

ANALYSIS OF THE RELATIONSHIP BETWEEN ENERGY DEPENDENCE AND NATIONAL SECURITY

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Abstract: Security is often commonly used and most meaningful concepts in contemporary political vocabulary. Furthermore, it has been engrossing in a fascinating subject in aspects of the survival of nations and states in the world. There is no doubt about the fact that energy security is factor influencing the security area. This paper analyses the impact of energy dependency in the World and in our country.

Keywords: SECURITY AREA, ENERGY DEPENDENCE

1. Introduction

In recent years, the issue of energy security has become more and more important. There are some concerns like a:

- depletion of petrol and other fossil fuels;
- reliance on other sources of energy;
- geopolitics (such as supporting dictatorships, increasing terrorism, "stability" of nations that supply energy);
- the energy needs of the poorer countries and the demands of developing countries such as China and India;
- discussing economic efficiency with the population;
- climate change;
- renewable energy sources and other alternative sources of energy,

energy insecurity, combined with other global problems, risks leading to conflict by repeating past mistakes in history.

The purpose of this report is a present a reasons for negative impact on security environment and ways to solve the problems.

2. Reasons for a Negative Impact of Energy Production on the Security Environment

The state of the energy industry is characterized by instability stemming from continuous increase in consumption and depletion of natural energy sources, accompanied by their harmful effects on environment. The energy sector is an area of the human activity that has a probably most devastating impact on nature. Bulgaria has a diverse power generation mix, including nuclear, thermal and water power plants.

Energy production, mainly from the conversion and combustion of fossil fuels, and the energy consumption of all economic sectors accounts for 79% of greenhouse gas emissions. Other greenhouse gas emissions are due to industrial processes other than energy consumption, agricultural practices or waste management. These percentages have remained largely unchanged since 1990. Electricity and heat production are share of 79% of energy includes, as well as fuel for burning fuels in industry, buildings, transport and agriculture. The next changes in the way we produce electricity and heat and in the way we use energy in our economy are essential to reducing greenhouse gas emissions. [12]

Since greenhouse gas emissions are mainly cause by energy production and consumption, energy efficiency can have a significant impact on reducing emissions. In addition, demand for energy investment and imports is decreasing and consumers save money. Energy efficiency is describe as the fastest and most cost-effective way to overcome energy security, environmental and economic challenges [13]. Therefore, a set of measures in a number of greenhouse gas emitting sectors [14] are defined in EU legislation and energy efficiency targets for 2020 and 2030 are set.

Energy dependence shows the country's dependence on imported energy and resources. It is defined as the ratio of energy imports and gross domestic energy consumption. Ha Table 1 are show energy consumption data by energy products in five years period.[1]

Table 1: **Final energy consumption by energy products** ^{Грешка!}
 Източникът на препратката не е намерен.

	2012	2013	2014	2015	2016
	Thousand tonnes of oil equivalent				
Total	9044	8597	8847	9367	9517
Industry	2576	2576	2608	2701	2634
Transport	2871	2604	2937	3255	3348
Others	3597	3417	3302	3411	3535
Agriculture, forestry and fishing	198	193	192	188	186
Households	2377	2257	2184	2213	2261

Bulgaria has greatly reduced its energy dependence - from 62.8% in 1990 to 34.5% in 2014. Eurostat are shows data in [2]. Energy dependence measures how much a country is force to import energy for its own consumption.

Total energy dependence for the European Union in 2014 was 53.4%, which means that it imports slightly more than half of its energy consumption. The development of the EU's dependence on energy imports is volatile, but the level has remained above 50% since 2004. [2]

Many people fear that the World is rapidly using a diverse but limited amount of fossil fuels. Some scientists fear that we have already reached a peak in the extraction and production of fossil fuels. The World relies petrol so much, for example, if there is a peak, or even peak is far away, it is ecologically, geopolitically and economically, and it is wise to invest in alternatives types.

On the one hand, exhaustion of fossil fuels, climate change requires adequate environmental decisions for future generations. On other hand, the deepening global economic crisis, global hunger, food shortages and rising prices make it a matter of utmost to manage and recover waste, a huge source of which is agriculture and waste products (domestic, commercial, industrial, institutional, etc.). [3]

In recently years, issue of the environmental impact of energy has remained topical. It is difficult to assess value of energy production on pollution of nature and disturbance of landscape, destruction of plant and animal species. In the information sources [4, 5, 6, 7] are shows that data emissions from energy sources.

3. Ways to Improve Energy Security

Places like a Nigeria, Iraq, Iran, and so on are produce oil, but they pose problems to varying degrees for oil-consuming countries, as they cover stable supply and stable management. The other one, like a Venezuela, threaten to use oil and its associated profits to develop even their own country and region.

As more and more developing countries are industrializing, they will naturally want more energy to quench the thirst for growth. This will lead to greater involvement in international relations, and in fact, China and India are increasingly active in many regions of the world.

