Kompetentnost' / Competency (Russia) 1/2023
ISSN 1993-8780. DOI: 10.24412/1993-8780-2023-1-33-38

Overview of Modern Energy Storage Technologies

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Citation: Kravchenko E.V. Overview of Modern Energy Storage Technologies, *Kompetentnost' / Competency (Russia)*, 2023, no. 1, pp. 33–38.
DOI: 10.24412/1993-8780-2023-1-33-38

key words

carbon-neutral energy, power supply, energy storage

I have carried out a review of modern energy storage technologies. The electromagnetic method of energy storage, mechanical method, chemical energy storage technologies, electrochemical storage, thermal energy storage technologies are considered. According to the results of the study, the trends of increasing the share of electricity generation using unconventional, renewable energy sources (NVE) during the transition to green energy have been identified. It is known that the unsteadiness of the power generation mode makes it difficult to use solar panels and wind generators when introducing them as the main source of generation. The analysis of the review showed that chemical and electrochemical energy storage technologies are the most attractive according to a number of criteria for creating large energy storage systems that will accumulate excess electrical energy from the non-traditional renewable energy sources. Therefore, the transition to green energy will depend on the solution of a number of tasks, including progress in the field of research on the possibility of ensuring the thermal regime of large battery-powered energy storage systems.

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