



## RENEWABLE ENERGY POLICY REVIEW

### ROMANIA

Romania has seen a large decrease in energy consumption since 1990 mainly due to the shutting down of large inefficient industrial businesses. The country has now a certain electricity over-capacity, and the energy mix includes a significant share of hydropower (mainly large scale), while the remainder is constituted by fossil fuels and nuclear power. In the near future, nuclear electricity development with two more reactors is a priority. In terms of Renewable Energy Sources (RES), in Romania's accession treaty, the EU set a target by 2010 (33%) that is to be achieved mainly by its current large hydropower production. The high potential of small-scale hydro power has remained almost untouched. A small number of wind, solar, biomass and geothermal projects have been implemented in the country. Provisions for public support are in place, but few renewable energy projects have so far been financed. The September 2007 energy strategy includes upgrading and retrofitting of hydro-power plants with total installed power of 2328 MW. Also targets for electricity from renewables were established: 35% by 2015 and 38% by 2020. Romania has already opted for a quota/certificate system, but the green certificates system per se does not fully secure investor confidence in renewable investments in the country. Indeed, the investment rate in the renewable sector is quite low, also due to long administrative procedures.

#### KEY FIGURES

- The **share of RES in total primary energy consumption** was of 11.91% in 2007<sup>1</sup>.
- The **share of RES in the final energy consumption** was 17.1% in 2006.
- The **share of RES in the gross electricity production** was 35.8% in 2006.
- The **share of RES heating and cooling** was of 12% in 2006<sup>2</sup>.

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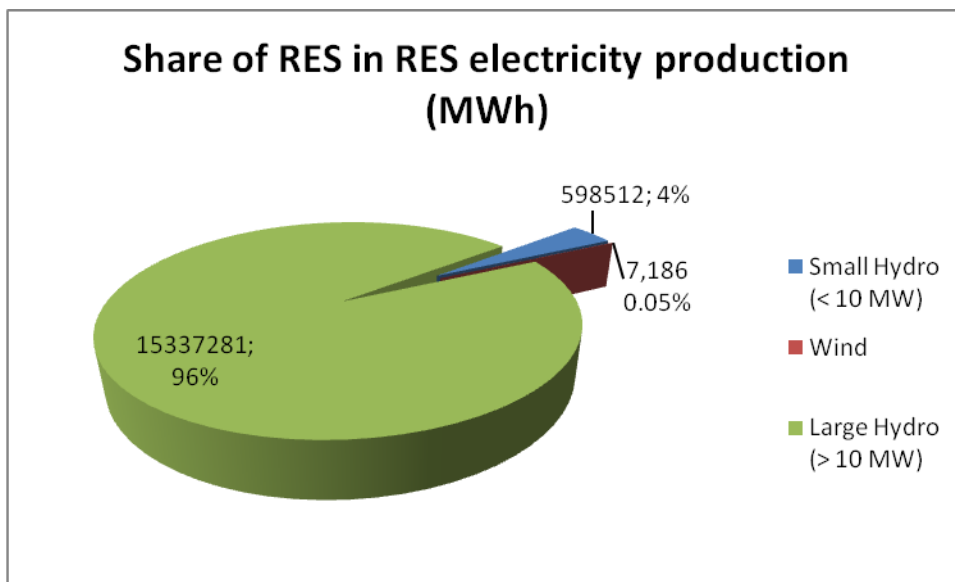
<sup>1</sup> Eurobserv'er

<sup>2</sup> The national statistics show 3022 ktoe from firewood within the final energy consumption of 25312 ktoe. It results the share of RES heating of 12%. If we consider the gross (primary) energy consumption, then the share is 3185 ktoe versus 39571 ktoe, meaning 8%

- The **share of biofuels** in the transport sector in 2006 was 0 %.
- Romania energy dependence on imports amounts to 31.6% 2006.

### Technology Specific Figures<sup>3</sup>

- **Wind power** registered an increase in 2007, passing from 3MW cumulated in 2006 to over 7 MW. This amount produced 8GWh of electricity.
- **Biofuels** consumption is solely represented by biodiesel use that accounted for 43,000toe in 2007.
- 3,279Mtoe primary energy and 4GWh of gross electricity were produced from **solid biomass**.



Source: Romanian Energy Regulatory Authority, provided by ARCE

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<sup>3</sup> Eurobserv'er

## **RES POLICY**

### **RES TARGETS**

#### **Mandatory targets set by the Directive on the Promotion of the use of energy from renewable sources**

- 24% share of RES on the final consumption of energy in 2020.
- At least 10% share of renewable energy in final consumption of energy in transport by 2020.

#### **Indicative Target set by the RES- electricity European Directive from 2001<sup>4</sup>**

- 33 % Share of RES on gross electricity consumption by 2010.

