The press service of the University of MPEI reported the creation of a new solar power plant, which could work around the clock.

The peculiarity of this development is that the power plant can produce electricity even at night and in bad weather thanks to the heat return system. The effectiveness of the station increases due to the use of two blocks of mirrors-heliotrouss and the storage system and heat return. In the afternoon, one block produces steam for the turbine, and the second retains energy in the form of molten salt, which heats up to a very high temperature – 565 ° C. At night, the accumulated heat through the heat exchanger is used to turn water into steam, which allows the turbine to continue the production of electricity.

MES said that this approach made it possible to increase the total efficiency of the station to 32%, which is 7.4% more than other stations in the world. Thanks to the heat storage system, the power station can operate at night about nine hours, and the annual volume of electricity produced increases by 15%.

The development process was led by a professor at the Department of hydropower and renewable energy sources of the NRU MAI Ruslan Tsgoev.

“We see how new technologies are gradually entering the energy of the regions and become an important part of the country’s general energy system. The new development of our scientists is an example of how to create innovative equipment on the basis of the Russian scientific school, which not only exceeds foreign analogues, but also surpasses them in a number of parameters, ”the press service of the word of the rector of the NIU Nikolai Rogalev quotes.