

Initial-aid cashback model for renewable cooling financing

A summary

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Introduction

In the context of the EU LIFE Cooling Down project, three innovative business models were developed and evaluated to support the implementation of renewable cooling systems. These models respond to the growing demand for cooling in buildings while addressing the financial, social, and institutional barriers that hinder the implementation of renewable and low-carbon cooling technologies.

The three models examined in the project are.

- Initial-Aid Cashback (IAC) Model (new)
- Energy Service Company (ESCO) Model
- Community Cooling Hubs

Other than ESCO and Community Cooling Hubs, the Initial-Aid Cashback (IAC) model is a novel and particularly promising approach. It was developed to provide a decentralized, socially inclusive financing mechanism that enables energy operators to implement cooling systems without bearing the upfront investment costs. The following summary outlines the functionalities and evaluation of all three models, but the main focus lies on the IAC model.

The Challenge of Financing Renewable Cooling

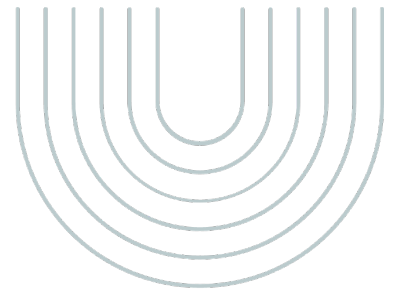
Traditional financing structures are often not well-suited to the deployment of renewable cooling technologies, which usually require substantial initial investments but deliver long-term economic and environmental benefits. Many building owners, especially in residential or small commercial settings, lack the liquidity or risk appetite for such investments, despite a clear need for thermal comfort during hotter summers caused by climate change.

The Cooling Down project therefore aimed to explore models that are not only technically and financially viable but also fair, participatory, and scalable across different socio-economic and institutional settings. Giving energy consumers the chance to participate actively and benefit from the clean energy transition is one of the main goals of the Initial-aid cashback model.

Initial-Aid Cashback (IAC) Model: Concept and Functionality

The Initial-Aid Cashback model addresses the central obstacle of upfront capital by introducing a third-party financing actor, the investor which is also consumer. This investor can be an individual, a community group, a private company, or even a local foundation that provides the necessary funding to install a renewable cooling energy system.

Following the functionality of the model is given



Pre-Financing and Implementation phase

The cooling system is financed by a group of consumers, that become investors at that point. These investors cover 100% of the initial capital expenditure. The system is installed by the operator which is owner of the technology.

Cashback Mechanism

In return for their investment, the consumers that invested in the first phase, receive compensation for a pre-defined amount of energy by reduced energy prices. This is why it is important that investors are consumers.

Consumers that didn't invest in the first place receive their energy, paying the standard energy price.

End of Contract Period

After the repayment, the operator and owner of the cooling device keeps selling cold, receiving the standard price payment from all consumers.

This makes the model interesting for operators, as the investments are made by the consumers but it has a high rentability from the very beginning.

Comparison with Other Models

To place the IAC model in context, two other business models were developed and analysed as part of the project.

Energy Service Company (ESCO) Model

This well-established model involves a professional third party (an ESCO) that installs and operates energy systems but does not own them as the ownership is kept on consumer side. While the ESCO model is technically mature and risk-reducing for users, it is often limited to large-scale commercial projects due to its administrative and contractual complexity.

Community Cooling Hubs

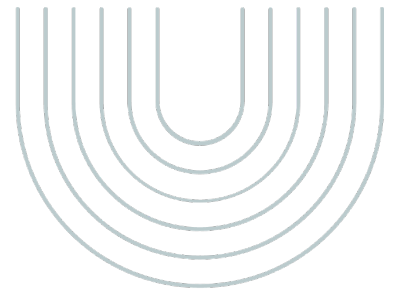
This model is based on shared infrastructure and cooperative investment. A central cooling system (e.g., district cooling or shared geothermal systems) serves multiple users in a neighbourhood. Financing is typically organized through local private persons. While this model has high environmental potential and promotes local governance, it requires significant coordination, institutional stability, and upfront planning.

Compared to these models, the IAC model offers greater flexibility and accessibility. It is suited to smaller-scale projects, easier to initiate, and can be adapted to individual users or small communities without requiring complex organizational structures.

