



Shevchuk S.P., Popovych O.M., Boychenko S.V., Golovan I.V., Listovshchik L.K., Meita O.V.; **Energy and resource-saving installations: a textbook for applicants for the degree of bachelor in speciality 141 "Electric power engineering, electrical engineering and electromechanics".** – Igor Sikorsky Kyiv Polytechnic Institute, – Kyiv: Publishing house "Polytechnics" 2025. – 382 p.

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The basics of the theory of turbomachinery and the principles of the arrangement of machines and installations for the pressure movement of liquids and gases - superchargers, used in the energy industry, mining and

processing of minerals, transport, and oil and gas complex industries are presented. Engineering methods for calculating parameters and selecting the main electrical equipment of installations, methods for their design and optimization of operating modes are presented. A comprehensive methodology for designing machines and installations based on a generalized indicator of their energy and resource efficiency at the stages of design, installation, and operation is proposed.

For applicants for a bachelor's degree in specialty 141 "Electrical Power Engineering, Electrical Engineering and Electromechanics", as well as for a master's degree, who, in particular, study educational components under the certificate programs "Engineering Design of Electrical and Mechatronic Systems", "Engineering and Automation of Fuel and Energy Systems and Bioenergy Technologies", "Engineering and Automation of Hydrogen Energy Systems and Technologies", as well as for graduate students and engineering and technical workers in the energy, energy and industrial mechanical engineering industries.