The future can also see resource conflicts. Dependence on fossil fuels and unnecessary resource use will worsen climate change, which threatens many of the world's ecosystems, will raise sea levels and affect food production, resulting in instability and conflicts caused by resource scarcity.

Nuclear power is one of the alternatives to fossil fuels that many countries are considering, given their efficiency and environmental friendliness during operation. Many environmentalists are afraid of the consequences of nuclear energy incidents and the inadequate storage of radioactive waste and say they are not worth it, but instead should invest in other alternatives for renewable energy.

The ownership of oil and natural gas from a number of countries is a way to change the security environment of countries that depend on them. In recently years, we have witnessed conflicts, violence and destabilization that hinder the development and security of vulnerable areas. [10]

In 2000, the European Commission launched the European Climate Change Program, which includes the following measures [8]:

- optimizing fuel consumption of the cars and energy efficiency of the buildings;
- increased renewable energy sources such as wind, solar, tidal power, biomass and geothermal energy;
- Reduction of the methane emissions from landfill.

According to Kyoto Protocol, the European Union has assumed responsibility of reducing greenhouse gas levels emissions by 8% to 1990 for 2008 - 2012. In this connection, the European Council also committed itself to a higher 30% reduction in greenhouse gas emissions by 2020 compared to 1990 as a contribution to a global post-2012 agreement [8]

Bulgaria fulfills the commitments under Directive 2001/81/E on national emission ceilings atmospheric pollutants, which include the achievement by 2010 and subsequent maintenance of total annual emissions for sulfur dioxide - 836 thousand kt/y; for nitrogen oxides - 247 kt/y; for volatile organic compounds - 175 kt/y; for ammonia - 108 kt/y. [4]

According to the contract of accession, between European Union members and Bulgaria, in 2010 Bulgaria committed to 11% of total electricity from renewable energy sources.

In the White Paper [9] states that alternative fuels are essential for both security of energy supply and reduction of negative environmental impact from transport sector.

In 2005, the European Commission issued a communiqué called "The Biomass Action Plan" in terms of:

- An increase in energy consumption in the transport sector, which does not allow for the reduction of greenhouse gas emissions;
- Undertaking by car manufacturers to commit to the introduction of new technologies in the car industry to reduce carbon dioxide emissions.

According to the National Security Strategy of the Republic of Bulgaria, the stability of the energy sector is a continuous process of providing vital public services for the functioning of society as a whole in the context of possible terrorist threats, natural disasters and major industrial accidents. The Republic of Bulgaria is interested in building a common EU energy policy. It supports the implementation of EU strategic initiatives to build the necessary infrastructure and diversify energy supply. Priority to ensure our

energy security is building and maintaining interconnections with neighboring countries networks as well as expanding the capacity of gas storage facilities.

The Republic of Bulgaria supports the development of international energy projects within the Southern Corridor, the first of which is the NABUCCO project, which is an EU priority. We also support the South Stream international energy project. Their implementation is accompany by security expertise - civil, public, environmental and national.

The development of nuclear energy is of strategic importance for our national security. The construction of new capacities is institutionally support, given that it is a promising resource for the production of emission-free electricity and due to the accumulated successful experience and professional capacity. Its development is strictly in line with the requirements for the management of nuclear waste and decommissioning and security measures.

Priority in energy security policy is to increase energy efficiency and promote energy savings. There is enormous energy saving potential in the country for its production, transmission and consumption. The energy security of the country and the improvement of the quality of the environment depend on the realization of the policy of the Republic of Bulgaria to increase the share in the energy production of renewable and alternative energy sources and the substitution of the electric energy with natural gas.

The country shall contribute to technological development in terms of efficiency in the production and deployment of clean coal technologies and to the application of technological achievements that are in line with European requirements and own economic capabilities. Our energy policy is based on a balanced approach to the integrated use of renewable energy sources, nuclear energy, natural gas, coal technologies and HPPs to ensure energy security and economic efficiency.

The Republic of Bulgaria carries out a clear and consistent regulatory policy to ensure the interests of national security, society and citizens in the operation and development of energy capacities, transmission and distribution networks. [11]

As a result of main sources of greenhouse gas emissions, policy of the European Union is aimed at: enhancing security of supply; ensuring the competitiveness of European economies and the availability of affordable energy; supporting environmental sustainability and combating climate change.

The European Union seeks to ensure that biofuels are produce sustainably, do not endanger the production of food and do not lead to deforestation or loss of biodiversity. All of this has given us a reason to summarize that the Community is striving for a comprehensive energy and environmental policy based on clear targets and deadlines for moving to a low-carbon economy and saving energy.

4. Conclusion

Although we cannot prevent all natural disasters, our preparation and responses to human impacts, can and should be improved. The possible restriction or even interruption of access to vital energy resources will have a severe destabilizing effect on the economy and the security environment, respectively.

Improving the environmental situation is a long and continuous process, an important part of the life activities of people in each country. In order to improve the environmental situation and the management of environmental security, both legislative and legal knowledge and actions, as well as knowledge and actions on the organization of its management at state, regional and corporate level are need.

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