

## OPINION

by a member of the scientific jury for the acquisition of the educational and scientific degree "Doctor" in the SA "D. A. Tsenov" - Svishtov, appointed by Order No. 52 of 20.01.2023.  
of the rector of the Academy of Economics - Prof. Mariyana Bozhinova

**Prepared the opinion: Prof. Stefan Simeonov, PhD**

**Author of the dissertation: Kaloyan Pargov, PhD student at the Department of Finance and Credit, "D. A. Tsenov" Academy of Economics**

**Dissertation Topic: *"Energy Security and the Energy strategy of EU in Bulgaria: Financial and Economic Aspects and Challenges"***

**Scientific supervisor: Prof. Stoyan Prodanov, PhD**

### **I. General presentation of the dissertation work:**

- 1.1. Main components of the introduction: the object, the subject and the research thesis are formulated clearly, logically and correspond to the seriousness of the set goals and tasks.
- 1.2. Volume: 217 pages in total, of which 185 are main text. With this, the volume is sufficient for meaningful development of the dissertation and achievement of the set tasks.
- 1.3. References: the reference list contains 158 sources, of which 113 are in English.
- 1.4. The appendix includes 8 pages of tabulated correlation dependences.

### **II. Assessment of the form and content of the dissertation**

#### **2.1. Assessment of the topicality of the theme:**

The topicality of the topic is clearly expressed and it is well-founded with "the growing impact of climate change on energy systems...". Add to this the extraordinary impact of the Kremlin's war in Ukraine and the all-round economic impact on the supply of liquid fuels, as well as the inevitable political consequences (including mandatory sanctions on Russia).

#### **2.2. Development of research in the dissertation scientific problem:**

The energy security problems of Bulgaria and Europe have not yet received the necessary practical solutions, they require a complex, in-depth and dynamic solution approach with long-term forecasts and validity. This

determines the need for the application of a learned research approach, such research does not abound and does not cover the needs of the current reality

2.3. The structure is classic in 3 chapters, in which the exposition is developed in a logical and balanced manner.

*1st chapter. Historical analysis and evaluation of the energy policy of the European Union at the beginning of the XXI century.*

*2nd chapter. Financial and economic metrics as indicators to prevent energy challenges.*

*3rd chapter. Challenges and prospects for the energy sector of the EU and Bulgaria.*

2.3. Opinion on the **language and methodology** used in the dissertation

The style in the dissertation and related publications is at a very good level, mature, in some places the polemical style prevails over the scientific style.

The methodology used in the dissertation work includes descriptive statistics, tabular presentation and schematic illustration, graphic modeling, regression research and beta analysis, which ensures the successful realization of the set research tasks.

2.4. Opinion on how accurately and fully the **abstract** reflects the work.

The abstract is 32 pages long. It correctly and accurately reflects the dissertation research and the results achieved in it.

2.5. **Publications** on the topic of the dissertation:

The author presents 4 scientific publications related to the topic of the dissertation. Three of them are independent: 1 study, 1 article and 1 report and one co-authored report. This indicates an excess of the minimum requirements by 10 points.

### **III. Scientific and practical contributions of the dissertation work**

As a consequence of the conducted dissertation research, the author derives 5 results of a contributing nature:

First. *"The author's definitive interpretation of the concept of "energy security" as an essential element of the energy policy of each country with a direct factor impact and importance for economic, national and ecological security, which in their integral entirety is achieved by ensuring the energy needs of optimal prices supporting economic growth in a global low-carbon transition."*

Second. *"The components of the energy balance of the European Union and Bulgaria were modeled, on the basis of which the need for a thorough study*

*of energy processes and their trends was deduced for the purpose of taking effective actions to prevent potential negative consequences from disruption of technological processes in the energy sector and the undertaking of mechanisms for timely coordination measures.'*

Third. *"A reasoned author's proposal for the formation of a strategic alliance for energy security between the countries of Sweden, Denmark, Great Britain, France, Austria, Germany, Hungary and Spain has been made, based on the evaluation of the energy three-component rank and the rank of the regional economic potential of the countries."*

Fourth. *"The quantitative interrelationships between the prices of the main energy resources have been identified through the application of correlation analysis in the countries of Europe, and the geopolitical possibilities for correction in the financial parameters of the main energy resources in Europe and the options for potential cooperation between the countries have been deduced"*

Fifth. *"Practical opportunities to add value for Bulgaria have been established, based on the strategic location of and next to main pipeline gas supply routes, their supply from regasification terminals, achieving competitive alternatives to traditional sources. On the basis of applied prospective analysis and combinatorial modeling based on the Euphemia algorithm or "Separate Virtual Broker" - SVB, the effects of the "Day Ahead" market segment of the Bulgarian Independent Energy Exchange with consideration of price market anomalies in 2022 have been critically assessed in a situation of connecting two national exchanges with a different seasonal peak and electricity supply and demand rhythm."*

The indicated summaries objectively reflect the achievements of the dissertation research and I believe that they have a scientific-applied nature and their observance can contribute to a more successful construction of Bulgaria's energy security, etc. European countries.

#### **IV. Notes to the dissertation research and recommendations for further work on the topic**

I do not think that there are any substantial notes of a critical nature.

It is not a sign of scientific achievement, nor of good practice, that the author's own self-assessment in the dissertation and in the author's report on the feasibility of the tasks set. It would be much more successful to highlight more

specific results that would convince readers of the importance of what was written.

My impressions of the author's overall work on energy security issues lead me to recommend concentrating on offering more specific solutions for individual issues in the energy strategy complex of Bulgaria and other European economies.

#### **V. Summarised evaluation of the dissertation work and conclusion**

The presented dissertation research sets broad goals and objectives, which have been fulfilled. My overall assessment of Kaloyan Pargov's presented dissertation work is positive. On the basis of the above, I propose to the scientific jury to award Kaloyan Pargov a PhD in economics.

20.02.2023

Prepared the opinion: .....

*(Prof. Stefan Simeonov, PhD)*