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Assessment of the economic efficiency of renewable energy sources in the Khabarovsk territory

T*he study presents a brief description and problems of power supply of the Khabarovsk territory. The problems and prospects of the development of renewable energy sources, in particular in the Khabarovsk territory, are considered. There are three main approaches that exist in the scientific community for comparing energy objects. The first approach is based on comparing the technical indicators of power facilities, the second on calculating the normalized cost of electricity, and the third is based on monetizing the environmental and climatic consequences of power facilities. During the study, it was found that these approaches differ in the number of indicators included in the calculation of the cost of electricity. In accordance with the selected approaches, evaluation of economic efficiency of three operating power plants of the Khabarovsk territory – coal, diesel and solar – was carried out, monetized estimates of the full cost of three alternatives for the production of electricity in the region were given, taking into account the environmental component. The analysis made it possible to conclude that under the current market conditions, renewable energy sources are most profitable in decentralized areas, and quantitative evaluations have shown that with the introduction of payments for carbon monoxide emissions, renewable energy sources become an economically effective way of organizing energy supply in the region, including in the regions with centralized power supply.*

Keywords: *electricity, renewable energy sources, decentralized areas, economic potential of renewable energy sources, monetization of environmental and climatic consequences, the Khabarovsk Territory.*

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