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Summary of doctoral dissertation *The role of renewable energy sources in Spain's energy security policy*

The doctoral dissertation *The role of renewable energy sources in the Spanish energy security policy* consists of four chapters.

The first chapter is devoted to the role of energy in the energy security of a modern state. It analyzes how the importance of individual energy resources has changed over the years. The breakthrough moments that contributed to the increase in energy demand in countries were also indicated. The problem of the country's energy security, which depends on many factors, was also discussed. The role of energy resources was indicated, as well as how the use of traditional energy carriers may affect the natural environment and what problems it may cause.

The second chapter is devoted to renewable energy sources that can contribute to increasing energy security. Various types of renewable energies were discussed: wind, solar, hydro, biomass and geothermal. This chapter analyzes the positive aspects of using renewable energy sources and the conditions. In addition, what are the benefits of using renewable energy sources and whether using this type of energy is associated with difficulties. It has been analyzed whether the use of renewable energy sources can complement the national energy systems. Due to the fact that energy policy plays an increasingly important role in the modern world, it is the main element of the economic policy of countries that, for strategic reasons, seek control over the extraction of raw materials, their storage and transformation into energy. The development of renewable energy sources is important for the achievement of energy policy objectives related to environmental protection.

Chapter three deals with Spain's energy security. This security depends on many factors and consists in meeting the energy needs of both residents and individual sectors of the economy. Among the factors influencing Spain's energy security, environmental conditions, such as geographic location, topography, climate, energy resources, as well as the country's economic conditions, such as agriculture and industry, are of particular importance. Energy security is also influenced by many factors of a social and political nature. Forecasts of energy demand, related to the gradual phasing out of subsequent nuclear power plants, are also important.

The fourth chapter is devoted to renewable sources in Spain. Individual legal acts, as well as actions taken by individual institutions, had an impact on the development or inhibition

of the development of renewable energy sources, which was reflected in domestic energy production. This chapter highlights Spain's actions in the renewable energy sector as well as what has been done to support different types or renewable energy sources.

Energy security has been attracting attention for a long time. It's importance grew at the beginning of the 21st century due to the intensification of challenges and threats in this field. It is related to the necessity to ensure continuity of energy supplies. Among the most important reasons for this interest are energy crises, climate change, environmental degradation and the depletion of energy resources.

Nowadays, the topic of energy security is also associated with the increased awareness of the depletion of energy resources and the impact of energy prices on the economy. It also points to the position of countries rich in energy resources compared to those that do not have them.

Due to the fact that modern development is related to energy consumption, countries are taking a number of measures to meet these challenges. Effective energy policy is related to the creation of laws, regulations and decision-making in the energy sector. Both individual citizens, as well as governmental and non-governmental organizations, collaborate in creating various types of influence groups that participate in creating energy policy. However, the state authorities decide about its final shape.

It is worth considering the problems of how states can ensure energy security, what actions should be taken by state institutions, how states should avoid interruptions in energy supplies, or state actions in energy policy regarding renewable energy sources serve to increase the share of these sources in final consumption, as well as what actions countries should take to effectively influence their development.

One way to deal with this situation is to try to obtain energy by investing in, for example, nuclear energy or renewable energy sources. Renewable energy sources have been known since the dawn of time, through the use of, for example, the energy of the sun, wind, water and biomass. They are gaining more and more popularity because they have a lower environmental impact than traditional mines.

Currently, many countries are introducing renewable energy installations. One of them is Spain, which has little of its own energy resources. Thanks to the development of this sector, it is possible to meet the energy demand that has so far been met thanks to nuclear energy. Due to the fact that the maintenance of nuclear power plants is expensive and carries the risk of failure, there is a move away from this method of obtaining energy. However, this entails the need to ensure the energy security of the state. Therefore, Spain is trying to obtain energy from

other sources, so that in the future the reduction of energy from nuclear power plants would not be too much for consumers. However, it is connected with the necessity to undertake many costly actions and investments.

Ways to ensure energy security in Spain can be an example for other countries. An analysis of the measures used to encourage investment in this type of energy may allow for the selection of the most effective ones. It also allows you to answer the questions which of the measures taken in Spain may prove most effective in other countries, as well as how to avoid mistakes that may slow down investments in the renewable energy sector. This country can become an example for others due to its experience in the renewable energy sector.