



AZERBAIJAN REPUBLIC

MINISTRY OF INDUSTRY AND ENERGY

**PERSPECTIVES OF USE OF
ALTERNATIVE AND RENEWABLE
ENERGY SOURCES IN AZERBAIJAN**



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**The State Program on Use of Alternative and
Renewable Energy Sources in Azerbaijan Republic
(period 2005-2013)**

Coordinating council on alternative and
renewable energy sources

Members of council:

-  Ministry of Industry and Energy
-  Ministry of Economic Development
-  National Science Academy
-  Ministry of Ecology and Natural Resources
-  State Oil Company of Azerbaijan Republic
-  “Azerenergy” Joint-stock Company
-  International Ecoenergy Academy



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**The State Program on Use of Alternative and
Renewable Energy Sources in Azerbaijan Republic
(period 2005-2013)**

Goals of the program:

- To determine potential of alternative energy sources in the production of electrical power;
- To increase of the efficiency of the usage of the energy sources of the country by using of renewable energy sources;
- To open new work places by opening new energy production areas;
- To guarantee of energy security of the country by using of alternative energy sources.



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Most windy areas of Azerbaijan

- Apsheron peninsula;
- Caspian sea coast areas;
- West of Azerbaijan (Ganja-Dashkasan region);
- Nakhchivan, Sharur-Julfa regions



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Perspectives of wind energy

- Annual wind energy reserve in Azerbaijan – 800 MWt;
- Or about 2.4 GWt/h per year;
- The savings will amount to 1 million tons of conditional fuel per year.



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**PERSPECTIVES OF ALTERNATIVE AND
RENEWABLE ENERGY**

Working of wind turbines

- About 250 days per year is windy around Baku city.
- We need at least 2 m/sec wind speed for the working of wind turbines.
- We need the minimum 3.6 m/sec wind speed for the production of electrical energy.



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**PERSPECTIVES OF ALTERNATIVE AND
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Solar energy

Advantages:

- Harmless in ecological side;
- Technologically simple in using;
- Profitable.

