



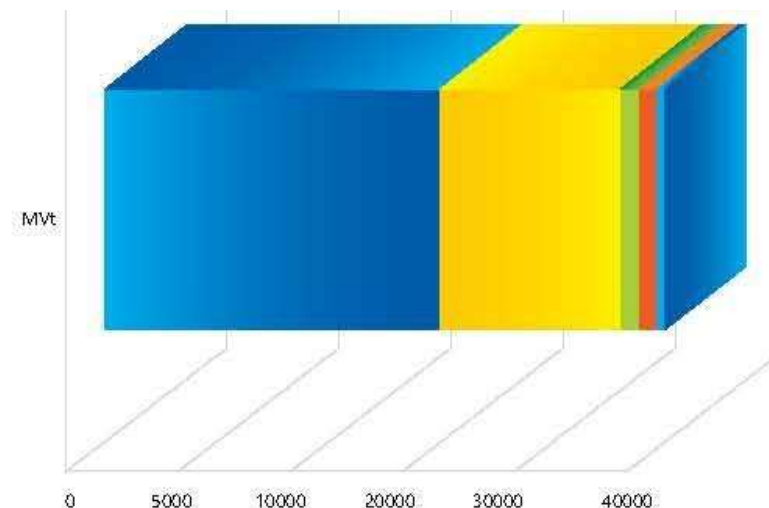
The State Agency on Alternative and Renewable
Energy Sources of the Republic of Azerbaijan

Opportunities and challenges for the development of the renewable energy in Azerbaijan

Baku 2018

Renewable energy technical potential in Azerbaijan

	MVt	%
Wind	15000	59
Solar	8000	32
Biomass and Waste	900	3.5
Geothermal	800	3.0
Small rivers	650	2.5
Total	25350	100



Current status of RE development in Azerbaijan



Existing legislation on RE:

- ▶ On the use of energy resources (1996);
- ▶ About Electric Energy (1998);
- ▶ About Energy (1998) ;
- ▶ About Electric and heat power plants (1999) ;
- ▶ “On the use alternative and renewable energy sources” (draft);
- ▶ About energy efficiency (draft).



Current status of RE development in Azerbaijan



Strategic support of developing RE:

- ▶ The State Program on Use of Alternative and Renewable Energy Sources in Azerbaijan Republic (2004);
- ▶ Establishment of a regulatory State Agency on Alternative and Renewable Energy Sources;
- ▶ Order of President of the Republic of Azerbaijan "On the development of the State Strategy on use of alternative and renewable energy sources in the Republic of Azerbaijan for 2012-2020";
- ▶ Decree of President of the Republic of Azerbaijan on approval of "AZERBAIJAN 2020: LOOK INTO THE FUTURE" DEVELOPMENT CONCEPT.
- ▶ The state program for the development of industry in Azerbaijan in 2015-2020 was approved by the the Presidential Order No. 964, dated December 26, 2014
- ▶ Strategic Road Map for the development of utilities (electricity and thermal energy, water and gas supply) in the Republic of Azerbaijan (*Approved by presidential decree of the Republic of Azerbaijan of March 16, 2016 no. 1897*)



Sample Summary on Technology Parks

Was approved by the Decree of President of the Republic of Azerbaijan dated May 15, 2014

- Exemption from payment of income tax for 7 years;
- Exemption from land tax for 7 years;
- Exemption from payment of property tax for 7 years;
- Release of the art technological equipment and devices imported into the country in order to create industrial area in the industrial park, from the VAT for 7 years.



Results

- Sumgait Technologies Park (STP)
(STP has been launched by the President of Azerbaijan Ilham Aliyev on 22nd of December 2009.
- Sumgait Chemical Industrial Park (was start to build in 03.10.2013);
- Balakhanı and Pirallahi Industrial Park are building;



Developing of renewable energy sector of economy



- Solar PV (50 MW) Plant
- Solar Collector Plant



**Was installed 275 MW
renewable power stations (for
2009-2017)**

- Hydro – 137 MW
- Wind - 66 MW
- Solar – 35 MW
- Biomass & waste - 37 MW



The classification of the AREA projects



- ▶ “1 house – 1 Power Plant”
- ▶ Industrial-type power plans
- ▶ Region hybrid power plants



Opportunities for increasing the development of RE

Hybrid PP

- Gobustan Experimental Polygon and Training Center – 5.5 MW

Solar PP

- Pirallahy Solar Power Plant – 2.8 MW
- Surakhany Solar Power Plant – 2.8 MW
- Nakhchivan Solar Power Plant – 20 MW

Wind PP

- Yeni Yashma Wind Farm - 50 MW
- Absheron Wind Farm (with PV component) – 80 MW
- Sitalchay Wind Farm – 3.6 MW
- Hokmaly Wind Farm – 8.0 MW

Biomass PP

- Biomass cogeneration on Oghuz, Aghjabedi and Samukh (feasibility study) – 16 MW



Baku Municipal Solid Waste Incineration Plant



➤ Total capacity – 37 MW

Industrial-type power plans

Solar projects

- ▶ Pirallahı Solar Power Plant (SPP)
- ▶ Total capacity 2.8 MWh

- ▶ Surakhani SPP
- ▶ Total capacity 2.8 MWh



Region hybrid power plants



Prototype “Samukh Agro-Energy Complex”

- ▶ The use of alternative and renewable energy sources in the economic fields
- ▶ Total capacity: 31 MW electricity and 48 MW thermal
- ▶ Currently 2,8 MW SPP and 7500 head animal farm are operating; was lay out a vineyard in 10 ha; was planted clover in 20 ha.
- ▶ Project implementation period: 2014-2018



Opportunities for increasing the development of RE

RE support for agriculture

- Samukh Agro-Energy Residential Complex

RE support for the solution of infrastructure issues

- “Wind Island – 1” Offshore Wind Farm

Waste to energy

- Waste-to-Energy Plant



Strategic Road Map for the development of utilities (electricity and thermal energy, water and gas supply) in the Republic of Azerbaijan

(Approved by presidential decree of the Republic of Azerbaijan of December 6, 2016 no. 1138)



Stages of Strategic Roadmap

Strategic view to 2020

Long-term view for the period up to 2025

Target view for the post-2025 period

During the next 5-10 years, in order to increase the generation capacity by 1000 MW, investments will be made for supplying sufficient amount of electricity in addition to planned investments. We expect 420 MW capacity at the expense of renewable energy sources (350 MW wind, 50 MW solar, 20 MW bioenergy) up to 2020

Expected result and result indicators

Through implementing the priority on renewable energy in the national production portfolio, 70 million AZN increase in GDP (50 million AZN directly, 20 million AZN indirectly) and creation of 270 new jobs are projected until 2020.

Key Performance Indicators:

- Investment in 350 MW wind energy, 50 MW solar energy and 20 MW bioenergy to diversify energy portfolio;
- Export of saved natural gas to Europe via Trans Adriatic Pipeline and Trans Anatolian Pipeline (as a result of actions taken in this area.



Challenges in RE development in Azerbaijan

- ▶ **Technical challenges:**
 - ▶ problems with technology transfer;
- ▶ **Financial challenges:**
 - ▶ lack of financial resources;
 - ▶ high level of interest rate;
- ▶ **Other challenges:**
 - ▶ lack of international organizations support in awareness sphere.



Thank you for your attention!

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