State Energy and Water Regulatory Commission

Regulatory and Legal Aspects, assessment of gasification sources availability - SEWRC

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Promoting electricity generation from biomass is regulated in ERSA:

Priority connecting of RES electricity generators to the transmission and/or distribution network;

Mandatory purchase of the electricity generated by biomass power plants;

preferential feed-in-tariffs for the purchased electricity generated by biomass power plants;

Funds envisaged for the development of networks, connected to RES electricity promotion in the investment programmes of the transmission and distribution undertakings

By the entry into force of AESBA in May 2007, a time limit for the validity of the long-term contracts has been fixed:

- 15 years for the contracts of biomass electricity generators;

By the entry into force of ERSA in May 2011, the time period for the purchase of biomass electricity at feed-in-tariff has been extended at 20 years.

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In pursuance of ERSA and NAPRES (National Action Plan for the Energy from Renewable Sources)**, promoting the use of electricity generated by biomass power plants is a key factor and SEWRC:**

- Sets feed-in-tariffs for the purchase of electricity generated by biomass power plants ;
- Develops a Methodology for the fair allocation of the difference between the market (referent) price and the feed-in-tariffs of electricity generated from RES among all customers;
- Exercises control on the proceedings of energy units connection to the transmission and distribution networks (especially up-to-date since the entry into force of the 3-rd energy package);
- Approves and publishes on the internet page the projected energy capacities,which may be provided for connection of energy units to the transmission and distribution networks ;
- Exercises control on the duties of the transmission and distribution networks operators to report about the cases of considerable reduce of the transmitted and/or distributed power amounts from biomass power plants, as well as other control functions.

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To set the **RES electricity feed-in-tariffs**, including for new technologies, SEWRC carries out an analysis of the type renewable primary energy source, the type of the technology used, the installed capacity, the pattern of facilities installation, including:

1. Investment costs, including connection costs;
2. Target rate of return on capital;
3. Target capital and investment structure;
4. Installation productivity according to the type of technology and the resources used;
5. Costs connected to a higher level of environment protection;
6. Costs of raw materials for the power generation;
7. Costs of fuel for transport purposes;
8. Costs of labour and salaries;
9. Other operational costs.

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RES electricity generation feed-in-tariffs set by SEWRC do not take into consideration the specific values of an individual investment project, but the average ones based on official sources and the international experience, adjusted with the peculiar of Bulgaria circumstances.

Tariffs are set by calculations of the financial flows current value being the result of the set by SEWRC revenue requirements based on the established price formation components. Prices are annuity for the mandatory purchase period and when the current value is calculated, the set by the Commission rate of return on capital before taxation shall be used as discount factor

Every year SEWRC **updates the feed-in-tariff** of electricity generated from biomass, depending on the value variation of the following price formation components :

- Costs of raw materials for the power generation;
- Costs of fuel for transport purposes;
- Costs of labour and salaries.

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In pursuance of the transitional provisions of the Act:

-distribution network operators (DNO) annually present to the transmission network operator the one-year period projected electricity capacities, which may be provided for connection to the distribution networks of biomass power units;

- the transmission network operator based on the 10-year development plan of the transmission network and on the DNO proposals, submits at SEWRC and the Minister of the ministry of economy, energy and tourism the one-year period projected electricity capacities which may be provided for connection to the biomass power plants;

-these requirements are being developed based on the purposes laid down in **NAPRES** according to the reported and forecasted electricity consumption, the networks transmission possibilities and the capacities balancing possibilities of the electricity system.

☐ **Under the new ERSA of May 2011 the State Energy and Water Regulatory Commission**:

- Approves and publishes on the internet page the projected energy capacities,which may be provided for connection of biomass energy units to the transmission and distribution networks. The terms and conditions for the development of such forecasts are stipulated in the Ordinance on the licensing of the activities in the energy sector.

- The terms and conditions for the connection of biomass energy units procedures including allowance criteria and the control SEWRC exercises are stipulated in the Ordinance on the connection of generators and customers to the transmission and distribution networks.

