

EXPERIENCE OF USING RENEWABLE ENERGY SOURCES: PROBLEMS AND PROSPECTS

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In today's world, the transition to ecologically clean energy sources is becoming urgent. This is due to the growing pollution of the environment and the desire to keep our planet clean for future generations. According to scientists, renewable energy sources are a promising and rapidly growing segment of the energy industry. A large number of countries are already abandoning hydrocarbons and developing strategies for the transition to renewable energy sources. For example, Spain plans a complete transition to renewable energy sources by 2050. The capacities of renewable energy in the leading countries are presented in Fig. 1.

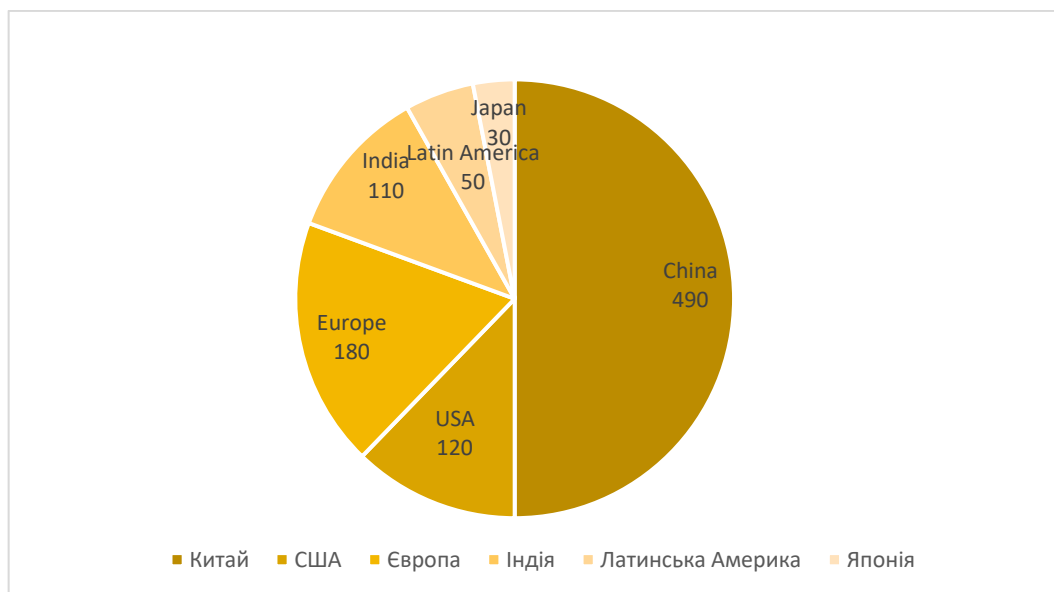


Figure 1. Renewable energy capacities in leading countries (GWt)

When choosing a strategy for the development of electric power with the help of renewable energy sources, it is important to reduce the level of emissions into the atmosphere by replacing the use of fossil resources with "green energy". The relatively high cost of renewable energy sources can be partially offset by the absence of environmental consequences from burning coal and gas. Thus, companies engaged in the production of electricity will not have to bear the costs of installing various filters, as well as eliminating

the potential environmental consequences of carbon dioxide emissions into the atmosphere.

ASYNCHRONIZATION IN JAVASCRIPT AND ASYNCHRONOUS STATE IN THE APPLICATION

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Abstract. JavaScript, as a single-threaded programming language, uses asynchronous programming to perform multiple operations simultaneously. Asynchronous code allows you to run operations without waiting for them to complete, thus improving performance and responsiveness of the interface [1]. This paper discusses the problems of managing asynchronous state in JavaScript applications, as well as the methods and tools used to solve them.
Keywords: asynchronous programming, JavaScript, promise, async/await, app state, state control.

Introduction. The shift to mobile Internet use has created new challenges in web development, particularly in optimizing websites for environments with limited network access and low bandwidth. Such conditions are increasingly common in areas affected by military conflicts or natural disasters, where reliable internet infrastructure is disrupted, making the efficient use of web resources critical. This study investigates the need for asynchronous state management techniques adapted to these constraints, aimed at improving web accessibility and user experience in low network power conditions.

Purpose of the Study. The primary goal of this research is to develop and validate a complete set of asynchronous state management strategies specifically designed for low-bandwidth networks and legacy devices. By focusing on these under-researched conditions, the research aims to contribute to the broader field of web development by ensuring that websites remain accessible and functional even in the most challenging environments.

Main research methods. The approach to this research involves a mixed methodology that combines theoretical analysis of existing asynchronous state management practices with practical testing in simulated low-bandwidth network environments. This methodology provides a comprehensive understanding of the effectiveness of different state management strategies under different network constraints.