



Javna agencija RS za energijo



Andrej Špec, Javna agencija RS za energijo

Slovenian support system for electricity from RES and CHP

**Uklanjanje prepreka za prihvat distribuirane
proizvodnje**

CIREC, Zagreb, 14 October 2010

Legislation

Energy Act, The Official Gazette of the Republic of Slovenia,
Nos. 27/07 (EZ-UPB2), 70/08 (EZ-C), 22/10 (EZ-D)

Regulation on issuing of the Declarations for the production units and
of the Guaranties of Origin, The Official Gazette of the Republic of
Slovenia, No. 8/09

Act on using guarantees of origin registry and the method of the
forwarding data of electricity production, The Official Gazette of the
Republic of Slovenia, No. 33/09

Regulation on measurements to be performed in production units which
are receiving guarantees of origin and support for electricity
produced, The Official Gazette of the Republic of Slovenia, No.
21/09

Regulation on determination of the amount of electricity from
cogeneration of heat and electricity which is generated with high
efficiency and determination of efficiency of transformation of
energy from biomass, The Official Gazette of the Republic of
Slovenia, No. 21/09 37/09

- Regulation on the way of defining and accounting of fee to assure support to production of electricity from cogeneration with high efficiency and from renewable source, The Official Gazette of the Republic of Slovenia, No. 2/09
- Decision laying down fee to assure support to production of electricity from cogeneration with high efficiency and from renewable sources, The Official Gazette of the Republic of Slovenia, No. 8/09
- Regulation on the rules for the preparation of forecasts on the situation of production plants generating electricity from renewable energy sources and high-efficiency cogeneration, The Official Gazette of the Republic of Slovenia, No. 83/09
- Regulation on supports for the electricity generated in cogeneration with high efficiency, The Official Gazette of the Republic of Slovenia, Nos. 37/09, 53/09, 68/09, 76/09 ,17/10
- Regulation on supports for the electricity generated from renewable energy sources The Official Gazette of the Republic of Slovenia, Nos. 37/09, 53/09, 68/09, 76/09 ,17/10



- **Government**
 - set up legislation
- **Energy Agency of the Republic of Slovenia (AGEN-RS)**
 - issues declarations
 - issues the Guarantees of origin (GO)
 - decides on the eligibility of support and the amount of the support
 - supervises the support system
 - announcing the situation of the production facilities (forecasts)
 - calculates the fee level for the following year
- **Centre for Support (Borzen)**
 - collects fee
 - pays support
 - estimates annual support found
- **System operators**
 - provide metering data of produced electricity



How to get the support?

- 1. Declaration for the production facility**
- 2. Guarantee of origin transferred to the Centre for Support**
- 3. Decision on granting the support**



The procedure for obtaining a declaration

- RES or CHP production facility
- Adequate meter configuration for GO

Application has to include:

- Producer data
- Technical data on production device (type, capacity, the connection to the public grid...)
- Data on meter(s) (energy flow type, the name of the producer and type, a serial number, the year of installation, the name of the technical scheme, last calibration/validation)
- Attachments (the connection approval, the operating permit, the location of the production facility and network, a technical scheme of the facility, the chart of metering sites)

DEKLARACIJA
za proizvodno napravo

____ SFE elektrarna 1, Prešernova ulica 51, 2000 Maribor _____
Ime in lokacija proizvodne naprave

je bila izdana proizvajalcu _____ Ime in priimek, Prešernova ulica 51, 2000 Maribor _____
Ime in sedež proizvajalca

in je vpisana v register deklaracij za proizvodne naprave pod številko _____ 666-05-1001/2010-0006 _____

