



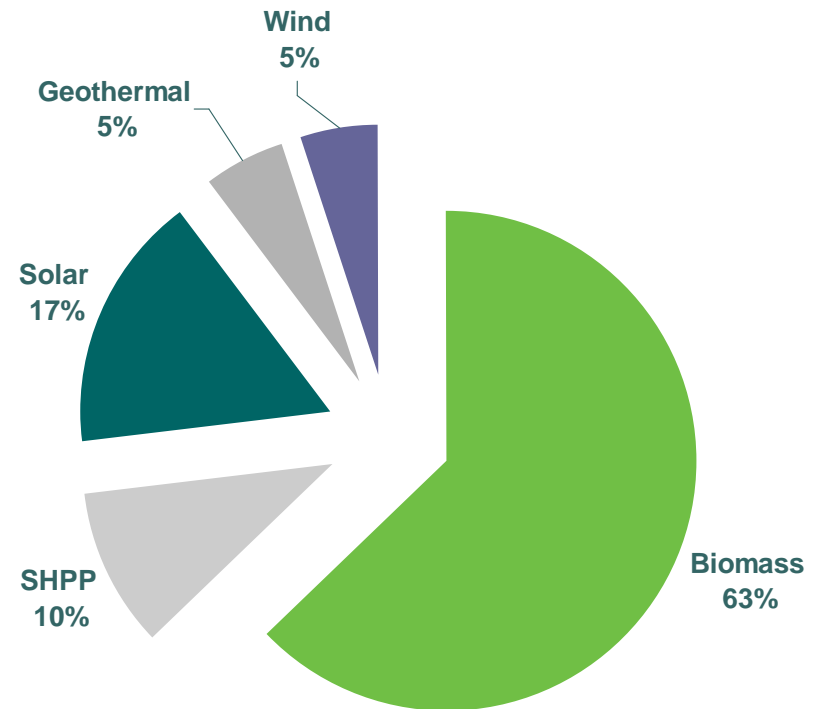
Serbia

Renewable
Energy
Policy

RES Technical Potential

Serbia's endowment of renewable energy resources is substantial
- realization of these potentials require Government action

	Potentials (Mtoe)
<i>Biomass</i>	2.40
<i>SHPP</i>	0.40
<i>Solar</i>	0.64
<i>Geothermal</i>	0.20
<i>Wind</i>	0.19
TOTAL	3.83



Clear technical potential of renewable energy - insufficient information
about the economic potential



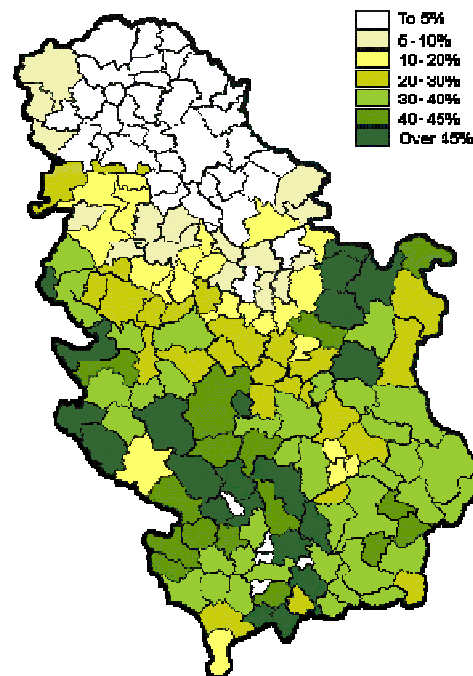
Biomass

Most promising utilization options for biomass:

- Space heating in households and buildings using biomass pellets or briquettes
- Co-firing or total replacement in district heating plants firing heavy oil or coal in south Serbia, where natural gas is not available yet
- Production of electricity utilizing agricultural and wood wastes

