

A decorative graphic on the left side of the slide consists of a network of light blue lines and circles, resembling a circuit board or a data network, extending from the top to the bottom of the page.

# **ENERGY SECURITY AND ENERGY UNION PERSPECTIVES FOR COUNTRY**

**October/20/2015  
CSF, Brussels**

**BETTER RESEARCH, BETTER POLICY, BETTER REFORM**

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# THE IMPORTANCE OF THE RESEARCH

THE EFFICIENCY USAGE OF THE ENERGY RESOURCES IN THE COUNTRY  
ENTERING THE OIL BOOM PERIOD AND IMPORTANCE OF USAGE OF  
ALTERNATIVE ENERGY RESOURCES  
NATIONAL ENERGY POLICY AND ENERGY SECURITY OF THE COUNTRY  
THE RELATIONSHIP WITH EU AND EAP COUNTRIES IN THE CONTEXT OF  
ENERGY SECURITY

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# THE CURRENT KEY ENERGY SECURITY RISKS, THEIR CAUSES AND EFFECTS

- Reduction of oil and gas outputs
- Security of oil and gas pipelines
- Stability and efficiency of energy resources
- Shortage of production of alternative energy resources

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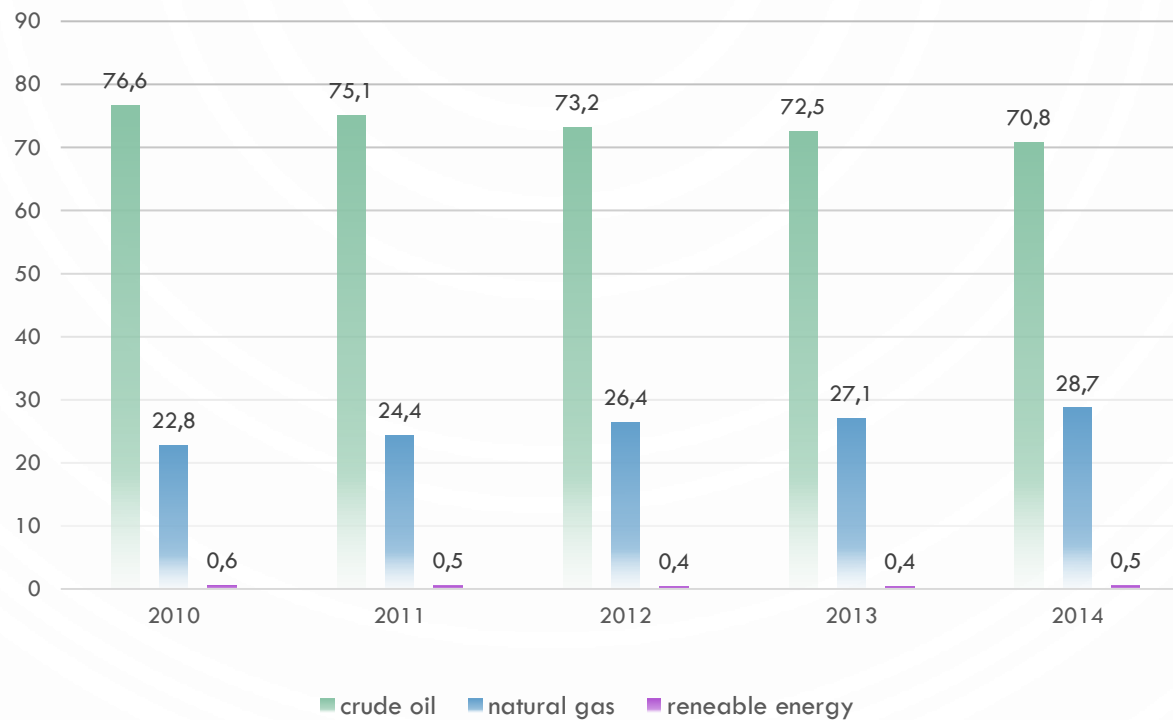
# REDUCTION OF OIL AND GAS OUTPUTS

According to the U.S Energy Information Administration report, Azerbaijan oil reserves were estimated at 7 billion barrels and natural gas reserves 35 trillion cubic feet (Tcf) as of January 2014. In comparison 2014 with 2010 the oil production decreased from 50 thousand to 42 thousand ton. The decreasing process of oil production related to crude oil price and at the same time reserves. The production of crude oil also impact to the oil revenue to the country. According to the figure 1, from there clearly seen that the production of crude oil decreased to 70.8% from 76.6% in the period of 2010-2014.

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# FIGURE 1. PRODUCTION OF ENERGY RESOURCES IN AZERBAIJAN THE PERIOD OF 2010-2014 (IN PERCENT)



Source: The State Statistical Committee of the Republic of Azerbaijan, Energy production analysis, 2010-2014

# SECURITY OF OIL AND GAS PIPELINES

This is common with the EU energy security strategy. The geographical situation of Azerbaijan and the pipelines are risky. Oil and gas routes are laid on the territories to the conflict affected regions which impacts to the security strategy of oil pipelines. Currently Azerbaijan has 4 pipelines (Baku-Novorossiysk, Baku-Supsa, Baku-Tbilisi-Ceyhan, South Caucasus Pipeline) and the security of them is very important for the country. However, these pipelines have also risk in order to usage point of view.

