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«Assessment of the prospects for energy construction in the context of
an increasing share of electrified transport (on the example of the
Krasnodar agglomeration)»

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Problem statement

Currently, the electrification of personal and public transport is a global trend. Indicators of individual countries show a rapid rejection of the use of organic fuel in transport and the transition to electric traction, which in turn exacerbates the problems of energy capacity shortages. The Russian Federation is no exception. Russia's current lag behind world leaders in the electrification of transport also determines the possible prospects for a rapid growth in the number of electric vehicles in our country, which must inevitably be accompanied by the process of updating old and commissioning new energy capacities.



Solution methods

The authors have evaluated in the framework of Krasnodar agglomeration, the magnitude of future needs for electrical energy when you achieve 100 % electrification of public transport and 15% Park electrification of personal vehicles.

To assess the prospects for using electrified transport, electricity consumption by electrified transport was calculated.



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Conclusions

Results, implementation

The energy system of the Krasnodar agglomeration is historically scarce, and the volume of resource consumption is growing annually. Increasing the share of electric transport will further increase the load on power supply systems.

- as a result of the active development of electric transport in the future until 2035, it is advisable to build one block of thermal power plants with CCGT on the territory of the city of Krasnodar.
- To cover the demand for electricity outside the city of Krasnodar, low-power wind and solar power generating devices equipped with energy storage systems can be used.

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