Velja od _____ 10.03.2010 _____ do _____ 10.03.2015 _____

Datum: _____ 10.03.2010 _____

Direktorica
Javne agencije Republike Slovenije
za energijo

Javna agencija RS za energijo



Register of declarations

<http://www.agen-rs.si/porocila/RegisterDeklaracij.aspx>



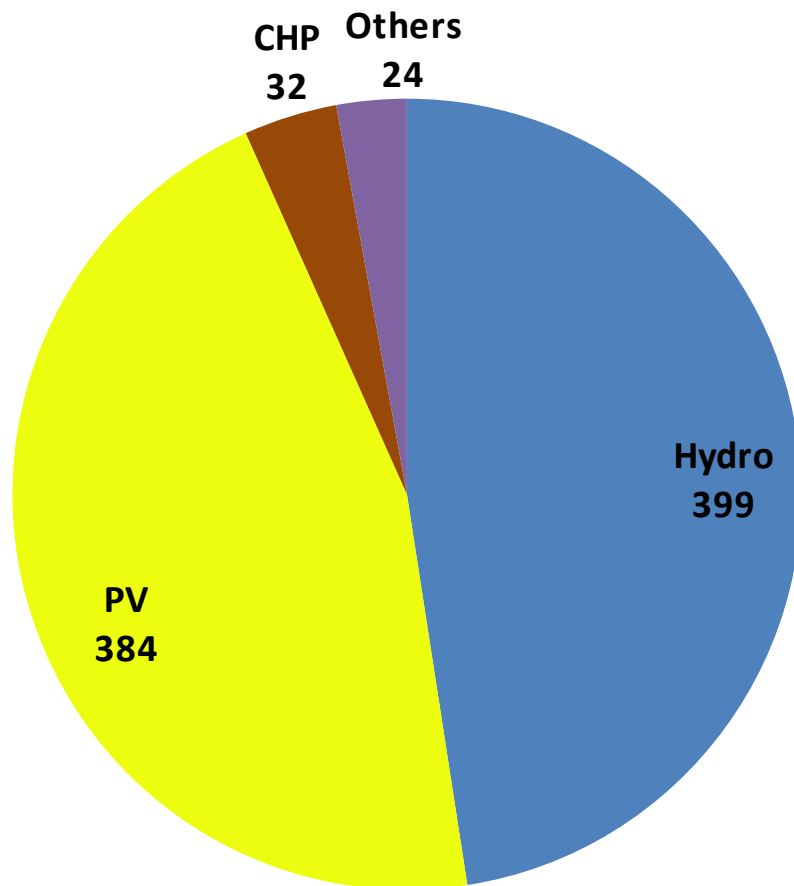
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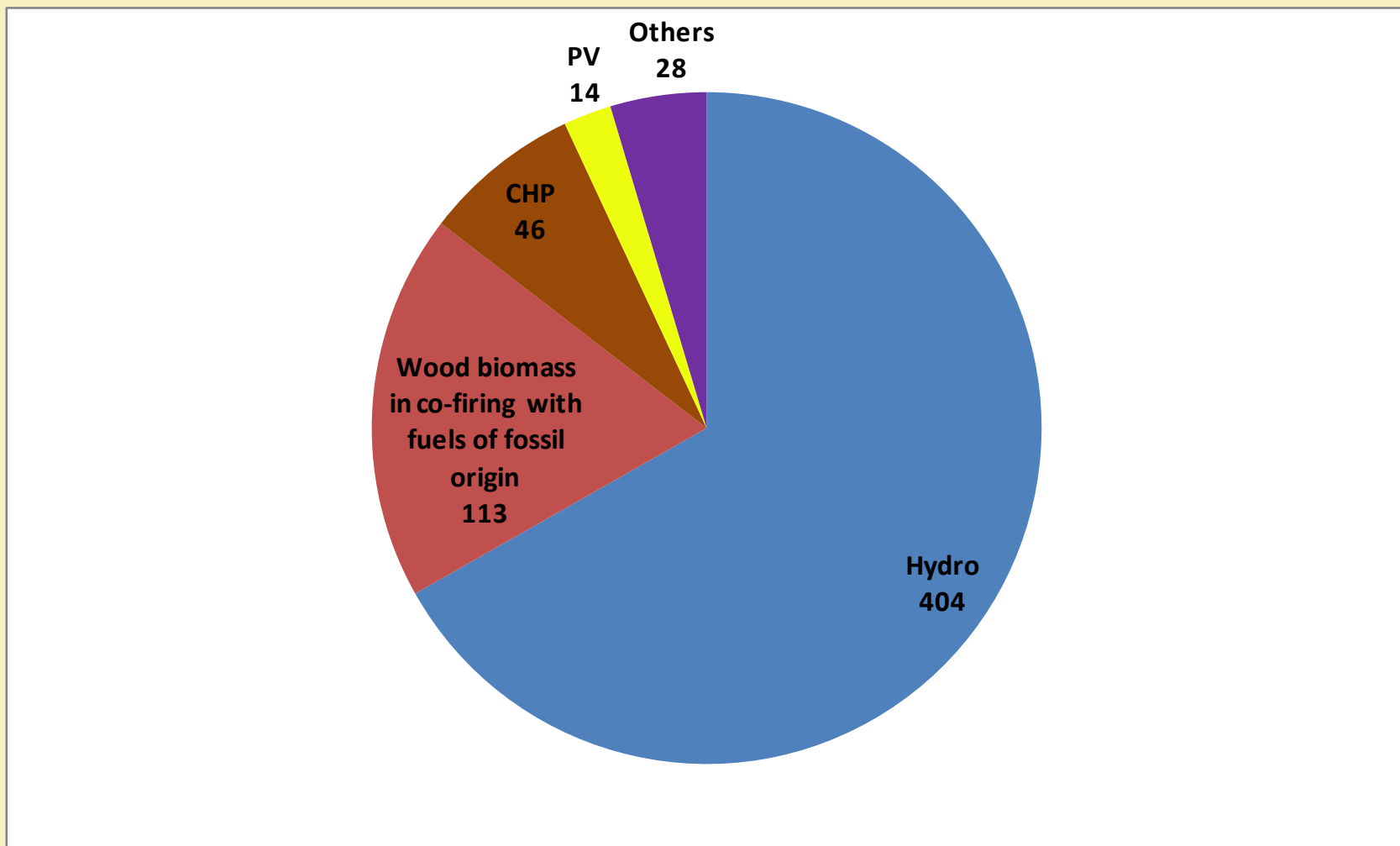
Register deklaracij za proizvodne naprave električne energije iz obnovljivih virov in soproizvodnje z visokim izkoristkom