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# STABILITY AND EFFICIENCY OF ENERGY RESOURCES

Country should use the energy resources effectively. The modernization of the oil and gas sector and the petrochemical industry, the diversification and development of the non-oil industry, the expansion of opportunities to use alternative and renewable energy sources impact to use the energy resources effectively. In January 2013, Azerbaijan announced to raise over USD 7 billion in alternative energy investments by 2020, and increase total renewable capacity to 2,000 MW or 20% of the nation's overall power needs.

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# SHORTAGE OF PRODUCTION OF ALTERNATIVE ENERGY RESOURCES

Country has a huge potential in order to using the alternative energy resources. The period of sunlight reaches 2500 hours in the Absheron Peninsula and Caspian Sea coast and reaches 2900 hours in the Nakhchivan Autonomous Republic. The speed of wind changes between 3-7 m/sec in a year which is consider perfect for wind generators (See Table 1).

Types of energy	Power (MVt)
Solar power	>5000
Wind power	>4500
Bioenergy	>1500
Geothermal	>800
Small hydro power plants	>350

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



# GIVE AN INSIGHT OF EMERGING ENERGY SECURITY RISKS

- Sustainable supply of domestic energy needs
- Modernization of the energy infrastructure and efficiently usage of energy resources
- Security of the oil and gas pipelines

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# POSSIBLE SOLUTIONS AND OPPORTUNITIES, INCLUDING POTENTIAL ROLE OF EU, EAP AND OTHER PARTNER COUNTRIES

- Enhancing security of Azerbaijan transit and export pipelines network
- Setting up energy infrastructure based on the modern Euro standards
- Increase also the volume of fossil-fuel energy from Caspian Basin and Central Asia as transit country
- Developing comprehensive energy demand management policy in Azerbaijan, in other word to reduce the demand
- Increasing of usage of renewable energy resources
- Diversify and security energy resources in the context ensuring of energy resources gradually

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# WHAT OPPORTUNITIES AND PERSPECTIVES DOES THE STRATEGY PROVIDE TO ADDRESS THE ENERGY SECURITY PROBLEMS IN AZERBAIJAN

- Azerbaijan already has partnerships in this field. “A leader company of France – CNIM has won the tender with EUR 346 million for construction, establishment and operation of waste to energy plant for 20 years in Baku, in 2008 year. The capacity will be 500 000 tons of city solid waste. This plant aims to be the biggest plant in Eastern Europe, in this field.”
- Azerbaijan can benefit from the European Union R&D strategy, Innovation policy in terms of realizing innovation policies, which are underlined in the National Energy Strategy.

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# WHAT ARE THE SYNERGIES IN THE STRATEGY AND AZERBAIJAN'S NATIONAL ENERGY POLICY?

- Solidarity and energy security
- Integrated energy market of the European Union
- The efficiency of energy, which contributes to the moderateness of demand
- Decarbonisation of the economy
- Competitiveness, Research & Development (R&D) and Innovation

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# DECARBONISATION OF THE ECONOMY AND THE DEVELOPMENT OF ALTERNATIVE ENERGY SECTOR

Decarbonisation of the economy and the development of alternative energy sector is also a priority for Azerbaijan, according to National Energy Strategy. This is close to the EU strategy for decarbonisation of the economy. The major tasks of the renewable energy security program of Azerbaijan are:

- to determine the potential of renewable and alternative energy sources for the electric power generation
- to enhance the efficiency of the utilization of energy sources of the country
- to enlarge the capacity of energy production by developing the alternative energy sources
- to provide the creation of new jobs

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# CHALLENGES AND POSSIBLE BARRIERS

- [Nagorno-Karabakh conflict](#) - The conflict between Azerbaijan and Armenia over the Nagorno-Karabakh region is a big risk in terms of energy security and infrastructure. This can impede the future projects with western partners and hampers the foreign investments at energy sector
- [Passive participation of Azerbaijan at EaP Program](#) - This is one of challenges and barriers. Active participation at Eastern Partnership Program can accelerate the integration of Azerbaijan to the Energy Union. The 3<sup>rd</sup> platform of Eastern Partnership Program implements the importance of energy security and energy partnership

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# RECOMMENDATIONS

- to diversify the usage of energy resources order to get the stability and efficiency of energy resources
- to invest and modernize the infrastructure in the energy sector for getting the productivity
- To active participation in EaP forum
- Increase also the volume of fossil-fuel energy from Caspian Basin and Central Asia as transit country
- Developing comprehensive energy demand management policy in Azerbaijan, in other word to reduce the demand
- Enhancing security of Azerbaijan transit and export pipelines network

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# THANK YOU FOR YOUR ATTENTION

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