- **For the purposes of purchase, transmission and distribution of electricity from biomass:**

  - Biomass electricity generators, whose energy units have total installed capacity up to 1500 kW, conclude a **contract for access with the distribution network operator at common conditions;**

  - Biomass electricity generators, whose energy units have total installed capacity over 1500 kW, conclude a **contract for access with the distribution network operator or the transmission network operator at common conditions**;

  - **the common conditions for access** are approved by SEWRC and are announce on the internet pages of the operators of the respective transmission or distribution networks **before the power purchase agreement is concluded.**

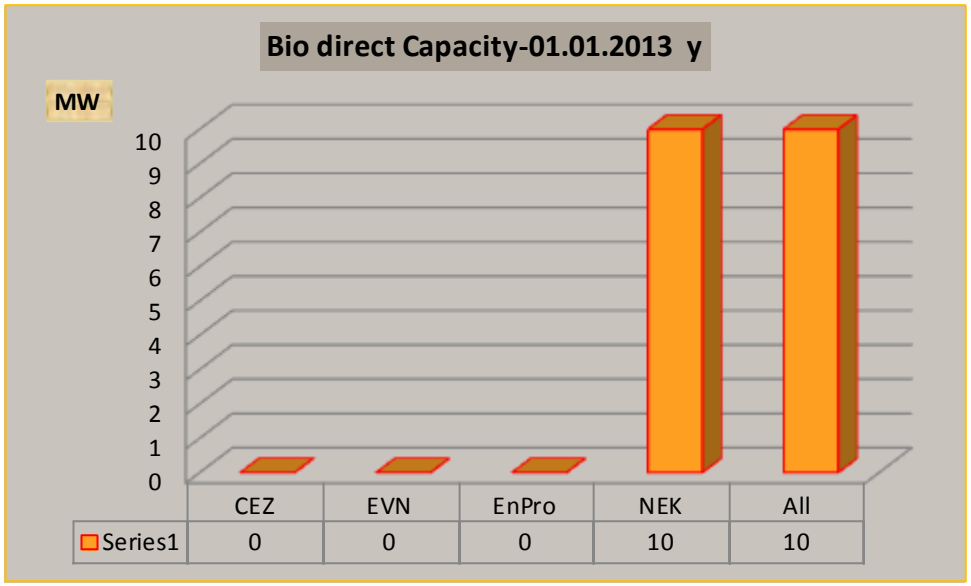
ERSA provides also for the following mechanisms for promotion of the heat and cooling power generation from RES:

- support and realization of projects for the construction of heat transmission networks and of small de-centralized systems of heat and/or cooling energy;
- Connection of units for heat energy generation from RES to heat transmission network and the purchase of the heat generated by the other heat generator from the heat transmission company.

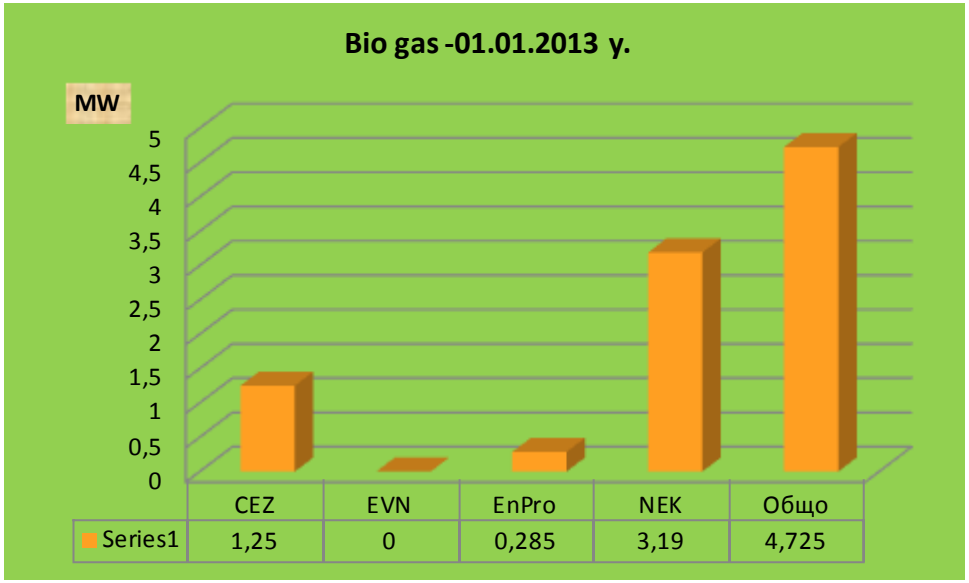
Gas production from RES is supported by:

- The provision of guaranteed access to the transmission and distribution networks
- Guarantee of the gas transmission and distribution
- Mandatory purchase of the gas produced and others.

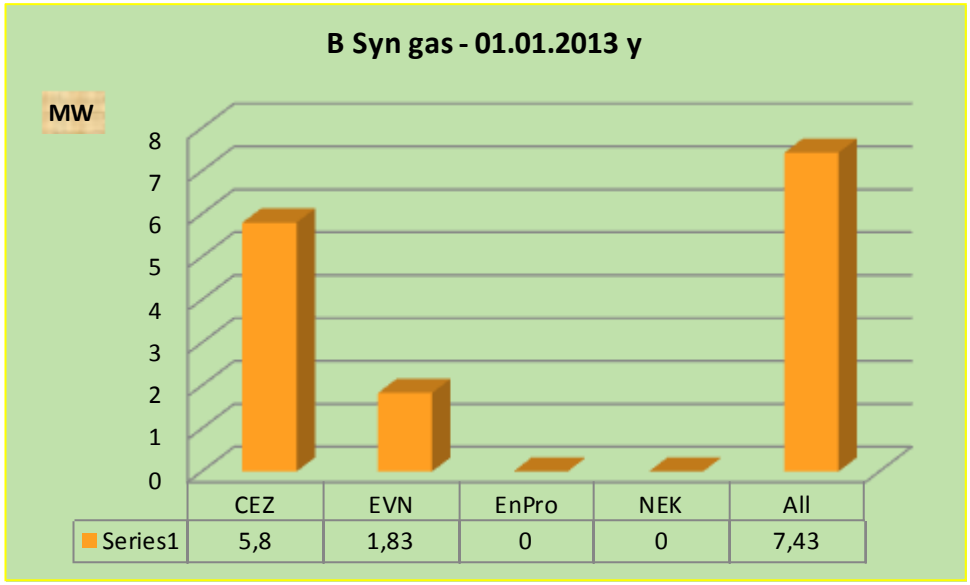
Installed capacities of power plants operating by direct biomass combustion:



Installed capacities of power plants operating with bio gas



Installed capacities of power plants operating with bio gas



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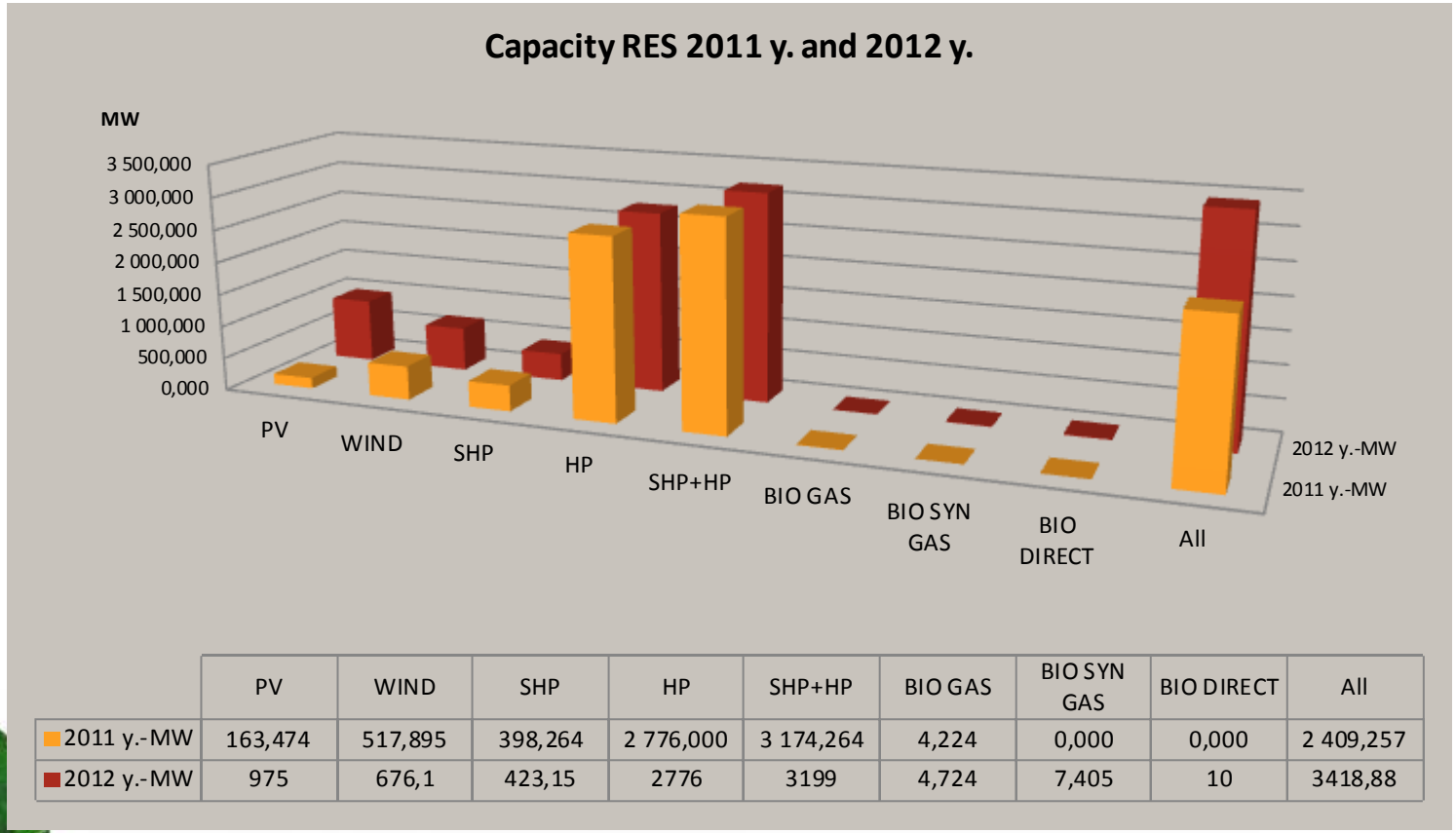
Installed capacities of power plants operating with RES in 2011 and 2012



	PV	WIND	SHP	HP	SHP+HP	BIO GAS	BIO SYN GAS	BIO DIRECT	All
2011 y.-MW	163,474	517,895	398,264	2 776,000	3 174,264	4,224	0,000	0,000	2 409,257
2012 y.-MW	975	676,1	423,15	2776	3199	4,724	7,405	10	3418,88