Št.	Vrsta proizvodnih naprav
1.	Hidroelektrarne
2.	Geotermalne elektrarne
3.	Elektrarne na biomaso
4.	Vetrne elektrarne
5.	Sončne elektrarne
6.	Elektrarne na odlagališčni plin
7.	Elektrarne na plin iz čistilnih naprav
8.	Elektrarne na bioplin
9.	Elektrarne na biorazgradljive komunalne in industrijske odpadke
10.	Sosežig biomase (delež biomase med 5% in 90%)
11.	Sosežig biomase (delež biomase do 5%)
12.	Soproizvodnja z visokim izkoristkom

Current numbers of valid declarations



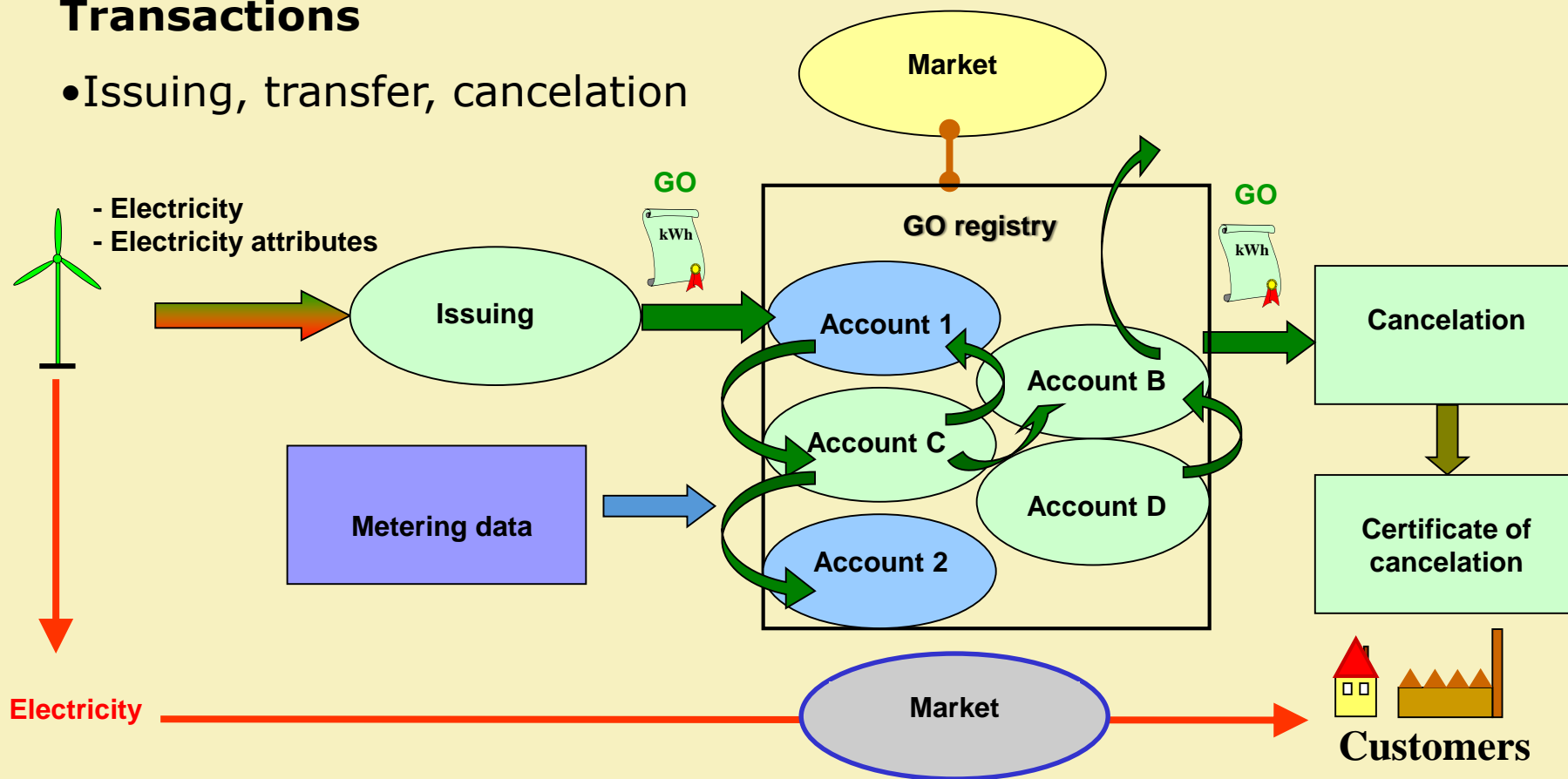
Capacity of facilities with declaration (MW)