Evaluation and Stakeholder Validation

The IAC model was evaluated through a combination of expert reviews, stakeholder workshops, and participatory feedback formats. Key strengths identified by stakeholders included:

- The ability to mobilize private capital at the local level
- High social acceptability due to its fairness and transparency
- Low administrative burden compared to ESCO contracts
- Potential for hybrid financing models (e.g., public-private or crowdfunded)



- Opportunity of participation on CET by private investors

However, several challenges were also highlighted.

- Legal uncertainty around contracts between investors and users
- Need for trust and clear accountability mechanisms
- Potential risk for investors if energy savings are lower than expected

Despite these challenges, the model was seen as highly promising, especially when combined with supportive policy instruments, such as municipal guarantees, subsidies, or tax incentives.

Furthermore, Figure 1 shows the profitability of the model for operators (Calculations were based on the case study of Romania from the Cooling Down project).

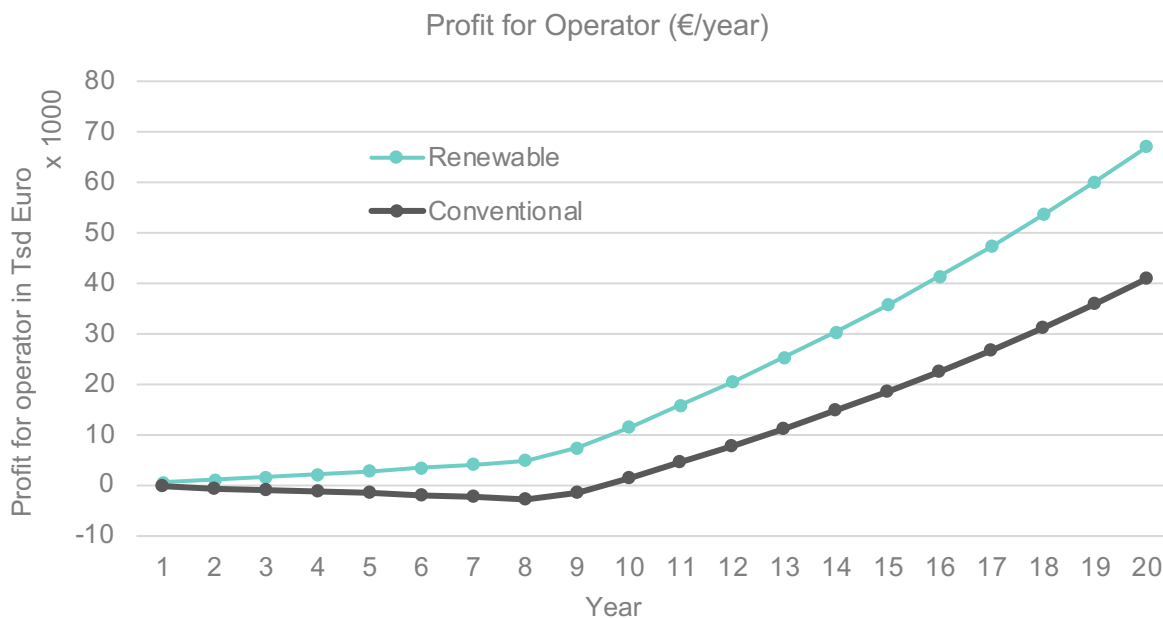


Figure 1: Profit for operator in Tsd. Euro per year

Conclusion and Outlook

The Initial-Aid Cashback (IAC) model offers a promising and innovative approach for financing renewable cooling. By involving consumers as investors, it overcomes the common barrier of upfront costs while ensuring fair returns through reduced energy prices. Most importantly, consumers – especially private person – can thereby be involved actively into the clean energy transition and benefit from it, which increases its acceptance. Compared to ESCOs and Community Cooling Hubs, the IAC model is more flexible, socially inclusive, and easier to implement on a smaller scale.

To fully realize its potential, legal clarity, trust-building, and supportive policies are essential. With targeted pilot projects and integration into local climate strategies, the IAC model can become a highly supporting tool for accelerating the transition to renewable and just cooling solutions.

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Source: Cooling Down D4.2 (2025), Novel business models for solar and geothermal cooling