Comparative analysis of electric power complexes of the European Union and Russia.

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World economy

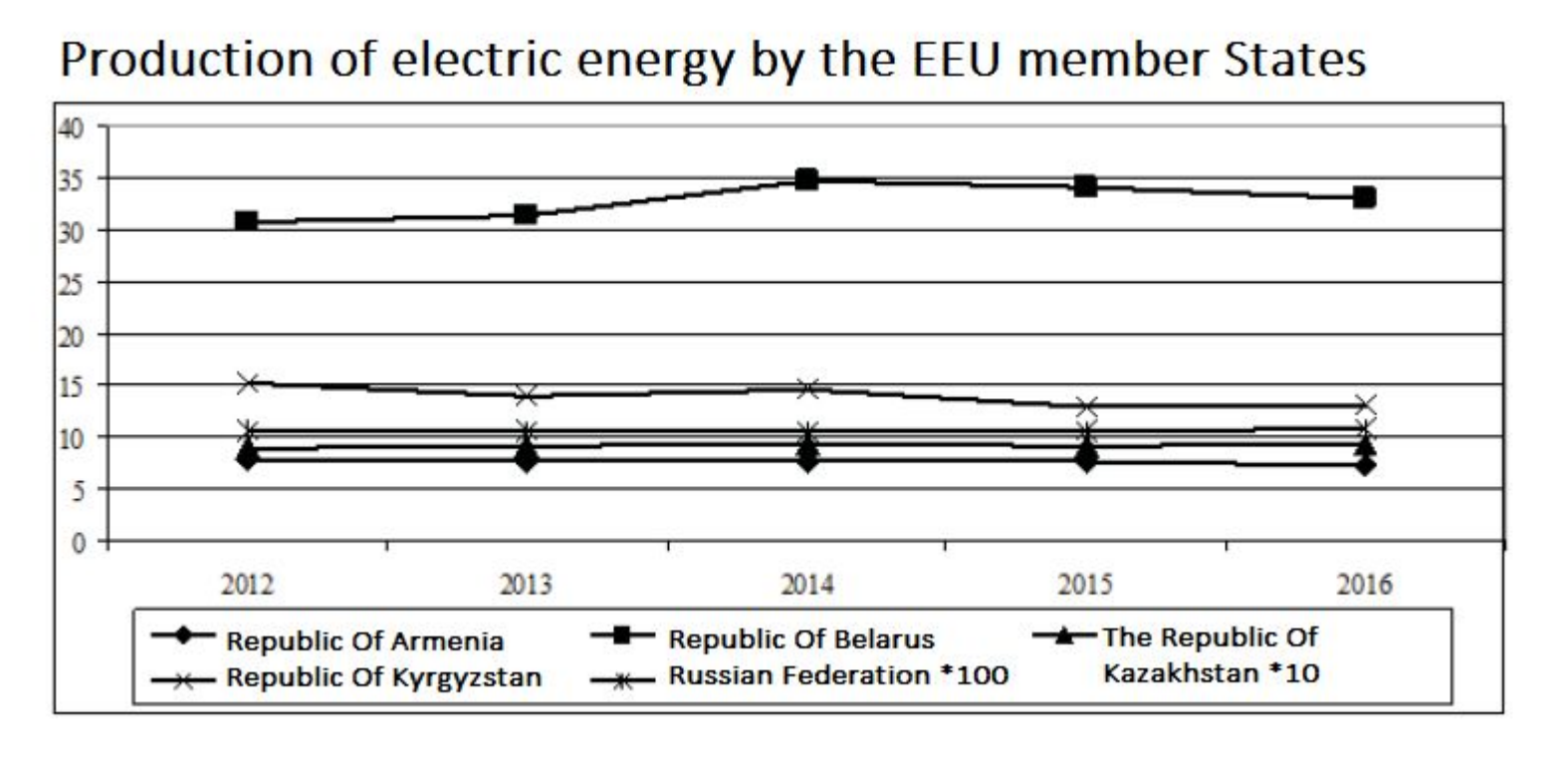
The development of the European Union (EU) and the full industrialization of the Russian Federation began after the end of the great Patriotic war, this period was marked by the restoration of destroyed Europe and the rapid development of the Soviet Union. The formation of the European Union was based on the convergence of six countries in the framework of the formation of common markets for coal and steel and the safe use of nuclear energy, now today, the EU is an economic, political and monetary Union and unites 28 States parties to the Agreement. In recent years, the Russian Federation has been not only an active participant in integration groups, but also an initiator of their creation and development. One of the most successful and promising projects is the creation of the Eurasian economic Union of the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Republic of Kyrgyzstan and the Russian Federation (EEU), which creates a common market for goods and services, provides free flow of capital and labor, and sets goals for creating common markets for oil, gas and electric energy.