Condition: valid declaration

Transactions

- Issuing, transfer, cancelation





GO register

Register

- <https://poi.borzen.si>



Javna agencija RS za energijo

Pol Register potrdil o izvoru v RS

Domov

Dokumentacija

Seznami

Stiki

Novice

Za delo z registrom Pol priporočamo Microsoft Int



Obvestil proizvaj

V skladu spreminje učinkovite kvalificira za podpc sistema (42. členo

Potrdila o OVE/SPT

CERTIFICATE / POTRDILO

OF REDEMPTION OF GUARANTEES OF ORIGIN

O UNOVČENJU POTRDILO O IZVORU ELEKTRIČNE ENERGIJE

SERIAL NUMBER

07-0020

SERIJSKA ŠTEVILKA

TYPE

RES / OVE

VRSTA POTRDILO

REDEMPTION DATE WITHIN THE SLOVENIAN SYSTEM OF GUARANTEES OF ORIGIN

5.10.2005

DATUM UNOVČENJA V SLOVENSKEM SISTEMU POTRDILO O IZVORU

With this certificate the Energy Agency of the Republic of Slovenia as the Issuing Body of Guarantees of origin for Slovenia confirms that

Š tem potrdilu Javna agencija RS za energijo kot izdajatelj potrdi o izvoru za območje Slovenije potrjuje, da je bilo

67096000 kWh

of electrical energy was produced in the units included in the List of Production Units and that the corresponding number of Guarantees of Origin were redeemed for

električne energije proizvedene v objektih navedenih v seznamu proizvodnih objektov, in da je bilo ustrezno število potrdil unovčenih za

