

# *Alternative and renewable energy sources in Azerbaijan*



Laws and regulations, implemented investments and prospects

# Overview of the public policy in the field of renewable energy sources

- Support for this area by the government;
- Enhancement of the legislation;
- Development of private sector;
- Financial support and subsidy policy;
- **Development of up-to-date technologies;**
- Research and development, exchange of information
- Education, training and the promotion of environmentally clean energy.



# National Strategy for the use of alternative and renewable energy sources for the period of 2012-2020

- Identify the main areas of generating the electric and thermal power from renewable energy sources;
- Develop a regulatory framework in the field of renewable energy
- Develop stimulating activities for use of renewable energy sources;
- Use of renewable energy sources in the economic sphere



**AREA** - the central executive body in the field of renewable energy and energy efficiency was created by the Decree of the President of the Azerbaijan Republic dated February 1, 2013 :

- Public policy and regulation;
- Effective arrangements and coordination;
- Governmental control.



## **"Azalternativenerji" Ltd. was established by the Agency, it includes:**

- elaboration;
- development;
- generation, transportation and distribution of power;
- equipment for power generation, design of units and facilities, manufacturing, construction and operation of facilities;
- activities in the field of infrastructure.



# Laws in the area of energy regulation

Despite the fact that there is no separate legislation governing relations on alternative and renewable energy, existing legislation in the field of energy covers certain issues:

- On use of energy resources
- On Energy
- On Electric Power Sector
- On electrical and thermal power plants



# Purview of the Law

«On use of energy resources»

This very Law defines the legal, economic and social grounds of public policy in the field of energy resources, as well as the main areas of its implementation mechanism, regulates relations arising in this field between the government and the corporations and individuals.



# Decrees and resolutions regulating the energy sector

- Resolution of the President on approval of the state program on "Development of fuel and energy complex of the Republic of Azerbaijan (2005-2015)";
- Resolution of the President on approval of the state program "On use of alternative and renewable energy sources in the Republic of Azerbaijan";
- Decree of the President "On additional measures related to the use of alternative and renewable energy sources in the Republic of Azerbaijan"



# *Alternative and renewable energy sources*

- Hydropower is currently the most important source of renewable energy in Azerbaijan. In 2010, the share of hydropower accounted for **18%** of total electricity production. Azerbaijan has about **1,000 MW** of existing hydro power facilities, it is planned to introduce additional hydro power for **62 MW**. Although until recently the use of wind energy in Azerbaijan has been negligible, the interest for this type of energy goes up. Use of wind energy has great potential in some regions of Azerbaijan.



# *Alternative and renewable energy sources*

Azerbaijan possesses economically feasible potential in the field of wind energy amounting to approximately **800 MW**. The most promising in this respect are the south-eastern regions of the country located near the Caspian Sea coast. Using the potential of solar energy, which is estimated at **5,000 MW**, is the goal for the distant future due to the relatively high initial investment costs. The use of biomass is equally unlikely without effective system of incentives. There is the potential for the use of geothermal energy for heating purposes due to relatively low temperatures in the wells.



# *Alternative and renewable energy sources*

Basic tariffs set by the Tariff Council of Azerbaijan Republic in 2007 which are still in force in 2012 are:

**2.5 euro cents / kWh** for small hydro power plants;

**4.5 euro cents / kWh** for wind turbines.

Azerbaijan seeks solutions to the problems in the field of environmental protection and rational use of natural resources.



# Potential of renewable energy sources in Azerbaijan

Type of potential	Capacity, MWt
Solar energy	>5000
Wind energy	>4500
Bio energy	>1500
Geothermal energy	>800
Small HPPs	>350



# Wind power PROJECTS

- Wind turbines (within the landfill Gobustan) – **2,7 MW** – exists.
  - Pump – **50,0 MW** – *final stage*.
- Design stage:*
- Wind turbines Khyzy (2012-2015)  
WPP (Yeni Jasma) (2012-2015)  
WPP Mushfig (2012-2013)



# Solar energy PROJECTS

- 1,000 houses - 1000 Power Plants (2012-2015)
- Solar power plant (within the landfill Gobustan) has a potential capacity of **1.8 MW**, the current capacity is **1 MW**.
- Development of lighting of buildings, roads, parks, solar photovoltaic modules (2013-2015)
- Samukh agro-energy complex
- Projects in schools, sports complexes, hospitals



# Gobustan pilot test site? (Hybrid)

- Wind power plant– 2,7 MW
- Solar power plant – 1,8 MW
- Bio gas power plant – 1 MW
- Use of thermal pumps (hybrid)

**Total capacity– 5,5 MW**





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