- The Eurasian economic Union has taken the experience of the European Union as the basis for its development, but if the EU includes countries with almost identical national economies, the Russian Federation occupies a dominant position in the EEU.

Gross domestic product of the EEC member States.

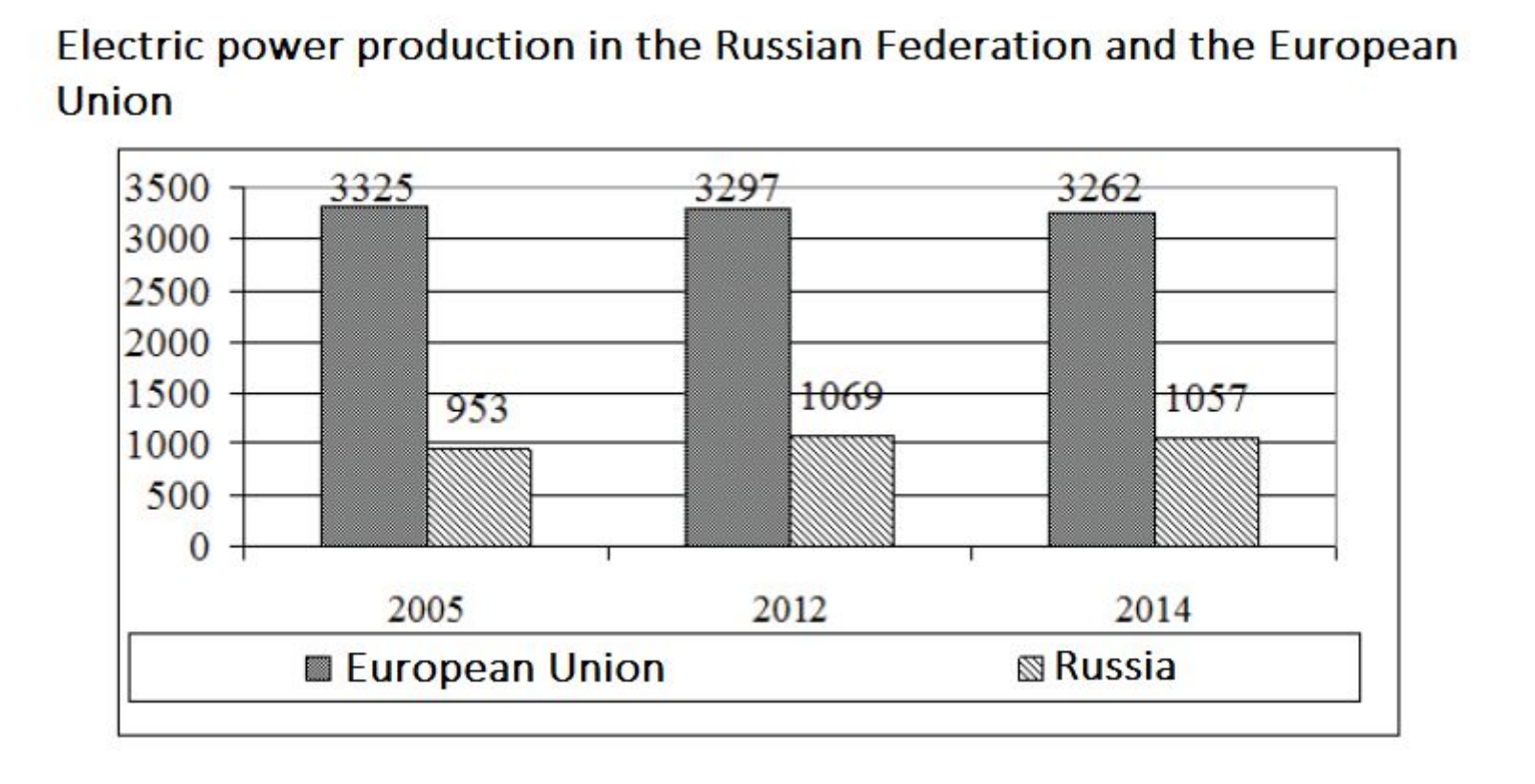
Country	*2012*	*2013*	*2014*	*2015*	*2016*
Armenia	10,6	11,1	11,6	10,5	10,5
Belarus	65,4	74,8	78,5	55,3	47,2
Kazakhstan	208,0	236,6	221,4	184,4	135,0
Kyrgyzstan	6,6	7,3	7,5	6,7	6,5
Russia	2 154,1	2 231,8	2 085,9	1 372,1	1 286,2
The EEU	2 444,7	2 561,6	2 404,9	1 629,0	1 485,4

