

## **Development of Green Economy: Myth or Real Admiration**

**Temirbek S. Bobushev**

Research Institute Kyrgyz Economic University,  
Kyrgyz Republic, 720033, Bishkek  
Togolok Moldo street 58,

### **Abstract**

It will soon be 10 years since the international community, speaking out about the causes of climate change at the global level, has gradually moved on to the issue of transition to the development of a “green” economy as an acceptable way out of the situation of growing greenhouse gases and carbon dioxide emissions into the atmosphere. However, despite serious contradictions between the capabilities and readiness of countries to transition to a “green” economy, politicians in a number of developed countries and, above all, the European Union (EU), argue that such a transition is possible, in the short term and has even already been accomplished in some countries. How should such assurances be accepted - as real anticipations of a process that has not yet taken place, or should the attention of scientists and the public be focused on obvious inconsistencies or obstacles to such a transition? Complications on the discussed path of transition from a market to a “green” economy give rise to many questions that require clear, concise and well-founded answers and solutions.

**Key words:** "green" economy, sustainable development, economic systems, energy sources.

### **Introduction**

Before we begin a discussion about the features of the transition from one economic system to another, in our case from market to “green,” let’s start with what an economic system means. An economic system is the way a society produces and distributes goods and services. An economic system is the way a society produces and distributes goods and services. It includes how things are created, who makes them, how they are distributed, and how people access them. It's like a set of rules that everyone in society follows when it comes to money and trading. An economic system is the means by which societies or governments organize and distribute available resources, services, and goods across a geographic region or country (1,2023). Economic systems regulate the factors of production, including land, capital, labor and physical resources. Economic systems, according to the mechanism by which resources are distributed, can be divided into four main types: traditional economy, command economy, mixed economy and market economy. Traditional economies, command

economies, and market economies are all economic systems that deal with the problem of scarcity by deciding what should be produced, how it should be produced, and for whom it will be produced. It is different who answers these questions: social tradition, government or individuals. A mixed economic system is a system that combines aspects of capitalism and socialism. A mixed economic system protects private property and provides a certain level of economic freedom in the use of capital, but also allows governments to intervene in economic activity to achieve social goals.

As can be seen from the above definitions of economic systems, the “green” economy does not belong to any of the above types. The definition of a green economy is essentially the practice of sustainable development by supporting public and private investment in infrastructure that promotes social and environmental sustainability. It is closely related to ecological economics, but has a more politically applied orientation. In other words, a “green” economy is not a type of economic system, but rather a concept proposed by UN representatives and supported by Green Party politicians in different countries to characterize the development of society within the framework of the concept of sustainable development. Within the framework of sustainable development, we are not talking only about economic development, but

are offering conditions to satisfy current and future generations of citizens with minimal negative impact on the environment.

If we continue to analyze the content of the concept of “green” economy, then it is built on the use of social factors and conditions for the implementation of the concept of sustainable development in the economic sphere. Then the question arises, is it possible to solve economic problems within the framework of the development of economic systems using social methods? I believe not, because the economy has a different nature, a different content in its relationship with other elements of the environment. On the other hand, the search for real approaches and mechanisms for implementing a “green” economy in practice might actually make it possible to make a transition to the evolutionary coexistence of mankind and nature in the modern world (2,2021).

### **Materials and Approaches**

EU countries are “pioneers” in the development of a “green” economy and even assure that a number of EU countries have actually made the transition to a green economy. In fairness, it is worth noting that some EU countries have actually moved closer to the stage of using a socio-ecological green economy model. But at the same time, it should be clarified whether the reduction in the share of hydrocarbon raw materials and the transition to alternative sources of energy production can be considered a real transition to a “green” economy. It is not entirely clear why the mere rejection of one of the elements of a market economy - low-carbon raw materials in favor of reducing carbon dioxide emissions into the atmosphere - can be stated as an actual achievement on the path to the transition to a “green” economy. Is it possible to ensure a real transition to a green economy in sustainable development only through the widespread use of renewable energy sources (RES)? What would be the actual costs of such a transition?

Solutions to economic problems and the transition to other economic systems are possible only through the use of economic methods and approaches to the implementation of such a task. Therefore, it should immediately be noted that economic development for any type of production and management is based on the use of energy resources, taking into account their high potential in energy production, without which the production of goods, food and services is impossible. Today, despite significant waste and emissions during energy production using fuel and energy resources, the efficiency of the latter greatly exceeds the potential capabilities of renewable energy sources. Perhaps it's a matter of technological advances to increase the efficiency of clean energy production using renewable energy sources, but for now this is a matter of the future. Currently, despite the attractiveness and low levels of emissions from the use of renewable energy sources, this vector of development, unfortunately, cannot yet ensure sustainable development in combination with environmental protection and maintaining optimal conditions for the existence of people on planet the Earth. Economic development is believed to lead to economic growth because the goal of economic development is economic growth. Growth occurs through development-induced changes, as quality of life can influence the output of products and services.

