

## Prospects for decarbonizing the world economy in the process of formation and evolutionary development of innovative and industrial belts of trade routes of the XXI century

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### Abstract

The research is aimed at identifying the prospects for decarbonizing the world economy in the process of formation and evolutionary development of innovative and industrial belts of trade routes of the XXI century. **Goal.** Analyze, develop and propose the main directions for the development of economic (innovation-industrial) belts of trade routes of the XXI century in order to decarbonize the world economy. **Tasks.** To identify the directions of decarbonization of the transportation process by rail. To determine the prospects for the use of automatic (unmanned) mobile equipment when moving along international transport corridors and the possibility of reducing energy consumption in transport. Critically evaluate the effectiveness of expanding the use of hydrogen-cell and biofuel vehicles in the development of transport and transit systems. Develop recommendations for ensuring the sustainable development of cargo transportation along the Northern Sea Route (NSR). To show the organizational and institutional preconditions for the decarbonization of the world economy. **Methodology.** The research uses the methods of evolutionary and institutional theory, the theory of production and technological balance of the economy and technical and economic structures, world system analysis, expert and analytical assessments. **Results.** A system of arguments has been developed to prove that the high-tech transformation of global transport and logistics processes based on the principles of inter-state and corporate partnership (ICP), the development of the transit economy (TE) and the innovation and industrial belts of trade routes of the XXI century, which contribute to the wide spread of environmentally friendly industries, will make a decisive contribution to the de-carbonization of the world economy and ensuring sustainable economic development. It is determined that the decarbonization of the world economy in general and transport and transit systems in particular fits organically and forms an integral part of the Belt and Road Initiative of the People's Republic of China (BRI) put forward in 2013, and is closely correlated with such important components of the BRI as the Digital Silk Road and the Silk Road of Health. **Conclusions.** The development of the economic (innovation-industrial) belts of trade routes of the XXI century has a significant impact on the decarbonization of the world economy. The development of hydropower and long-distance transmission of generated electricity, as well as the construction and modernization of global, regional and transit energy transport systems will contribute to reducing carbon dioxide emissions. When creating and operating the Norman-Aryan trade route of the XXI century, it is necessary

to set the task of supplying electricity to transport communications and rolling stock exclusively from renewable energy sources (RES), and for the countries of Central Asia – through the use of hydropower, solar and wind sources. The construction and operation of the "Green Silk Road" will become a reliable ecological and innovative basis for the development of the transit economy in Russia and the countries of Central Asia.

**Keywords:** *decarbonization, world economy, evolutionary and institutional theory, «green» energy, renewable energy sources, transit economy, interstate-corporate partnership, trade routes, innovation and industrial belts, transport and transit systems, railway transport, high-tech transformation*

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