

**AUTOMATING PROCESSES IN THE ENERGY SECTOR:
CHALLENGES AND PROSPECTS**

student Verenev P.A.

scientific supervisor – lecturer Samusevich A.S.

Belarusian National University of Technology
Minsk, Belarus

In the modern world, the energy sector is one of the most important and promising sectors of the economy. With each passing year, the amount of consumed energy grows, which requires increased efforts to optimize production processes. One of the most effective methods of optimization is process automation.

First and foremost, the challenge of process automation in the energy sector is the high cost of implementing new technologies. Automating processes requires the use of new, expensive technologies that may not be accessible to many enterprises. In addition, the use of new technologies also requires additional costs for employee training, which can also be associated with certain difficulties.

Another challenge of process automation is the lack of standards and rules for exchanging information between different systems. It is necessary to ensure compatibility between different systems so that they can work together and exchange necessary information [1].

However, despite some difficulties, process automation in the energy sector has great prospects. It allows significantly improving the efficiency of production processes, reducing production costs, and improving product quality.

In addition, process automation allows reducing the number of errors related to human factors, improving the safety of equipment operation and enhancing production quality. In case of implementing automation in the energy

system, it becomes possible to exercise complete control over resource consumption and save costs on energy carriers.

One of the prospects of process automation in the energy sector is the development of "smart" grids, which will allow for the most efficient use of produced energy, taking into account changes in demand and supply on the energy market.

However, when implementing automation in the energy sector, certain difficulties should be taken into account. For example, many processes in the energy industry require a large amount of data for effective automation, which may require additional costs for infrastructure and equipment. In addition, when automating processes, it is necessary to ensure the security of the system to prevent possible cyber attacks or other threats.

In conclusion, it can be said that process automation in the energy sector has great prospects, but it is also associated with certain difficulties that need to be taken into account when implementing it. However, thanks to modern technologies and innovations, these difficulties can be overcome, allowing for more efficient and safe work in the energy sector.

References

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