- Within the framework of the Eurasian economic Union, three major agreements were signed that regulate the creation of common gas and oil markets by 2025 and electric energy by July 1, 2019.in this regard, it is interesting to analyze the electric power industry of the European Union and the Russian Federation, as the dominant member state of the EEU.

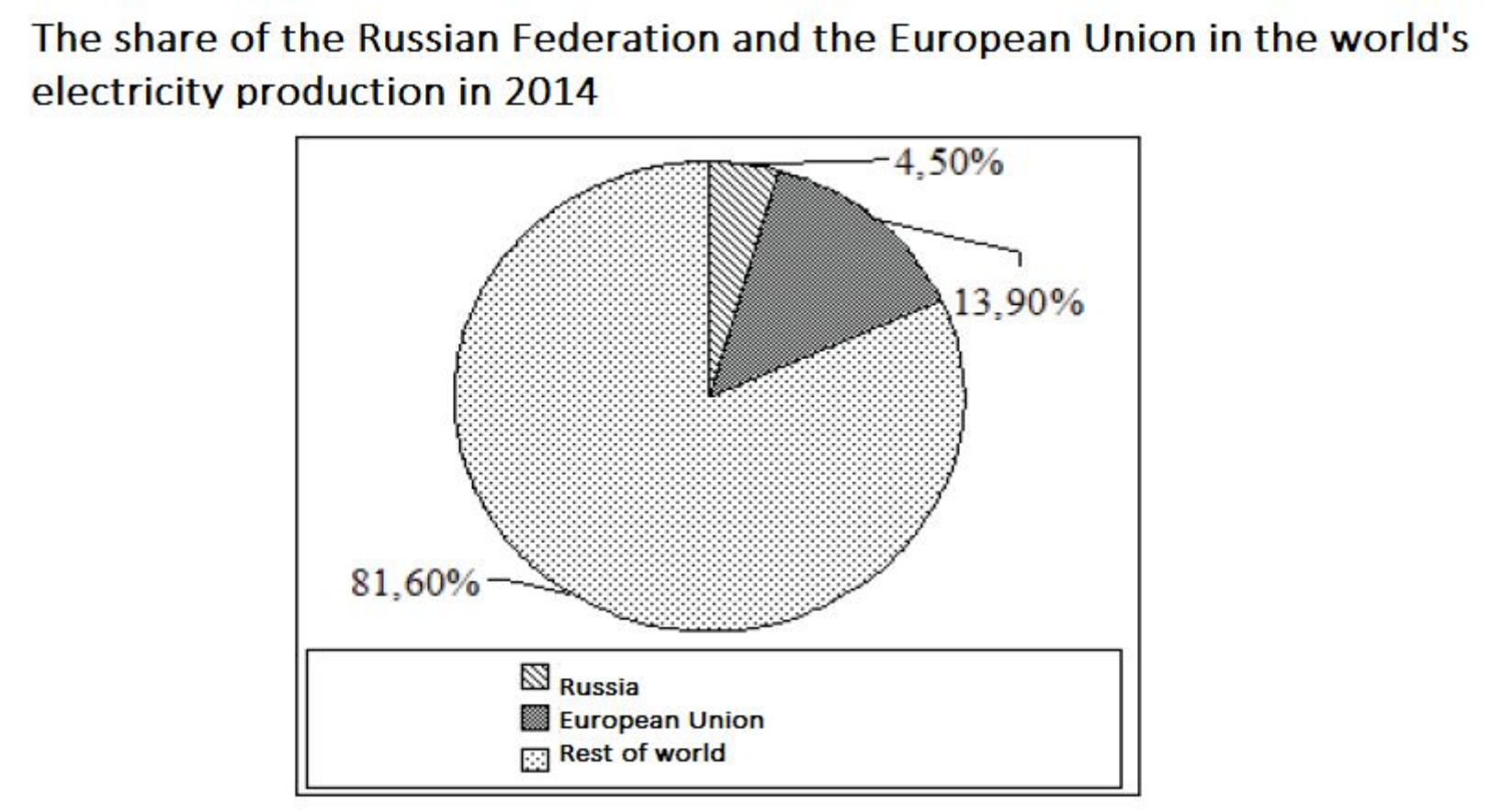


- The figure shows that in 2016, electricity production in the Russian Federation reached 1090 billion kWh, while the total energy production in other member States of the EEU did not exceed 190 billion kW*h.

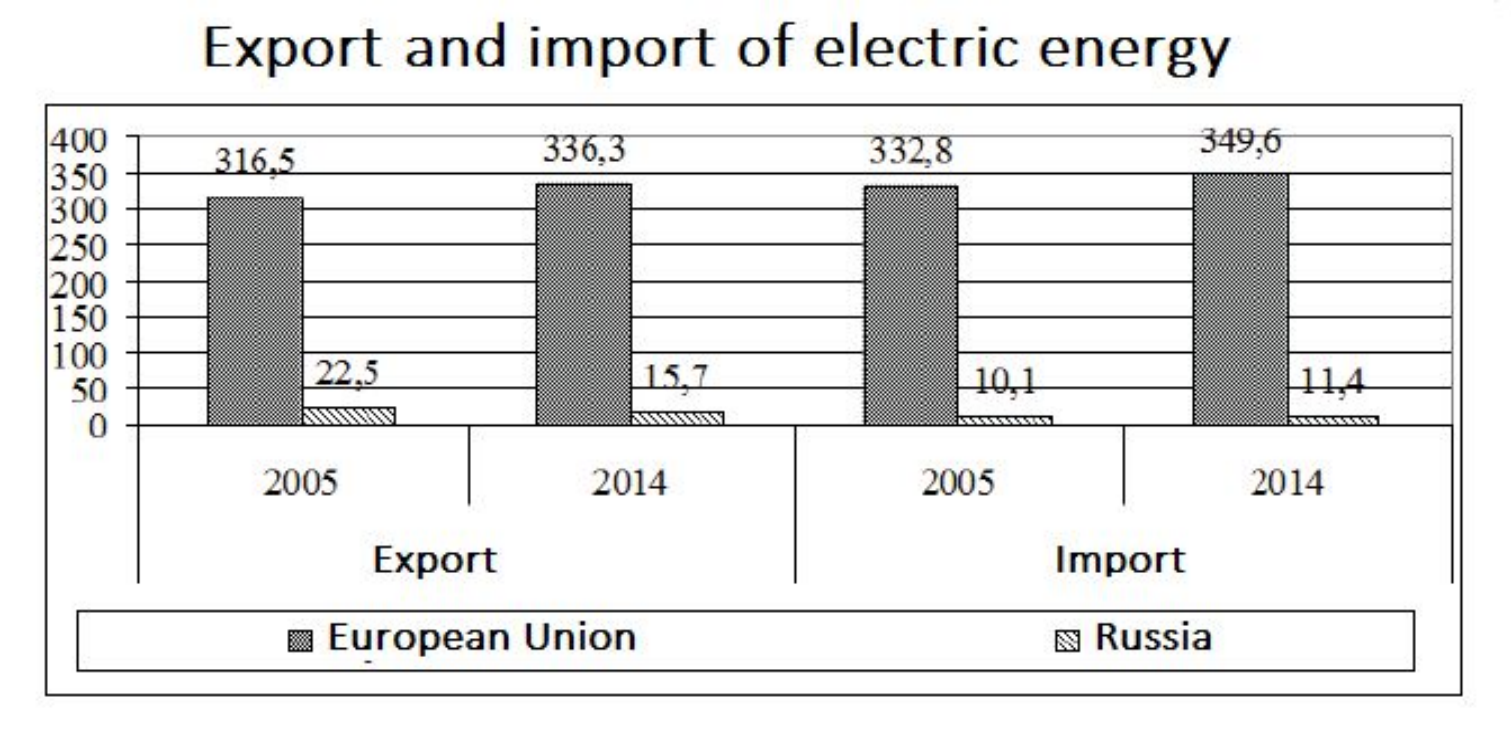
- Consider the production of electricity in the Russian Federation and the European Union.