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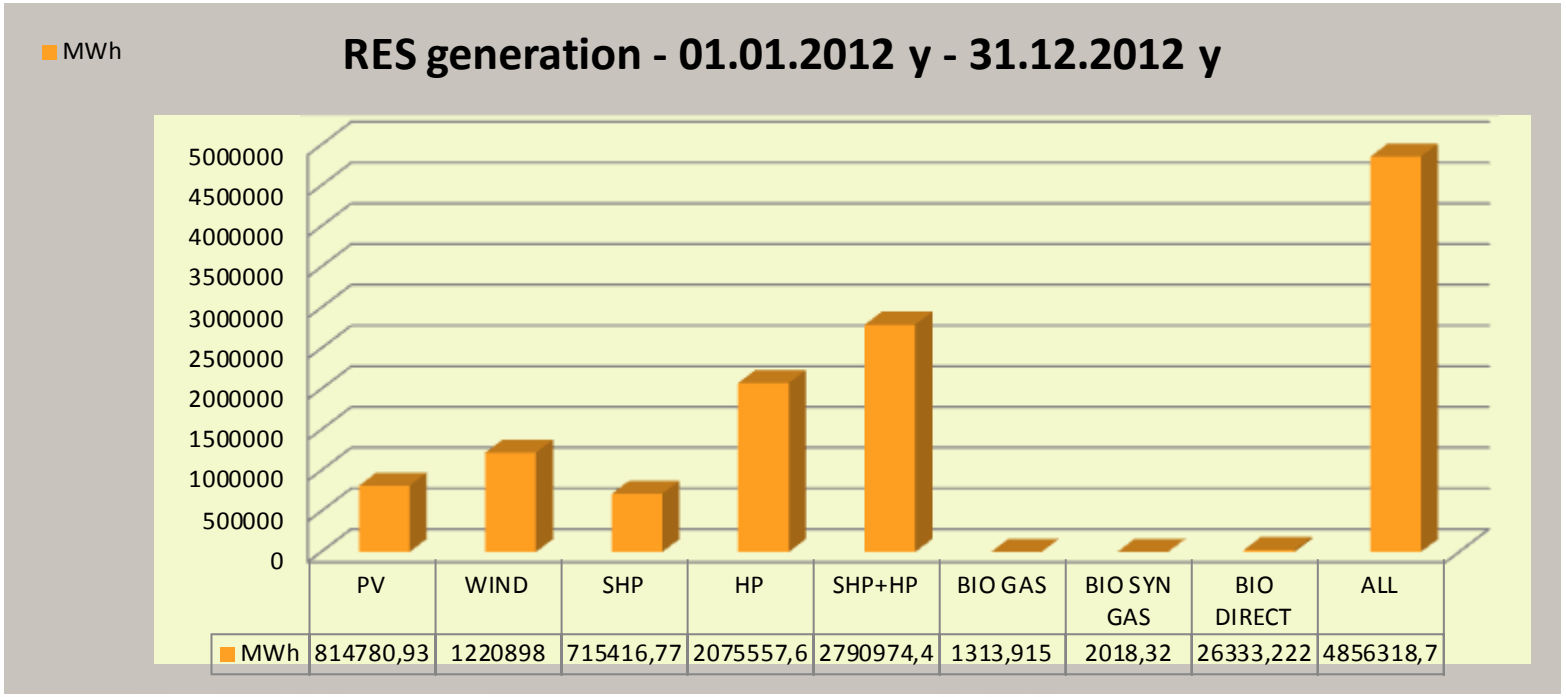
RES electricity generated in the period 01 Jan 2012 – 31 Dec 2012



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Feed-in-tariffs of electricity generated from power plants operating by thermal gasification of biomass and/or biodegradable fractions of industrial and municipal waste:

Power plants with installed capacity up to 5 MW, without combined cycle – 367.88 BGN/ MWh;

Power plants with installed capacity up to 5 MW, with combined cycle - 400.97 BGN/ MWh;

Power plants with installed capacity over 5 MW, without combined cycle - 357.98 BGN/ MWh;

Power plants with installed capacity over 5 MW, with combined cycle - 391.06 BGN/ MWh;

At this stage, feed-in-tariffs of electricity generated from power plants operating by thermal gasification of biomass, as follows:

Types of Biomass

-Wood chips and pellets
-Grape pomace
-Forest residues
-Straw
-Residues from furniture industries

Others under development

-chicken litter
-sewage sludge
-animal meal
-plastics-?
-tyres - ?

Yet!!!

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Under **NAPRES**, RES share in the total consumption of electricity in the country is shown in the table

	2010	2012	2014.	2016	2018	2020
RES share in the total energy consumption, %	10.1	10.7	11.4	12.4	13.7	16.0
Total consumption of RES, thousand. т.н.е.	1107	1296	1560	1786	1934	2059

Thank you for the attention!

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