Podjetje

Strossmayerjeva ulica 30, 2000 Maribor

Slovenija

REDEEMER

Podjetje

UNOVČITELJ

ADDRESS

Strossmayerjeva ulica 30

NASLOV

2000 Maribor

Slovenija



Javna agencija RS za energijo

Energy Agency of the Republic of Slovenia

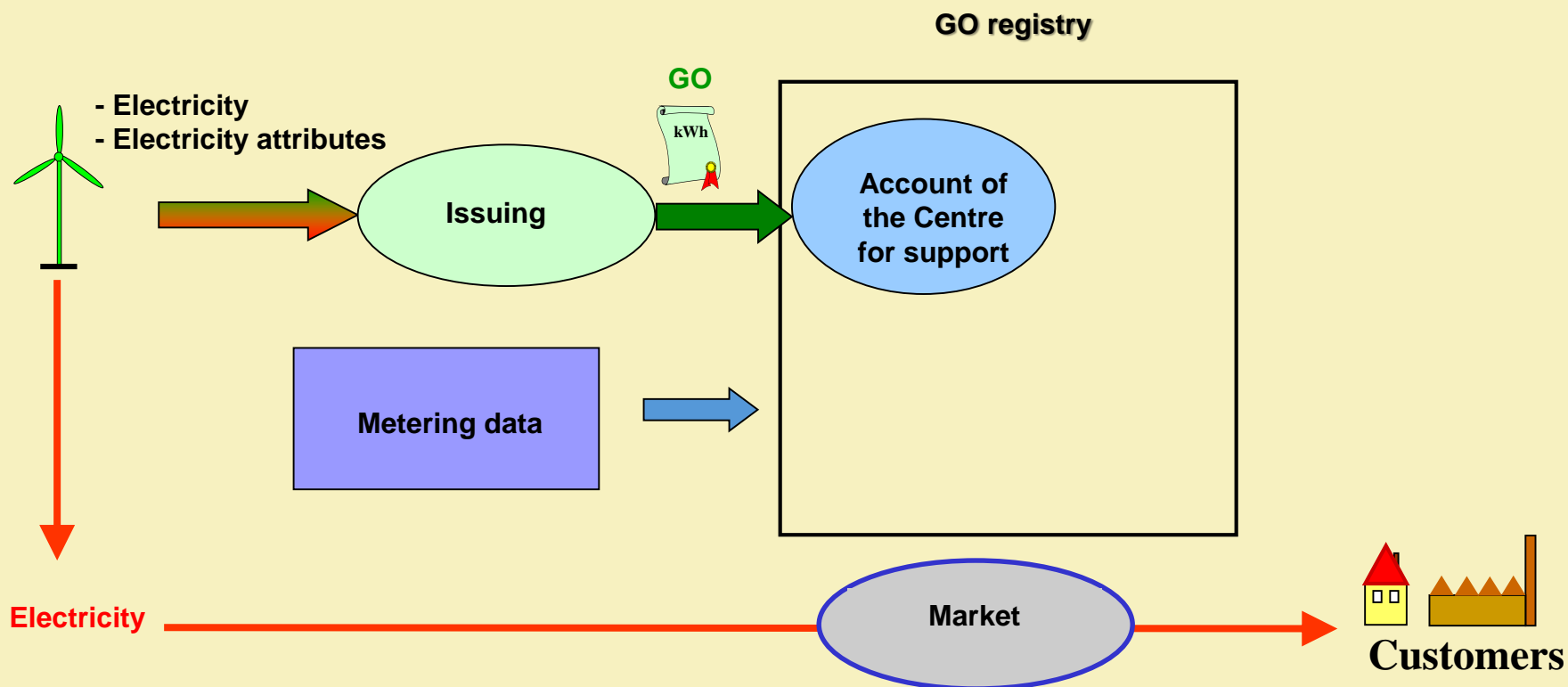


Use of the GO

- *Support*
- Trademarks
- Disclosure

The producers are eligible to receive support only for the produced electricity for which they obtained guarantees of origin and transfer them to the Centre for Support.

Application for transfer is sent to the AGEN-RS.



- Valid declaration for production facility
- Adequate meter configuration (useful heat, fuel consumption, electricity)
- Production facility not older than 15 (RES) or 10 years (CHP)
- Capacity is not exceeding 125 MW (RES) or 200 MW (CHP)

Application has to include:

- Data about producer and production facility
- Annual estimation of the production
- Data about the beginning of the production
- Data on meter(s)
- Data about other type of subventions/ state aid
- Type of the requested support
- Attachments (operating permit or agreement on access to the grid)



RCE represent the total annual costs of operating typical RES generating plants, reduced by total revenues and benefits of operation (sale of heat etc.), and are expressed in €/MWh.

$$\mathbf{RCE = (costs - other\ benefits) / electricity}$$

- costs: annual investment + operating costs (€) + fuel costs (€)
- other benefits: sale of heat and other by-products
- electricity: installed power (MW) * annual operating hours (h)



Structure changing period of RCE

Structure

Change

Variable RCE

==

Fuel costs –
revenues (heat and
other benefits)

Annually or more frequently

Cause: forecasts of the reference prices for electricity and energy published by the Energy Agency within the announcing the situation of the production facilities

Fixed RCE

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Investment costs
Operating costs
(excluding fuel costs)

Every five years only for new producers

Cause: significant change costs and other investment parameters



- Technology (hydro, solar, gas turbines with heat recovery...)
- Used fuel (biomass, gas, landfill gas...)
- Size of production facility (capacity)
- Sustainable and other criteria (type of biomass, integrated PV...)
- Economic criteria (depreciation period, discount rate, revenues...)