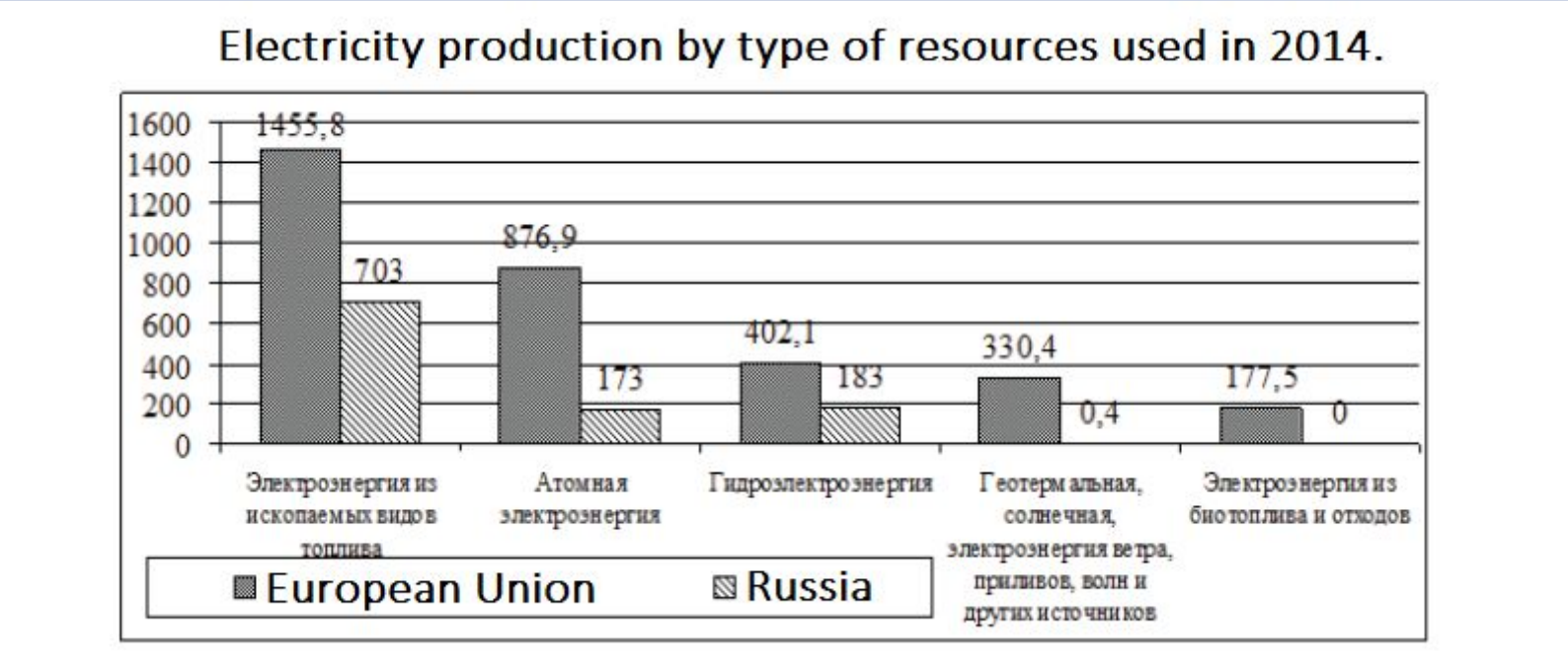
- The figure shows that the electric power complex of the European Union generates three times more electricity than the entire energy system of the Russian Federation, and the share of electricity generation relative to world production is shown in the figure.



