

emissions by 2050 and compromise carbon neutrality targets in China. *Nature Food*. <https://doi.org/10.1038/s43016-025-01163-6>

6. Гнедіна, К., & Сорока, А. (2023). Декарбонізація економіки як чинник забезпечення кліматично нейтрального майбутнього: Сучасні виклики і перспективи в Україні та світі. *Економіка та суспільство*, (54). <https://doi.org/10.32782/2524-0072/2023-54-76>.

UDC 330.15:658.5:502.131.1

THE IMPACT OF SUSTAINABLE DEVELOPMENT POLICIES ON THE FINANCIAL AND ECONOMIC PARAMETERS OF PROJECTS

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The intensification of EU climate policy and the progressive alignment of Ukrainian legislation with the frameworks of the European Green Deal, Fit for 55, the EU Sustainable Finance Taxonomy, and circular economy principles are reshaping the environment in which investment and engineering projects are developed and implemented. Environmental provisions are no longer regarded merely as regulatory burdens; they increasingly act as key economic determinants that influence project cost composition, risk exposure, investment appeal, and long-term performance outcomes.

The objective of this study is to explore the ways in which green regulatory instruments affect core economic indicators of projects and to justify the incorporation of environmental criteria into economic evaluation practices in Ukraine.

The adoption of environmental standards results in higher upfront capital expenditures (CAPEX), primarily due to:

- the integration of energy-efficient technological solutions;
- the application of environmentally responsible materials;
- the upgrading of equipment to meet emission-related requirements.

Conversely, operating expenditures (OPEX) tend to decline over the project life cycle as a consequence of improved energy efficiency, more rational resource use, and reduced waste management costs.

Sustainability-oriented regulations also reshape conventional investment assessment metrics:

- Net Present Value (NPV) generally improves over the long term as resource savings accumulate;
- the Internal Rate of Return (IRR) becomes more dependent on energy price dynamics and carbon-related regulatory measures;
- while the payback period may initially extend, exposure to technological obsolescence risks is mitigated.

The deployment of emission pricing instruments, including carbon pricing mechanisms and the Carbon Border Adjustment Mechanism (CBAM), introduces additional financial burdens for carbon-intensive initiatives. In contrast, projects aligned with green standards exhibit lower regulatory uncertainty, more predictable financial performance, and better prospects for securing international funding.

Adherence to sustainable development principles also creates access to new financial opportunities, such as:

- participation in grant-based funding schemes;
- attraction of concessional financing;
- issuance of green bonds.

These instruments contribute to lowering the weighted average cost of capital (WACC) and strengthening overall project competitiveness.

Enhanced environmental performance further generates indirect economic benefits, including:

- improved corporate reputation;
- stronger stakeholder and market confidence;
- expanded export potential through compliance with EU environmental requirements.

Overall, sustainability-driven regulation is redefining the approach to project economic evaluation, shifting the focus from short-term cost reduction toward long-term life-cycle value optimization. Environmental criteria thus serve not only as compliance conditions but also as strategic factors that enhance investment robustness, innovative capacity, and competitive positioning. Embedding environmental parameters into financial modelling is therefore essential for effective project management within the evolving regulatory and economic landscape.

References

1. Tonnarello, F., Vermiglio, C., Migliardo, C., Naciti, V. (2025). *The Impact of EU Taxonomy for Sustainable Activities on European Utilities Performance*. DOI: 10.1002/bse.4128
2. Springer Nature (2025). *The impact of changing energy prices, interest rates, and investment costs on net present value and internal rate of return for alternative energy projects*. DOI: 10.1007/s43621-025-00921-7
3. He, J., Huang, Z., Fan, X., Zhang, H. (2023). *The impact of environmental regulation on regional economic growth: A case study of the Yangtze River Economic Belt*. DOI: 10.1371/journal.pone.0290607