Scientists of the Perm Polytechnic University have developed an intellectual system for managing urban heat supply. The new technology based on artificial intelligence can reduce heating costs by 10-12% per year.

The system analyzes the weather forecast and data from temperature sensors in the heating networks. The real -time algorithm calculates the optimum temperature of the coolant, excluding both overheating and insufficient heating of the rooms.

A feature of development is the use of neural networks. The algorithm was taught at a virtual stand that imitates the work of various heating systems. After preliminary training, the system is already finished in the real conditions of a particular city.

According to the developers, the accuracy of the system reaches 97.9%. She quickly responds to weather changes, in advance adjusting the temperature of the coolant. This avoids energy overrun with sudden warming.

In Russia, about 100 million people use centralized heating. Existing systems often work on outdated equipment with manual control, which leads to heat losses up to 30%. The new development can be a solution to this problem.

The technology was created as part of the Priority 2030 program.