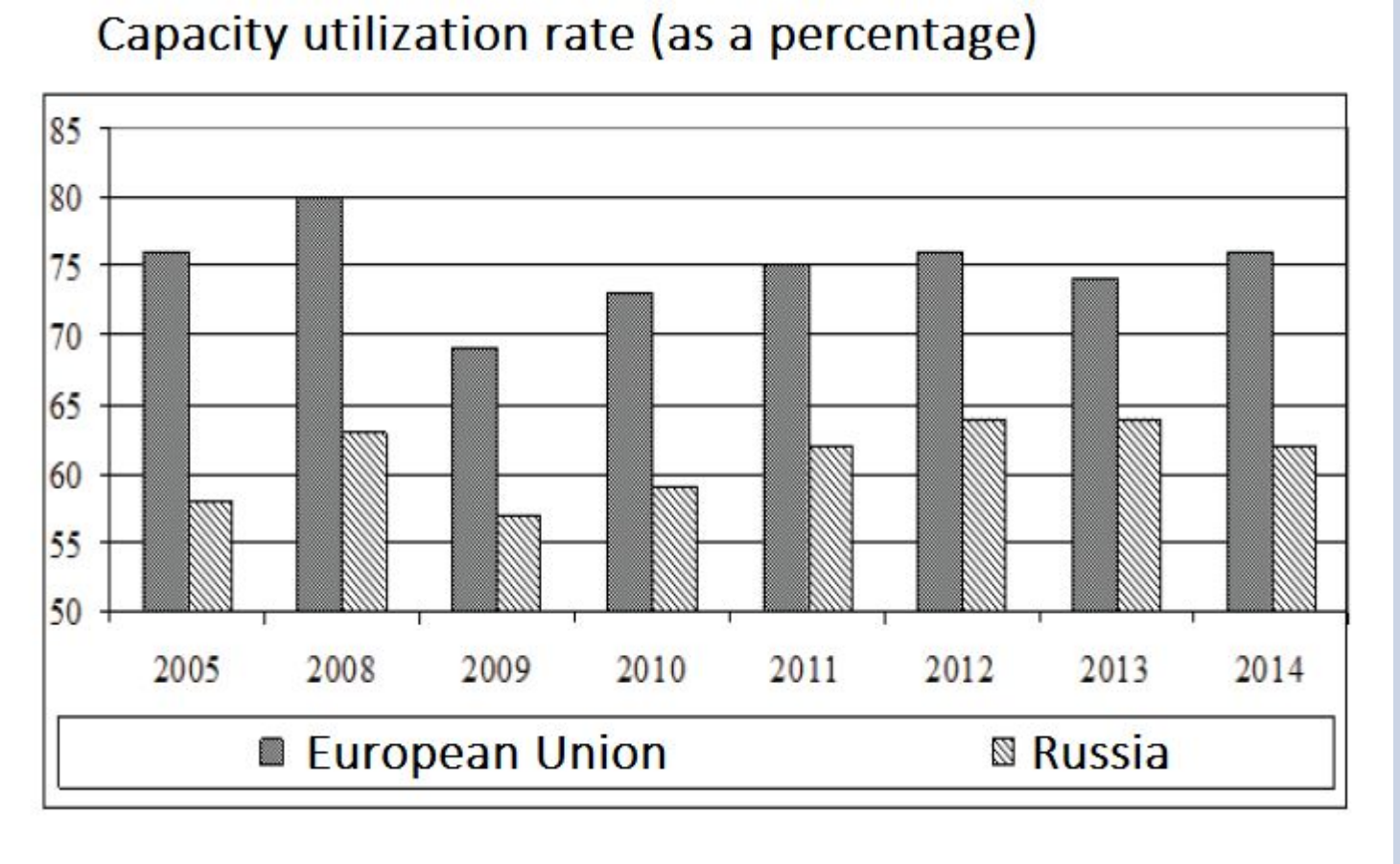
- When considering the figures, it can be concluded that the export and import of electric energy in the European Union reaches 10% of the total energy produced, and in the Russian Federation it does not exceed 1%. Let's analyze the production of electric energy by the types of resources used.