Economic growth and economic development indicate progress in a country's economy. However, this correlation between economic growth and economic development does not take population growth into account. Population growth can lead to an increase in the labor force and expansion of output, which causes economic growth, but through increased consumption levels. It is consumption that should and can be the important indicator that allows us to evaluate economic development (3, 2022). The level of economic consumption refers to the increase over time in a country's real production of goods and services, or real output of per capita income, and economic development is associated with growth in human capital indices, declines in inequality indicators, and structural changes that improve the quality of life of the population as a whole. That is, the improvement in the quality of life of people does not occur due to economic growth, but through an increase in the level of consumption of manufactured products and services by the population. In this case, the economic growth indicator provides the conditions for such a change by increasing economic activity in the country or region.

Let's move on to the transition to a green economy, which involves rethinking economic models and policies to ensure environmental sustainability while promoting increased economic consumption and social well-being. In energy production, this means a transition of the global energy sector from energy production and consumption systems based on fossil fuels, including oil, natural gas and coal, to renewable energy sources such as wind and solar power, and lithium-ion batteries. What does such a transition give overall? According

to “assurances” (4,2015), it can help reduce energy consumption, as well as reduce greenhouse gas emissions and the amount of waste generated throughout the life cycle of a manufactured product. Reducing the consumption of energy-producing resources should improve the efficiency of their use and improve the conservation of biodiversity. It sounds very tempting and reassuring.

## Results and Discussions

Let's start our discussion with the question - what are the consequences of the green transition? Is there a risk of negative impacts if consumption and production are reduced, for example as a result of carbon pricing? On the other hand, in the context of abandoning the use of hydrocarbon raw materials in energy production, the problem of inflated costs for electricity in EU countries also arises. Moreover, the opportunities and challenges facing EU countries also depend on the changing structure of energy demand. In this regard, it is important to make policy decisions based on the situation in the country, rather than global biases that contribute to incorrect assessment of the burden on countries' energy sector as a result of climate action. For example, the German business model based on affordable gas and exporting vehicles to eastern countries is no longer working, so there is a need to make the right policy decisions based on the facts and needs of the country. It is true that increased investment, for example in low-carbon technologies, has the potential to boost productivity and economic growth in the long term. However, clean energy produced through renewable and recycled energy sources could provide additional benefits such as higher employment, industrial development, improved health and greater access to energy. Ultimately, the biggest benefits from the current transition away from fossil fuels are expected to come from the impacts of climate change and decarbonization, i.e. solutions to economic development problems must provide solutions to environmental problems. But is this really the case?

Let turn to information on the use of hydrocarbon raw materials by countries at present and propose to evaluate the possibilities and efficiency of using renewable energy sources in energy production. In general, today for the production of electricity on an international scale, for example, in China, 51% of mined coal is consumed, in the USA - 83%, in the countries of the Eurasian Economic Union - about 26% (5, 2023). In the structure of electricity generation by fuel type, coal still occupies one of the leading positions (38% of global clean energy production). The highest share of energy generated from coal is in India and China (77 and 66.4%, respectively). As for the countries of the Central Asian region, the most energy from the use of coal generation is produced in the Republic of Kazakhstan (69.2% of total production), in the Kyrgyz Republic - 8.2%, since most of the energy is produced from the country's hydro resources (ibid, 2023).

The use of oil and gas in energy production is presented as follows. In 2020, the EU imported 58% of its energy consumption, as domestic production met only 42% of its needs. At the same time, the EU energy balance in 2020 consisted of 35% oil and oil products, 24% natural gas and 11% coal. The share of renewable energy sources and nuclear energy in energy production was 17% and 13%, respectively. It should be noted that natural gas is the main type of fuel for electricity production and heating in the EU. In 2020, the EU received 46% of its natural gas imports, meeting 41% of its gross available energy from natural gas. As we can see, despite assurances of the success of the transition to a “green” economy, hydrocarbon raw materials (69%) still constitute the main share of resources for energy production (6,2023). Therefore, I believe that the ongoing rapid transition to the use of renewable energy sources in EU countries, for example, in Germany, is somewhat premature and, in general, even erroneous (7, 2023). To illustrate what has been said, I will cite a statement on the state of the energy sector in Germany, said almost 10 years ago. «Germany has made unusually big mistakes. Giving out huge long-term subsidies to solar farms was unwise; Abolishing nuclear power so quickly is insane. But Germany's biggest mistake is one commonly made by countries that are trying to move away from fossil fuels and towards renewables. This means ignoring the fact that wind and solar energy impose costs on the entire energy system that increase more than proportionally as their quantity increases» (8,2014).