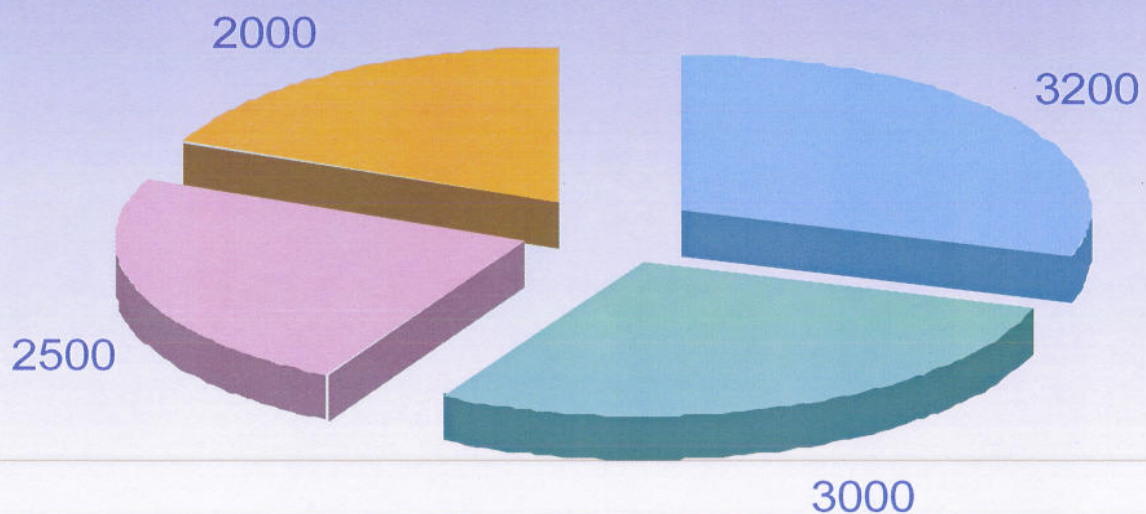


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PERSPECTIVES OF ALTERNATIVE AND RENEWABLE ENERGY

Sunny hours



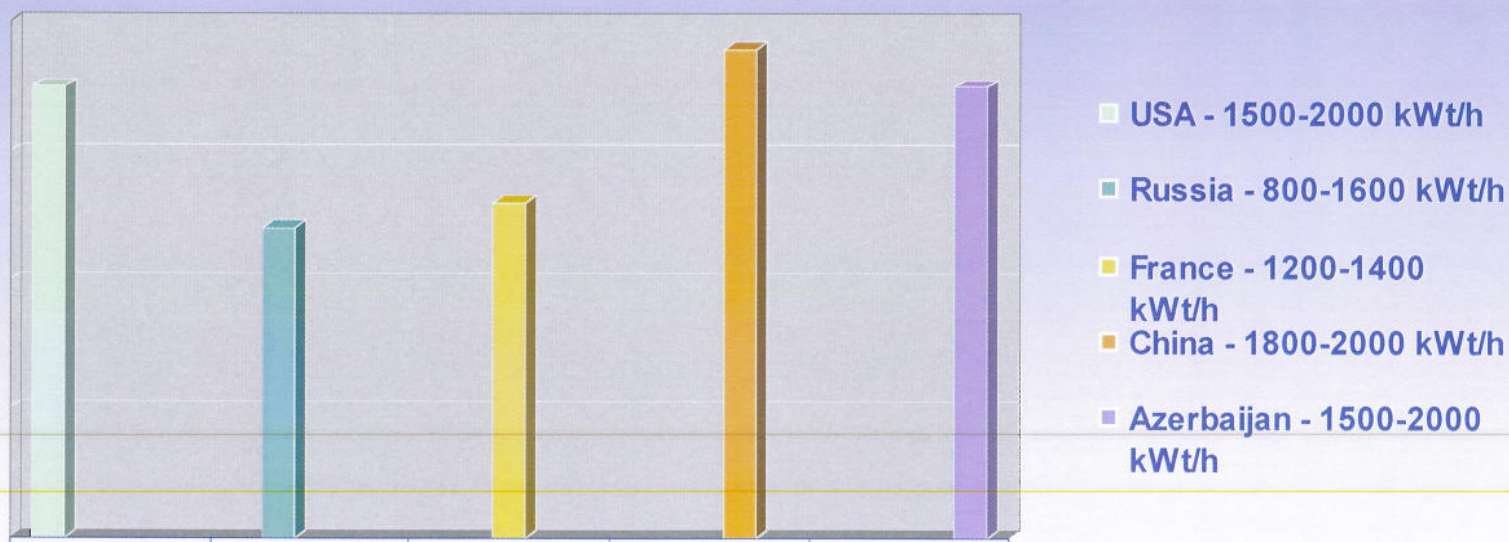
■ Azerbaijan ■ Central Asia ■ USA ■ Russia



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PERSPECTIVES OF ALTERNATIVE AND RENEWABLE ENERGY

Solar energy amount for 1 sq.m area





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**PERSPECTIVES OF ALTERNATIVE AND
RENEWABLE ENERGY**

Small hydropower plants

Advantages:

- Cheap technologies;
- Ecologically clean technologies;
- Conformability.

The part of water power plants production power in all electricity system of Azerbaijan is 17-18%.

That is 11.4% of all produced electrical energy in Azerbaijan.

There is possibility to increase value of WPS 3-4 times



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**PERSPECTIVES OF ALTERNATIVE AND
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Hydropower potential of Azerbaijan

- Total hydropower potential of Azerbaijan – 35÷40 bln. kwt/hour
also:
- Technical suitable potential – 16.0 bln. kwt/hour
also:
- Small hydropower plants can produce 5.0 bln. kwt/hour

Possible to save 850 000 tons of oil per year



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Biomass Energy

Biomass sources of Azerbaijan

- Flammable industrial waste;
- Forestry and woodworking waste;
- Agricultural and organic compounds' waste;
- Household and municipal waste;
- Waste received from areas polluted by oil and oil production.



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Cooperation of Azerbaijan with international organizations on alternative energy

- Cooperation with Europe Union on alternative and renewable energy resources development;
- Asian Development Bank “Technical support of the Ministry of Industry and Energy of Azerbaijan in renewable energy resources development (small hydropower)”;
- “Technical support of Azerbaijan in development of renewable energy resources (wind energy and small hydropower)” United Nations Development Programme;