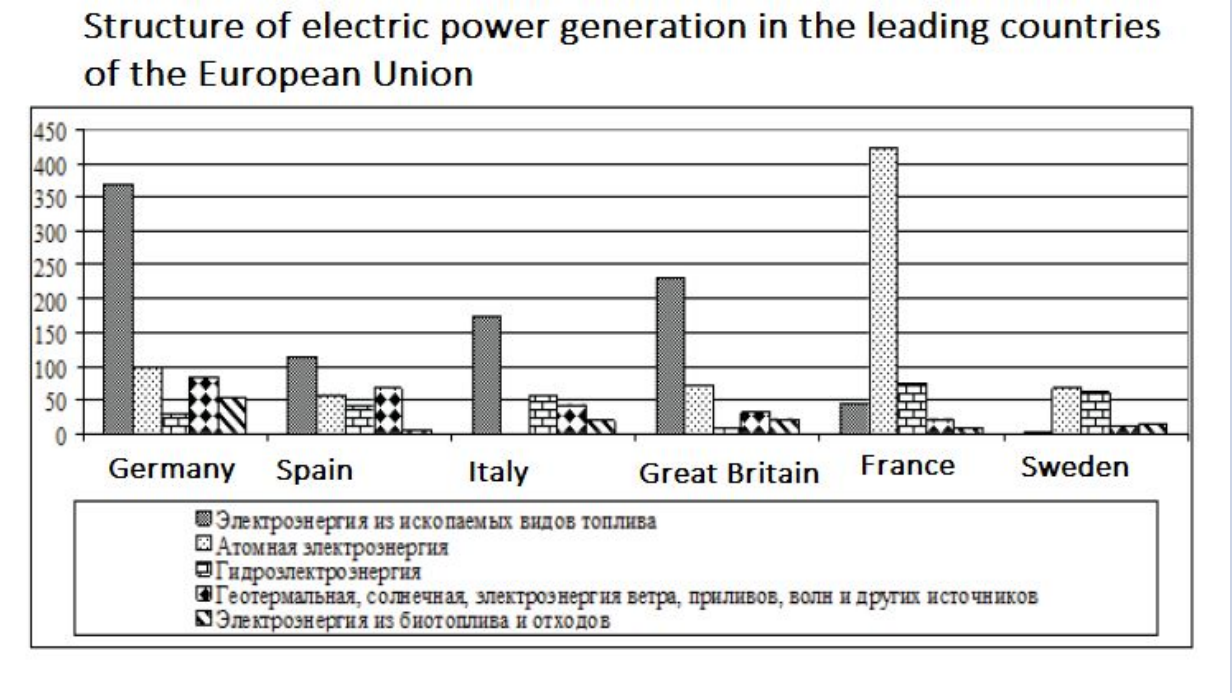
- The figure shows that almost 70% of electricity in the Russian Federation is generated using fossil fuels, while in the European Union it does not exceed 45%. Production of electric energy based on non-traditional types of energy in Russia is almost non-existent, and in the EU the same indicator exceeds 15% of the total output.



- In General, it is clear that developing countries are abandoning the production of electricity from fossil fuels and switching to renewable and non-traditional energy. Next, we will consider the level of capacity utilization in the European Union and the Russian Federation.



- The figure shows that production capacity in the European Union, on average, is loaded by 20% more than in the Russian Federation, which indicates a more efficient production process and rational distribution of the consumed load in the EU countries. The presented analysis of the electric power complexes of the European Union and the Russian Federation shows a significant difference in industries. At the same time, the competitiveness of Russian energy is much lower than that of Europe. This is reflected in the absence of exports and imports of electric energy and production from renewable and non-traditional types of energy, as well as a drop in capacity utilization.



Result

- Thus, having conducted a comparative analysis of the electric power complexes of the European Union and the Russian Federation, as a result, it was concluded that the EU electric power industry is highly developed and the Russian energy industry is degraded. During the period of active participation of the Russian Federation in the formation and launch of the Common electric energy market of the Eurasian economic Union, mechanisms were proposed to improve the competitiveness and efficiency of the Russian electric power industry.

Source of information:

- https://www.youtube.com/watch?v=w9g_CRqZCqI
- https://www.youtube.com/watch?v=LS_ntBT8thE
- https://cyberleninka.ru/article/n/sravnitelnyy-analiz-elektroenergeticheskih-kompleksov-evropeyskogo-soyuza-i-rossiyskoy-federatsii/viewer