Thus, based on what has been noted, we can say that perhaps the economy of a number of leading EU countries, for example Germany, will gradually return from solar and wind to gas, coal and even nuclear energy. This backward transition will vary in terms of both fixed and variable costs, depending on the source of energy production. The costs of a nuclear power plant are largely fixed: once built, producing another unit of electricity is inexpensive. Conversely, in the case of gas-fired stations, most of the costs are associated with fuel and are therefore variable. It turns out that solar panels and wind turbines themselves are not as profitable as they might seem. If they cannot provide reliable power

generation when needed, then their generating capacity is of less value compared to a conventional power plant. To truly compare the two, it is necessary to determine not only the cost of producing each megawatt hour, but also the cost of that specific hour. In an ideal market, where prices are updated minutely and from one network node to another based on geographic location, the relative benefit of any energy source could be easily calculated: it would depend on "catching coefficient". This is the difference between the market value that the source receives and the average price of electricity over a certain period. Prices should be higher when people use electricity the most, increasing the level of use of sources that produce electricity at that time. Fortunately, for renewable energy sources, this usually occurs during daylight hours, which makes solar energy useful, or during cold, windy months. However, capture rates will decline as more renewables come online, as an abundance of solar panels means electricity prices are very low or even negative during sunny weather.

## **Conclusion**

Global commitment to climate change mitigation has increased significantly in recent years, starting with the 2015 Paris Agreement. Since then, there has been a dramatic acceleration in the implementation of decarbonization strategies and goals. The energy sector is at the center of climate policy as it accounts for around 75% of global carbon dioxide emissions (9,2020). In particular, a key goal of the global energy transition is to reduce global energy supply from 80% in 2020 to 20% in 2050, while sharply increasing the use of renewable energy from 12% in 2020 to about two thirds in 2050, under the "No -zero" scenario International Energy Agency (IEA) (10.2021). Today, 88% of global emissions are covered by countries' net zero ambitions. The world's largest emitters, such as the EU, US, China and India, have set emissions targets for mid-century. However, given their climate strategies, net zero does not mean that these countries will no longer export oil at all. Moreover, fossil fuels are expected to still play a global role (albeit a more modest one) even in a zero-emissions scenario.

On the other hand, today's energy transition is primarily a political process that is a response to the climate challenge caused by market failure. This means that the energy transition will occur at different rates and speeds from one country to another and will often cost more than policymakers expect. However, by seeking to radically reduce the use of fossil fuels and scale up clean energy technologies, today's energy transition threatens the existing model of hydrocarbon production and the overall industrial development of various countries. It must be recognized that although greater climate ambitions are dictated by increasing international pressure, countries producing hydrocarbon fuels have also embarked on an energy transition for internal reasons. The energy transition is motivated by economics and politics. Given the interaction of oil, economics and politics, energy transition strategies of hydrocarbon-producing countries are aimed at maintaining export earnings even in a decarbonized world (11,2023). Thus, the transition from the use of hydrocarbon raw materials to renewable sources for energy production may gradually lead to a result where renewable energy sources can replace hydrocarbon resources in the domestic energy structure, but not in the state budget, since investments in renewable energy sources are still not bring the same high profits that the hydrocarbon industry provides. All of the above allows us to make a proposal that, despite the attractiveness and political relevance of replacing hydrocarbon raw materials with renewable energy sources, in order to mitigate the negative impact of climate change on the socio-economic life of society, it is necessary to pursue a more restrained policy for the actual implementation of economic development programs of the country. In assessing and forecasting such development, naturally, one should involve economists who have sufficient professional experience in using economic methods to solve problems of economic development. As for politicians, they should not only listen, but also use the achievements of economic science to actually solve economic problems. Only in this case can we expect to find optimal solutions for economic development and environmental protection. You cannot solve the problems of one industry or even a global problem by denying and abandoning practical achievements in the field of economic development. At the same time, it is possible and necessary to promote solutions that are aimed at transforming our coexistence not only in the long term, but also in the present.

## **References**

1. Cambridge Business English Dictionary. Cambridge University Publishing, 2023.
2. Bobushev, TS. Coextension Access Code. Lambert Academic Publishing, Part 1, 2021.

3. Bobushev, TS. Countdown of Coexisting. Lambert Academic Publishing, Part 2, 2022.
4. . Renewable Energy Policy Network for the 21<sup>st</sup> Century (REN21), *Renewables 2015 Global Status Report. Annual Reporting on Renewables: Ten Years of Excellence* (Paris, REN21 Secretariat, 2015), pp. 18.
5. Eurasian Economic Commission, 2023
6. Eurostat, Energy Statistic,2023
7. World Energy Forecast 2022.
8. Posery Hans et al., Development and integration of renewable energy sources: Lessons learned from Germany, Finadvice, 2014.
9. Hannah Ritchie, Pablo Rosado and Max Roser, 2020 - "Emissions by sector". Published online at OurWorldInData.org. Retrieved from: [https://ourworldindata.org/emissions-by-sector'](https://ourworldindata.org/emissions-by-sector)
10. IEA, 2021.
11. Manfred Hafner, Pier Paolo Raimondi. Energy transition and prospects for producing countries in the MENA region 2023, IEMed Mediterranean Yearbook.