

Investments in Renewable Energy Projects for Municipal Utilities (Water Supply Systems)

Position Paper

This position is addressed to investors, grant providers, and partners, aiming to highlight the importance of investing in renewable energy sources (RES), particularly solar power plants, to ensure stable electricity supply for water utilities. Solar power plants provide energy independence and economic stability, even during wartime.

Water utilities are critical infrastructure, especially in crisis situations. In the context of war, cities such as Sumy, where infrastructure is frequently damaged by Russian shelling, face significant difficulties with water supply, often requiring costly mobile reservoirs. In order to ensure reliability and stability of water supply, new solutions are required, those that reduce costs and increase autonomy.

Energy Costs and Current Alternatives

Ukrainian budget institutions, on average, spend €0.15 per kWh on electricity, leading to significant monthly expenses for municipalities. Diesel generators, which are traditionally used for backup power, are extremely expensive (€1.35 per kWh during frequent power outages) and harm the environment. An alternative is solar energy, which costs €0.10 per kWh with battery storage and €0.04 per kWh without. The payback period for these systems is 3-5 years (without batteries) and 5-8 years (with batteries).

Effectiveness of Renewable Energy in Water Utilities

Solar power plants provide stable energy supply for water utilities. A 101 kW solar power plant at the Sumy water utility, with 82 kWh of battery storage, ensured the operation of the utility during emergency power outages. Over its operation, it saved approximately €15,500.

Key Barriers to Implementing Solar Energy in Water Utilities

Many water utilities lack the necessary feasibility studies and project documentation, which complicates attracting investments.

Municipalities or water utilities often cannot allocate funding for project documentation without guarantees of construction. Additionally, many public utilities have significant debts for electricity, limiting their borrowing capacity.

The war has exacerbated economic challenges, leading to a need for significant non-repayable financial aid. Currently, water utilities receive this aid in the form of materials and equipment. However, this assistance has created expectations of continuous grant support, which complicates initiating investment projects, as such projects require greater involvement.

Tariffs for water supply are highly politicized, making financial planning for new energy projects difficult.

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★ Recommendations

- Support Developing Project Documentation: Provide technical and financial assistance for developing feasibility studies and project documentation.
- Investment Models with Private Capital: Create investment models where solar power plants receive a 20% discount on grid tariffs for the electricity they sell to water utilities, ensuring benefits for all.
- Facilitate Blended Financing: Combine grants with investment funds for long-term sustainable development, supporting the economic stability of water utilities.
- Support for Sustainable Development Policy: Strengthen political support for renewable energy projects, ensuring community support for the implementation of decentralized solutions.

! Conclusion

Investments in renewable energy for water utilities can significantly enhance infrastructure resilience, reduce dependence on fossil fuels, and lower electricity costs, which is critical for municipalities during wartime. International support aimed at addressing barriers to RES implementation will bring both economic and humanitarian benefits to Ukrainian communities.

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This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of NGO Ecoclub and do not necessarily reflect the views of the European Union.



Funded by
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