#### **Indicative Target set by the European Biofuels Directive from 2003<sup>5</sup>**

- Biofuels consumption of 5.75% of petrol and diesel use for transport in 2010.

#### **National commitments**

- 11% of RES in primary Energy Consumption by 2010. (2015 – Renewable energy sources a share of 15% on the total primary energy sources).
- There is no national target/commitment for heating and cooling.

#### **Progress toward the targets**

In terms of RES of gross electricity consumption, Romania may be still on target, as important wind projects are developed. In 2007, the majority of all RES-e was generated through large-scale hydro power.

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<sup>4</sup> Directive 2007/71/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. Currently in force, sets targets up to 2010.

<sup>5</sup> Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. Currently in force, sets targets up to 2010, with indicative targets by 2005.

## RES POLICY INSTRUMENTS

### Support for RES Electricity

Romania introduced the following measures to promote RES-e:

*A quota system with tradable green certificates (TGC) for new RES-e has been in place since 2004. Purchase Obligation for supplier companies and the obligation to fulfill an annual quota of purchased RES electricity.*

- The mandatory quota increase from 0.7% in 2005 to 8.3% in 2010.
- For the period from 2005-2012 the annual maximum and minimum value for the TGC in 24-42 Euros/certificate.

TGCs are issued to electricity production from wind, solar, biomass or hydro power generated in plants with less than 10 MW capacity.

*Mandatory dispatching and priority trade of electricity produced from RES since 2004.*

#### *Quota Obligations*

Resource	Technology	Penalty level [€cents/ kWh]	Quota in % (in year)	Year	Comments, obtained quota
all RES-E	all	63	0.70%	2005	0.000%
		63	2.20%	2006	0.001%
		63	3.74%	2007	
		84	5.26%	2008	
		84	5.78%	2008	
		84	8.30%	2010-2012	
			9.00%	2013	
			10.00%	2014	
			10.80%	2015	
			12.00%	2016	
			13.20%	2017	
			14.40%	2018	
			15.60%	2019	
			16.80%	2020	

Source: ENERO Centrul pentru Promovarea Energiei Curate si Eficiente in Romania. Center for Promotion of Clean and Efficient Energy in Romania

The new Law 220 issued in November 2008 gives important improvement of the market incentives for RES, such as:

- 1 green certificate for every 1 MWh delivered in the electricity grid by the generators of hydroelectricity from new HPP or HPP with max. 10 MW installed power and rehabilitated;

- 1 green certificate for every 2 MWh delivered in the electricity grid by the generators of hydroelectricity from HPP (installed power 1- 10 MW) (not corresponding to the conditions as stated in the previous point)
- 2 green certificates for each 1 MWh delivered in the electricity grid by the generators of hydroelectricity from HPP with max. 1 MW/unit installed power
- 2 green certificates for each 1 MWh delivered in the electricity grid by generators from wind-until 2015; 1 green certificate -starting from 2016
- 3 green certificates for each 1 MWh delivered in the electricity grid by generators from biomass, biogas, bioliquid, gas of waste fermentation and geothermal energy
- 4 green certificates for each 1 MWh delivered in the electricity grid by generators from solar sources

Green certificates can be traded in the range of 27 – 55 € each.

### Support for RES heating and cooling

There are no support schemes. However, the list of priorities of the Romanian Energy Efficiency Fund (2002) includes the use of RES for heating.

### Support for Biofuels

Legislation on biofuels was transposed into national legislation in December 2005.

#### Quota

Resource	Quota in % (per year)	Year
Biofuels	2%	From 1 <sup>st</sup> July 2007
Biofuels	3%	From 1 <sup>st</sup> January 2008
Biofuels	4%	From 1 <sup>st</sup> July 2008
Biofuels	4%	From 1 <sup>st</sup> July 2009
Biofuels	5.75%	2010

## Sources:

European Commission Factsheets by Country

[http://ec.europa.eu/energy/energy\\_policy/facts\\_en.htm](http://ec.europa.eu/energy/energy_policy/facts_en.htm)

Member States Reports in the framework of the Directive 2001/77/EC on renewable electricity

[http://ec.europa.eu/energy/res/legislation/electricity\\_member\\_states\\_en.htm](http://ec.europa.eu/energy/res/legislation/electricity_member_states_en.htm)

Member States Reports in the framework of the Directive 2003/30/EC on biofuels

[http://ec.europa.eu/energy/res/legislation/biofuels\\_members\\_states\\_en.htm](http://ec.europa.eu/energy/res/legislation/biofuels_members_states_en.htm)

Romanian Agency of Energy Conservation

<http://www.arceonline.ro>

ISPE

<http://www.ispe.ro>



In the framework of the EU co-funded project: RES 2020: Monitoring and Evaluation of the RES Directives implementation in EU27 and policy recommendations to 2020



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