RCE calculation

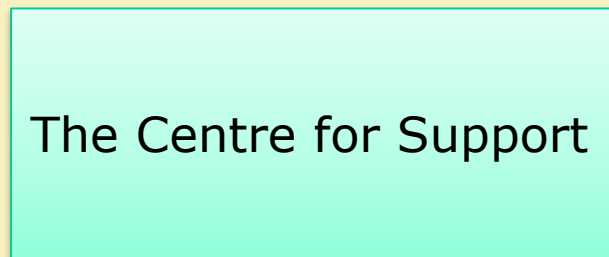
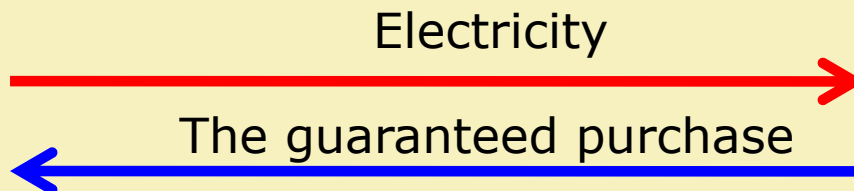
Detailed description of the calculation is published on the website of the Ministry of the Economy in documents:

- Methodology for Determining Reference Costs of Electricity Generated from Renewable Resources No. 360-81/2009-1
- Methodology for Determining the Reference Costs for High-Efficiency Cogeneration No. 360-82/2009-1

Link: http://www.mg.gov.si/si/delovna_podrocja/energetika/sektor_za_razvoj_energetike_in_rudarstvo

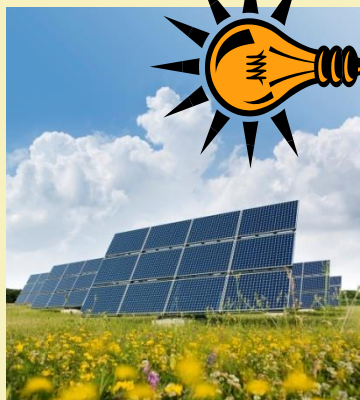
Type of support

The guaranteed purchase

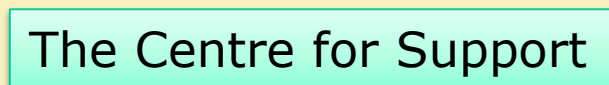
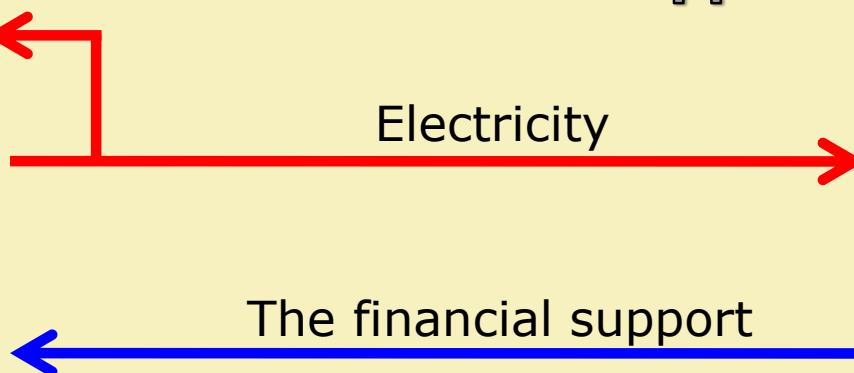


OR

Consumption



The financial support





The guaranteed purchase (EUR/MWh) = RCE (EUR/MWh)

