



THE ROLE OF COMMERCIAL BANKS IN THE DEVELOPMENT OF ALTERNATIVE ENERGY

Movlonov Shokhrukh Farrukh ugli

Chief Inspector of the Central Bank of the Republic of Uzbekistan

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ABSTRACT

This article explores the critical role of commercial banks in the development of alternative energy. It analyzes the financial instruments used by banks, their cooperation with governments and international organizations, and the challenges they face in green financing. Through international and local case studies, the work identifies strategic directions for increasing bank involvement in sustainable energy projects.

In recent years, the global energy sector has witnessed a significant transformation due to the growing concerns over climate change, environmental degradation, and the depletion of fossil fuels. Alternative energy sources such as solar, wind, hydro, and bioenergy have become crucial for sustainable development. However, the transition to renewable energy requires substantial financial investment. In this context, commercial banks play a vital role by providing necessary funding, credit facilities, and financial advisory services.

This article aims to analyze the role of commercial banks in financing and supporting alternative energy development. It evaluates the current trends, challenges, and opportunities for banks to foster a green economy. Alternative energy refers to energy sources that are not based on fossil fuels and have low environmental impact. The main types include:

- Solar energy: Derived from sunlight using photovoltaic cells.
- Wind energy: Generated by wind turbines.
- Hydropower: Utilizes water flow to produce electricity.
- Biomass and biofuels: Organic materials converted into energy.

Alternative energy contributes to:

- Reducing greenhouse gas emissions
- Enhancing energy security
- Creating green jobs
- Promoting technological innovation

According to the International Renewable Energy Agency (IRENA), investments in renewables surpassed \$500 billion in 2023. Countries like China, the United States, and members of the European Union lead the global energy transition.

Commercial banks serve as financial intermediaries by:

- Accepting deposits
- Providing loans and credit
- Offering payment services
- Managing risks through financial instruments

Green finance refers to the allocation of financial resources to environmentally beneficial activities. ESG criteria guide banks in evaluating the sustainability of investments. Banks support alternative energy by:

- Offering green loans for renewable projects
- Issuing green bonds
- Partnering with government programs
- Providing financial advice and risk analysis

Table 1. Case Study: International and Local Examples

HSBC:	Uzbek banks (e.g., NBU, Asaka Bank):
Invested over \$100 billion in clean energy projects globally.	Financing solar panel installations and energy-efficient housing.

Challenges and Prospects for Commercial Banks in Alternative Energy Development:

- **Barriers Faced by Banks**
 - Lack of technical expertise in renewable projects
 - High perceived risks and long payback periods
 - Insufficient regulatory incentives
 - Limited access to international climate finance
- **Banks can mitigate risks through:**
 - Credit guarantees and insurance schemes
 - Co-financing with development banks
 - Using innovative tools like green bonds and blended finance
- **Government support is crucial in:**
 - Setting renewable energy targets
 - Offering tax benefits and subsidies
 - Establishing clear environmental regulations
- **Commercial banks can expand their role by:**
 - Developing specialized green finance departments
 - Partnering with multilateral development banks
 - Educating clients and raising awareness about sustainable investments

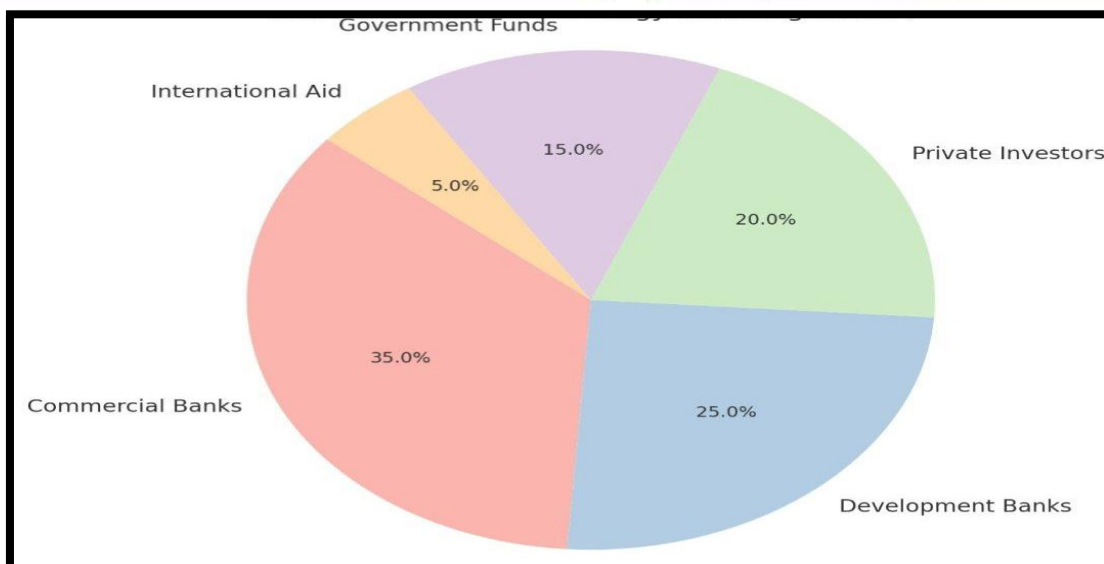


Fig 1. Sources of Renewable Energy Financing in 2024

Explanation (fig.1): This pie chart illustrates the distribution of financial sources supporting renewable energy projects in 2024. Commercial banks account for the largest share at 35%, highlighting their critical role in green project financing. Development banks contribute 25%, typically through concessional loans and structured programs. Private investors represent 20%, attracted by growing returns in the clean energy sector. Government funds (15%) support national strategies and subsidies, while international aid (5%) mainly comes from global climate funds and foreign development assistance.

This breakdown underscores the importance of financial institutions—particularly commercial banks—in accelerating the global transition to sustainable energy.

Table 2. Investment by Commercial Banks in Renewable Energy (2023)

Nº	Bank	Investment in Renewable Energy (Million USD)	Main Focus
1.	HSBC (Global)	5000	Wind, Solar
2.	Asaka Bank (Uzbekistan)	120	Solar Panels
3.	NBU (Uzbekistan)	90	Energy Efficiency
4.	Bank of America	4000	Solar, Biomass
5.	Credit Agricole	3000	Hydropower

Explanation (Table 2): This table presents a comparison of selected commercial banks and their investments in renewable energy projects during 2023. The banks listed include both global and Uzbek institutions. HSBC and Bank of America stand out as leading global players with significant investments of \$5 billion and \$4 billion, respectively. Their focus spans across solar, wind, and biomass energy.

Among Uzbek banks, Asaka Bank and the National Bank of Uzbekistan (NBU) have also begun playing an active role in supporting sustainable energy development. Asaka Bank invested approximately \$120 million mainly in solar panel installations, while NBU allocated \$90 million toward energy efficiency projects.

This data highlights the growing engagement of commercial banks in the green energy sector and reflects their potential to mobilize large-scale capital for environmentally beneficial projects.

Conclusion. Commercial banks have a strategic role in driving the transition toward alternative energy by mobilizing capital and managing financial risks. Their active participation not only contributes to environmental sustainability but also opens new markets and investment opportunities. To maximize their impact, banks must overcome structural and regulatory challenges through innovation, partnership, and long-term vision.

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