has not implemented concrete disclosure regulations on CO2 emissions and radioactive waste.

BPR [35]: The deadlines for calculation of the Residual Mix are implemented, however the EAM and the RE-DISS methodology are not mentioned by name in the law since it is still a voluntary system.

### 2.3 Proposals regarding RE-GO

None.

### 2.4 Proposals regarding CHP-GO

None.

### 2.5 Proposals regarding Acceptance of GO

Croatia has implemented general restrictions from the RES directive on the recognition of GOs, but no concrete, explicit rules have been set for Croatia. The Regulation on Establishing a System of Electricity Guarantees of Origin covers the full implementation of Art. 15 of RES-Directive.

BPR [21]: Croatia should consider the rejection for recognition of GOs from other countries which have not implemented an electricity disclosure system and do not assure that double counting is avoided. Currently, only general restrictions from the RES directive have been implemented in Croatian legislation. They should be more specific in the future.

### 2.6 Further proposals regarding Disclosure

None.

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

<b>Problem</b>	<b>Country-specific proposal</b>
Possible double counting in different explicit tracking instruments	BPRs: [11a], [22]
Double counting of attributes in implicit tracking mechanisms	BPRs: [11a], [22]
Double counting within individual supplier's portfolio	
Loss of disclosure information	BPRs: [11a], [22]
Intransparency for consumers	BPR: [11a]
Leakage of attributes and/or arbitrage	BPRs: [35]
Unintended market barriers	BPR: [22]

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