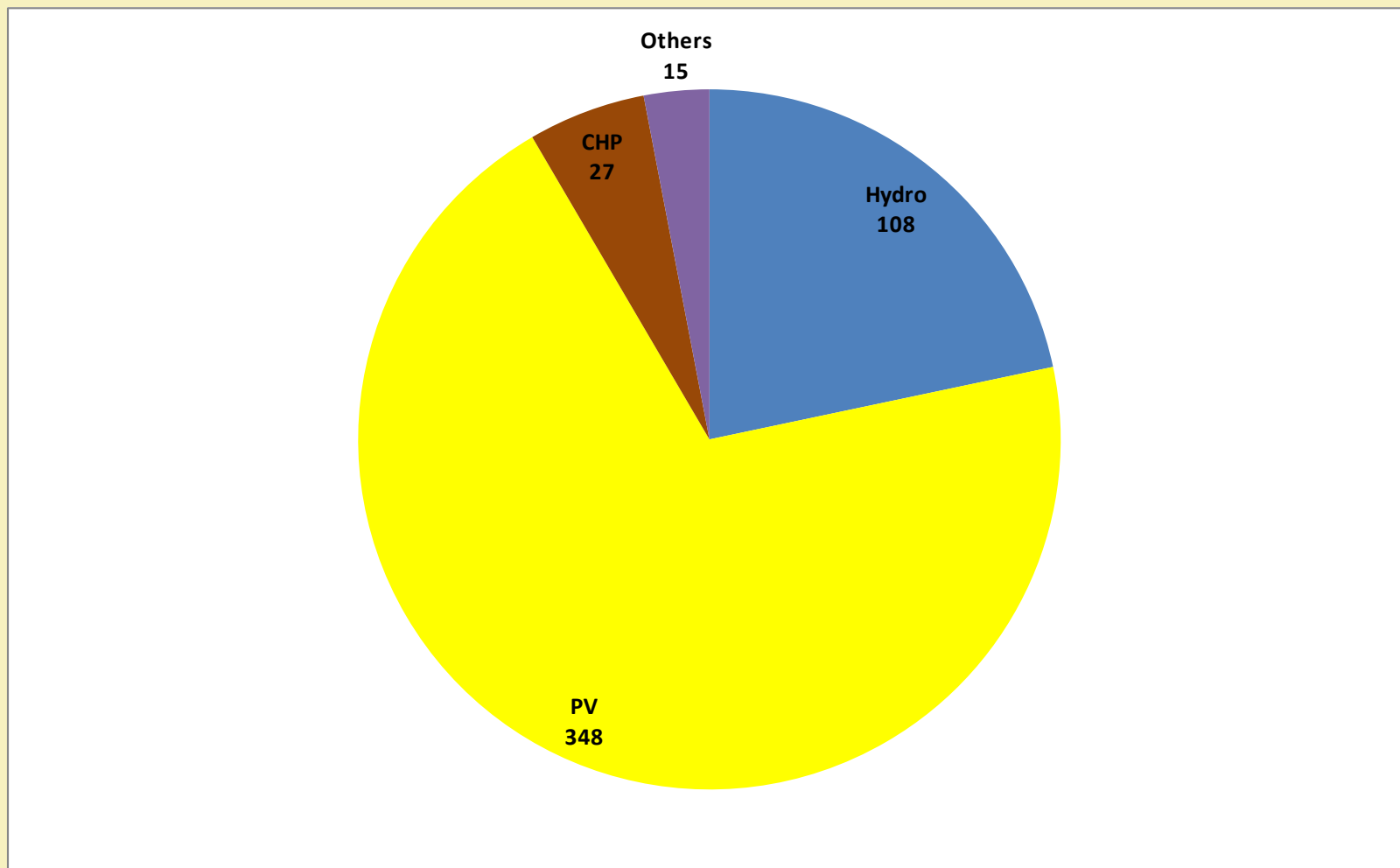
The financial support (EUR/MWh) =

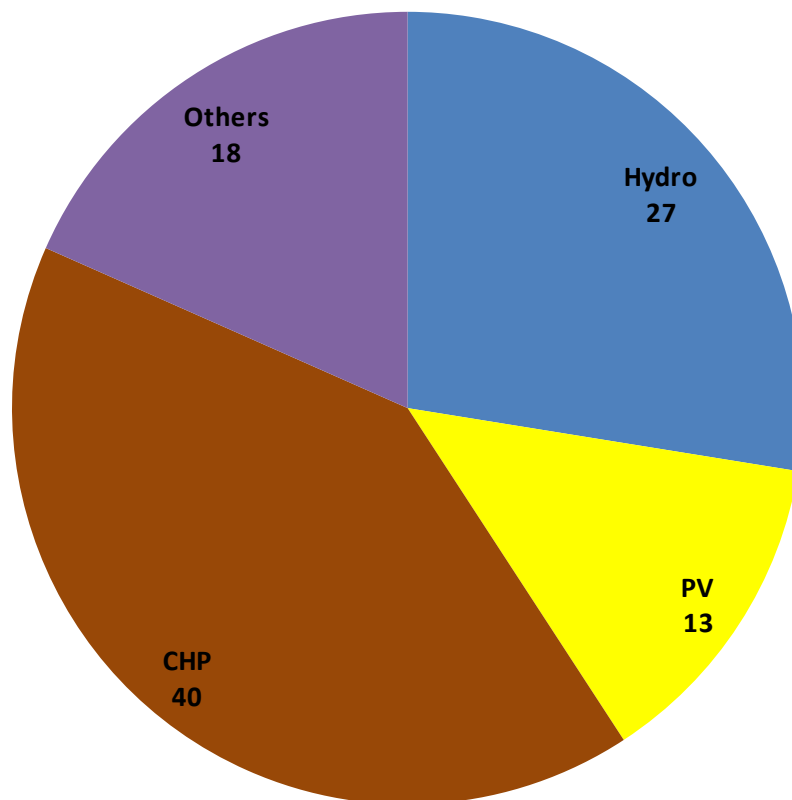
reference price electricity (EUR/MWh)* B

reference price electricity: forecasts of the reference prices for electricity published by the Energy Agency within the announcing the situation of the production facilities

factor B: reflects the features of operation of individual types of RES generating plant, and thereby market price of produced electricity