Wood biomass

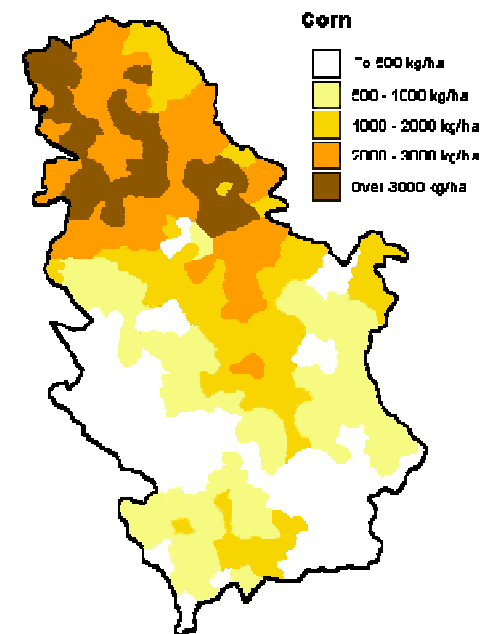
1 Mtoe



Federal Statistical Office, 2001

Agriculture biomass

1.4 Mtoe



Small Hydro Power Plants

Small hydro

SHPP Cadastre (1987)
856 locations
500 MW

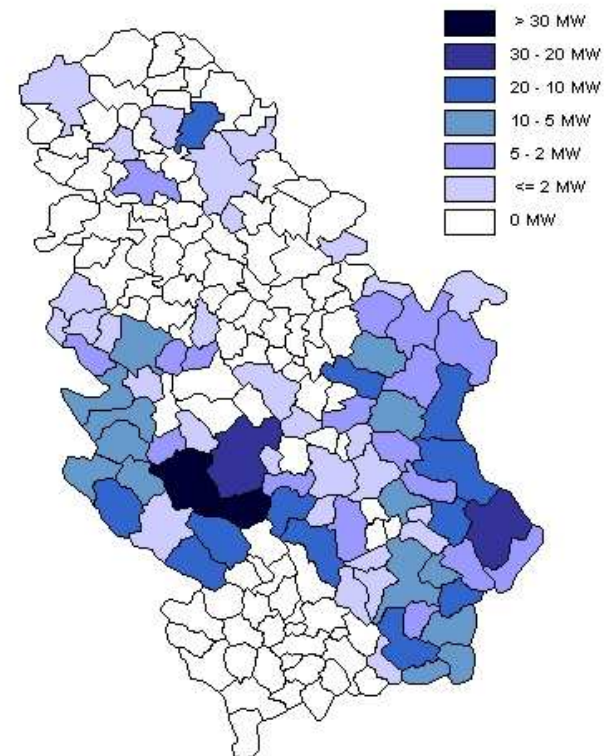
>5 MW: 9 locations
2-5MW: 30 locations (average
3 MW)
<1 MW :largest number of
locations

1,500 GWh/year

Number of SHPP in Serbia –
60
(50% out of operation)

Revitalization

Construction



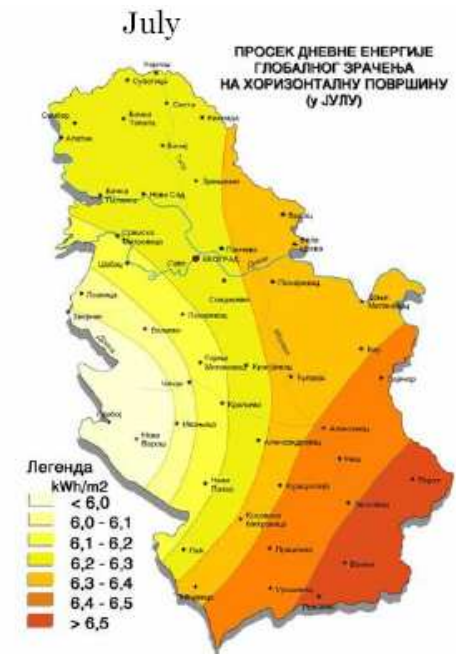
Solar

Average yearly insolation in Serbia
about 1,400 kWh/m²

Average daily value
about 3.8 kWh/m²

If each housing unit (2.65 million units) would install average 4 m² of collectors

Equivalent to some saving potential of 7,420 GWh



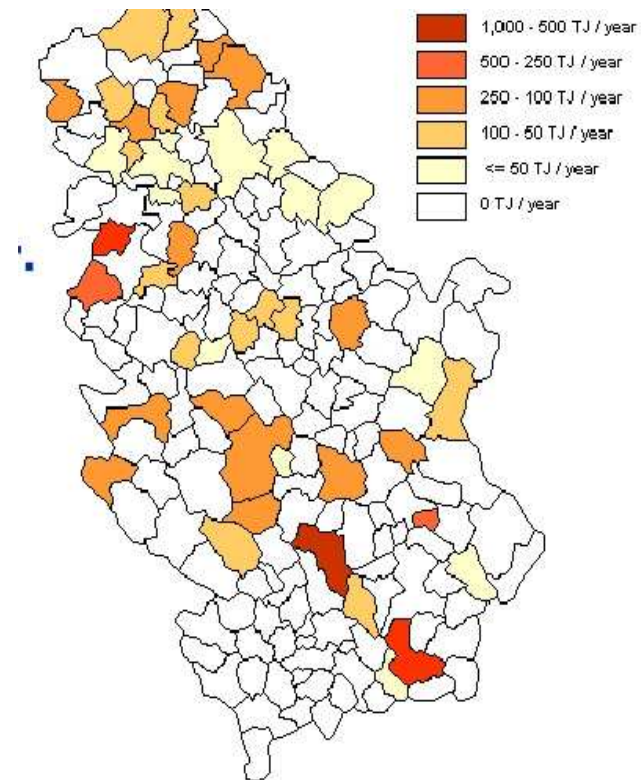
Geothermal

Use of geothermal potential is mainly for balneological purposes, sports and recreation

Total installed energy use - 74 MWt

Prospects for expanding geothermal energy for agricultural heat and water heating are reasonably good

Potential for larger scale geothermal electricity is limited - requires water temperatures above 100°C.



