IMPROVING THE EFFICIENCY OF INVESTMENT PROJECT FINANCING IN ENERGY ENTERPRISES THROUGH INTEGRATED FINANCIAL MECHANISMS

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Energy enterprises play a strategic role in ensuring economic stability, industrial growth and social welfare. The uninterrupted supply of energy resources, modernization of production and distribution networks, and introduction of energy-saving technologies directly depend on the availability of long-term investment resources. In the modern economy, the financing of investment projects in energy enterprises cannot be limited to one source of capital.

Investment project financing in energy enterprises has a specific nature. Such projects usually require large capital expenditures, long payback periods and stable cash flows. At the same time, they are influenced by tariff regulation, currency fluctuations, inflation, liquidity restrictions and project implementation delays. Therefore, the main task is not only to attract financial resources, but also to combine different sources of financing in a balanced way.

An integrated financial mechanism means the coordinated use of state funds, internal resources of enterprises, commercial bank loans, international financial institution resources, public-private partnership instruments and capital market tools. The advantage of this approach is that it reduces dependence on one financing channel, distributes risks among participants and creates conditions for increasing the efficiency of investment projects.

Table-1

Main directions of integrated financing mechanisms in energy enterprises

Direction	Practical mechanism	Financial problem reduced	Expected management effect
State support	Budget funds, subsidies or guarantees for socially important infrastructure projects	Lack of long-term and cheap capital	Acceleration of strategic projects
Internal resources	Use of depreciation funds, retained earnings and operational savings	Excessive dependence on external borrowing	Higher financial independence
Bank loans	Attraction of medium and long-term loans from commercial banks	Insufficient current investment resources	Expansion of financing opportunities
International financial institutions	Use of loans, grants and technical assistance	Limited domestic financial capacity	Access to cheaper capital and expertise

Public-private partnership	Joint implementation of infrastructure projects with private investors	High budget burden and project risks	Risk sharing and project discipline

Table 1 shows that integrated financing is not simply the mechanical combination of different financial sources. It is a management system in which each source performs a specific function. State support may be directed to strategically important infrastructure, while internal resources demonstrate the enterprise's own responsibility for investment development.

The first important element of the integrated mechanism is the diversification of financing sources. If an energy enterprise depends only on state funds or only on bank loans, its investment activity becomes vulnerable. Delays in budget allocations, high interest rates or changes in credit conditions may negatively affect the implementation of projects.

The second element is the assessment of the cost of capital. Each financial source has its own price. Commercial bank loans may be faster to attract, but they can increase the debt burden. Funds from international financial institutions may be cheaper, but they usually require strict project documentation and monitoring. Therefore, the enterprise should calculate the weighted average cost of capital and choose the optimal financing structure.

The third element is project selection based on financial and technical-economic indicators. Traditional indicators such as Net Present Value, Internal Rate of Return, Profitability Index and Discounted Payback Period are necessary for evaluating financial attractiveness. However, in energy enterprises these indicators should be supplemented by sector-specific results: reduction of technical losses, expansion of network coverage, improvement of service reliability and reduction of emergency cases.

Financial sources state, banks, IFIs, PPP	**Financial instruments guarantees, bonds, co-financing**	**Evaluation indicators NPV, IRR, PI, DPP, WACC**	**Expected results efficiency, lower risk, sustainability**

Figure-1. Integrated financial model for improving investment project efficiency in energy enterprises

Figure 1 presents the integrated financing model as a multi-level system. The final result of this model is not only the attraction of capital, but also the achievement of measurable operational effects. These effects include lower losses, wider access to energy services, better reliability of supply and improved financial sustainability of the enterprise.

A special feature of the proposed model is the connection between financing and measurable results. In traditional financing, funds are often allocated according to planned expenditures. However, this approach does not always guarantee real efficiency. In an integrated mechanism, financial resources should be linked with clearly defined indicators.

Table-2

Indicators for evaluating the efficiency of investment project financing in energy enterprises

Indicator group	**Main indicators**	**Practical meaning**	**Management decision**

Financial efficiency	NPV, IRR, PI, DPP	Measures profitability and payback	Select projects with higher return
Cost of financing	Interest rate, WACC, debt service ratio	Shows price and sustainability of capital	Optimize the financing structure
Technical-economic results	Loss reduction, network expansion, capacity growth	Reflects the sectoral effect of investment	Prioritize operational benefits
Service quality	Reliability, accidents, customer complaints	Shows social and operational impact	Link financing with quality improvement
Risk indicators	Currency, inflation, liquidity and delay risks	Identifies financial threats	Apply reserves and stress testing

The indicators presented in Table 2 prove that investment efficiency in energy enterprises should be evaluated in a comprehensive way. Financial profitability alone is not enough for strategic infrastructure projects. A project may have a moderate financial return, but if it significantly reduces technical losses and improves network stability, it may have high socio-economic value.

Risk management is another important component of integrated financing. Tariff changes may influence revenue, inflation may increase construction costs, and currency fluctuations may affect foreign loans and imported equipment. These risks should be assessed before financing decisions are made.

In conclusion, improving the efficiency of investment project financing in energy enterprises requires an integrated approach. The combination of state support, internal funds, bank loans, international financial institution resources and private investment creates a more stable and flexible financing system. At the same time, the effectiveness of this system depends on the correct selection of projects, comprehensive evaluation indicators and systematic risk management.

The following practical proposals may be advanced: energy enterprises should develop an integrated financing portfolio for each large investment project; financial indicators should be supplemented by technical-economic indicators; investment decisions should be based on the weighted average cost of capital; public-private partnership and international financing instruments should be expanded; and risk matrices, stress testing and reserve mechanisms should be introduced into project management practice.

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