Number of facilities in new support scheme





- Data used for obtain declaration, GO and decision on support
- Operating data (fuel consumption and production data)

Measures:

- withdrawal of declaration and decision on support
- financial penalties from 300 to 20000 EUR
- prohibition of entering into the support system



Agency authorized persons

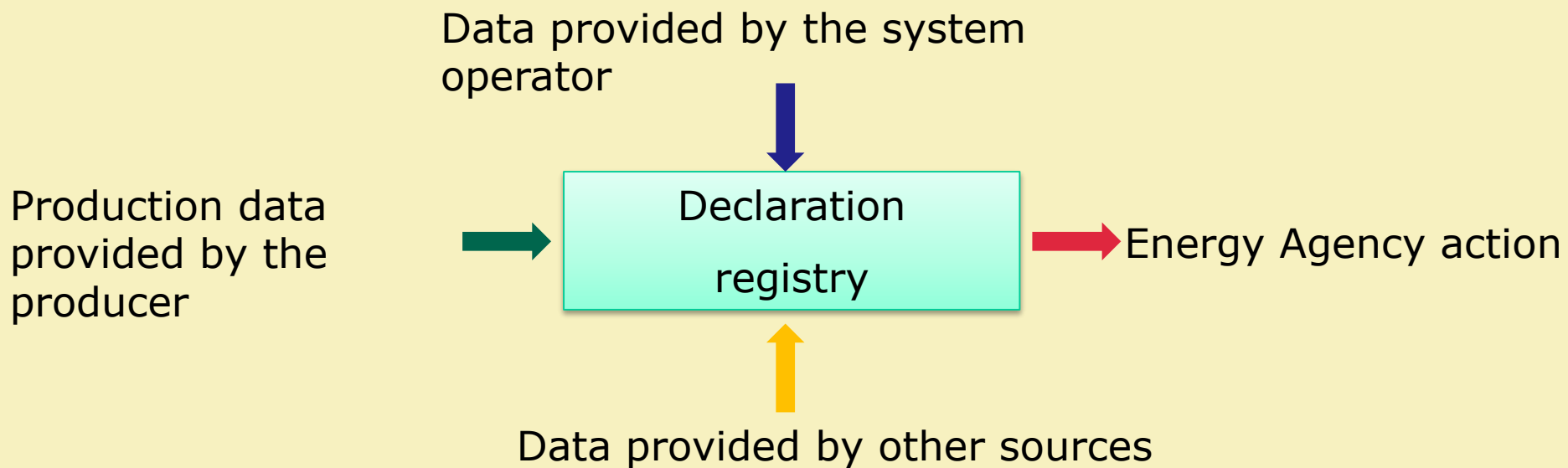
- Authorized by the director of the AGEN-RS
- Authorized persons have to meet the requirements to become an inspector
- Authorized persons have the same competencies as inspectors
- Authorized persons can inspect production facility at any time
- Producer has to allow the agency authorized persons the review of the manufacturing facility and all the records and documents

- a production facility with capacity **above 1 MW** has to have registered measurements of the energy values on used biomass:
 - the amount of biomass burned
 - lower calorific value of biomass which is defined in the supplier's specification in accordance with the SIST-TS CEN / TS 15234:2006, or measured by an accredited laboratory for testing
- a production facility with capacity **below 1 MW** should have the same registry as the facilities above 1MW. If measurements of calorific value are not available, the producer has to establish a register containing information on:
 - the amount of biomass burned,
 - measured and registered water content in the biomass and
 - type of biomass.

Lower heating value of biomass is determined in accordance with the SIST-TS CEN / TS 14918:2005 and BS-TS CEN / TS 14961:2005.

- If producer is receiving supplements to support for a particular type of biomass, he has to also keep in a Biomass registry:
 - the type of biomass used and
 - keep the evidence of the sources and origins

- Authorized persons have insights into Biomass registry at any time





Javna agencija RS za energijo



Thank you for your attention!

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