Wind

Wind data
based on 10 metre heights
extrapolated to 50 metre heights

2,300 GWh

1,300 MW of capacity

at sites with minimal average
wind speeds of 5 m/s

Best locations in Serbia (extrapolated)

Midzor	7.66 m/s
Suva Mt.	6.46 m/s
Vrsacki breg	6.27 m/s
Tupiznica	6.25 m/s
Krepoljin	6.18 m/s
Deli Jovan	6.13 m/s





Barriers for wider use of RES

Institutional barriers

- Lack of experience
 - Need for the experience of how a private sector renewable energy project can work in Serbia*
 - Absence of “first set” of projects*
- Transition Issues
 - Many industrial companies are in transition – both with regard to structure and ownership, and managements are not yet ready to consider measures to rationalize energy activities*

Financial barriers

- Absence of a price support mechanism
 - Renewable energy projects are not bankable without a price support mechanism*
 - RES cannot compete with fossil electricity generation based on lignite (whose price does not reflect their environmental damage costs)*
- Debt Financing support
 - Difficulty to secure long term loans appropriate for small renewable energy projects*
- Electricity tariff
 - Low electricity tariff does not stipulate domestic, commercial and industrial consumers to use renewable energy - current average price is 5 € cents/kWh*





Barriers for wider use of RES

Technical barriers

- Absence of technical standards

Despite the existence of manufacturers of heating equipment and biomass fuel (briquettes and pellets), production standards are not regulated

Equipment for biomass energy utilization need clear information about technical specification and performance characteristics

- Barriers to biomass utilization

Low electricity price, which decrease motivation to install biomass firing boilers

No developed market for biomass fuel and biomass utilisation facilities

- Absence of a renewable energy resources inventory

Update and development of Small Hydro Registry

Wind monitoring programme with wind speed measurements at 50 metres needed





Legal regulation under preparation

Purpose: to promote investments in renewable energy projects

Amendments to the Energy Law
drafted, waiting for adoption by the Parliament

- Production, transporting, storing and trading of biofuels is recognized as energy activity
- Definition of renewable energy sources is amplified and contains biofuels, biogas, landfill gas, sewage gas
- Definition of biomass refer to biodegradable material developed in agriculture, forestry and accompanying industry for energy purposes
- Definition of privileged power producers includes all RES producers except hydro-power plants and biomass power plants larger than 10 MW
- Guaranteed grid access to a privileged power producers - through obligation of local distribution company to purchase all the electricity produced from RES

Regulation on privileged power producers will be the definition of what types of renewable energy producers qualify for privileged status

Deadline for completion: December 2008
Deadline for adoption: 1 July 2009.

Feed-in tariffs as the price support mechanism

Deadline for completion: December 2008.
Deadline for adoption: 1 July 2009.





Investment incentives applicable to RES projects

INVESTMENT INCENTIVES

In case of investments in production facility, Government approve grant between 2000 and 5000 euros per new job creation, minimal investment value is within the range of 1 and 3 million euros, whereas the minimal number of new jobs is 50

An investor that invests in fixed assets, i.e. in whose fixed assets other entity invests over 600 million RSD (6.8 million EUR), and uses these assets for conducting business in Serbia and during the investment period additionally recruit at least 100 people - shall be exempted from corporate profit tax payments for the period of 10 years proportionally with the investment made

TAX CREDITS

A tax payer that made profit in newly established business unit in an underdeveloped area will receive a corporate profit tax reduction in the duration of two years, proportional to the share of such made profit in total profit of the company

ACCELERATED DEPRECIATION OF FIXED ASSETS

This incentive is provided for fixed assets that are used for the prevention of air pollution, water and soil pollution, noise reduction, energy savings, forestation, and collection and utilization of waste for industrial raw materials and fuels

FOREIGN INVESTMENTS INCENTIVES

The law on foreign investments stipulates free import of goods that are the foreign investor's nominal capital (founding capital) – providing it fulfils acts regulating environment protection. Import of equipment as the founding capital of a foreign investor, except for passenger motor vehicles and game & gambling machines, is free from customs and other duties. Besides, a foreign investor and a company with foreign founding capital are entitled to tax and customs related deductions in line with the law





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