

ON-BILL SCHEMES TO DELIVER THE RENOVATION WAVE AND ECONOMIC RECOVERY



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POLICY BRIEFING

The Renovation Wave: building renovations to foster EU economic recovery

On 14 October 2020, the European Commission published the Renovation Wave¹ a strategic communication to boost building renovations in the EU, to help deliver the climate-neutrality objective of the EU Green Deal and to support the economic recovery from the COVID-19 pandemic.

Accessible, easy and sufficient funding is key to speed up renovations in the EU. The Renovation Wave estimates the additional investment to double current renovation rates at around €90 billion per year. Public capital can cover some of the additional financing, but private capital must also be mobilised. This is where innovative financing schemes become essential. On-bill mechanisms can be a valuable tool in that respect; this paper explains what on-bill schemes are and how they can be used to facilitate and speed up residential building renovations in Europe.

Using on-bill mechanisms for financing the renovation of residential buildings

On-bill schemes are tools for involving the private sector in energy efficiency financing that can help resolve some of the existing barriers to energy efficiency investments linked to the regulatory environment, end users' ability to finance renovations and utility companies' involvement in renovation projects.

First, on-bill financing is a business model that brings different building renovation actors to the same table and finds the right balance between the costs and benefits of investing in the renovation project. As a result of this process, both pre and post-investment phases of the building renovation run smoothly.

Second, on-bill mechanisms can be employed at a large scale, which makes them suitable for renovating large portions of the EU residential building stock.

¹ European Commission. 2020. A Renovation Wave for Europe – greening our buildings, creating jobs, improving lives

For these reasons, on-bill mechanisms are a powerful instrument that can facilitate renovations, contributing to the objectives of the Renovation Wave and to economic recovery.

WHAT ARE ON-BILL SCHEMES?

The core feature of an on-bill scheme is the **involvement and active role of the utility company supported by financing institutions** in energy renovation of residential buildings.

Another cornerstone of on-bill schemes is using **the utility bill as the repayment vehicle** – a method that has been used in the USA and Canada for more than 30 years, mostly for renovation of residential buildings. On-bill schemes can be structured to ensure “bill neutrality”, meaning that the projected energy savings offset the fixed monthly loan or tariff instalment and the final user does not pay higher bills than before the interventions.

Based on the source of financing, there are two main mechanisms applicable to on-bill programmes: **on-bill financing (OBF)** and **on-bill repayment (OBR)**.

Within an OBF scheme, the renovation investment is provided and renovation costs are covered by the utility company with its own or public funds, while the end-user repays the renovation costs through the utility bill. OBR, on the other hand, requires involvement of a third-party financing institution as a capital provider. In OBR schemes, the utility company serves as a repayment intermediary, but it could also play the role of an initial financier (subsequently selling the end-user’s debt to financial institutions) and/or demand aggregator.

Figure 1 depicts the two possible types of OBR schemes. A typical OBF scheme can be imagined as a simplified OBR scheme where the utility company takes the role of the investor (the figure would be without the “Investors” block).

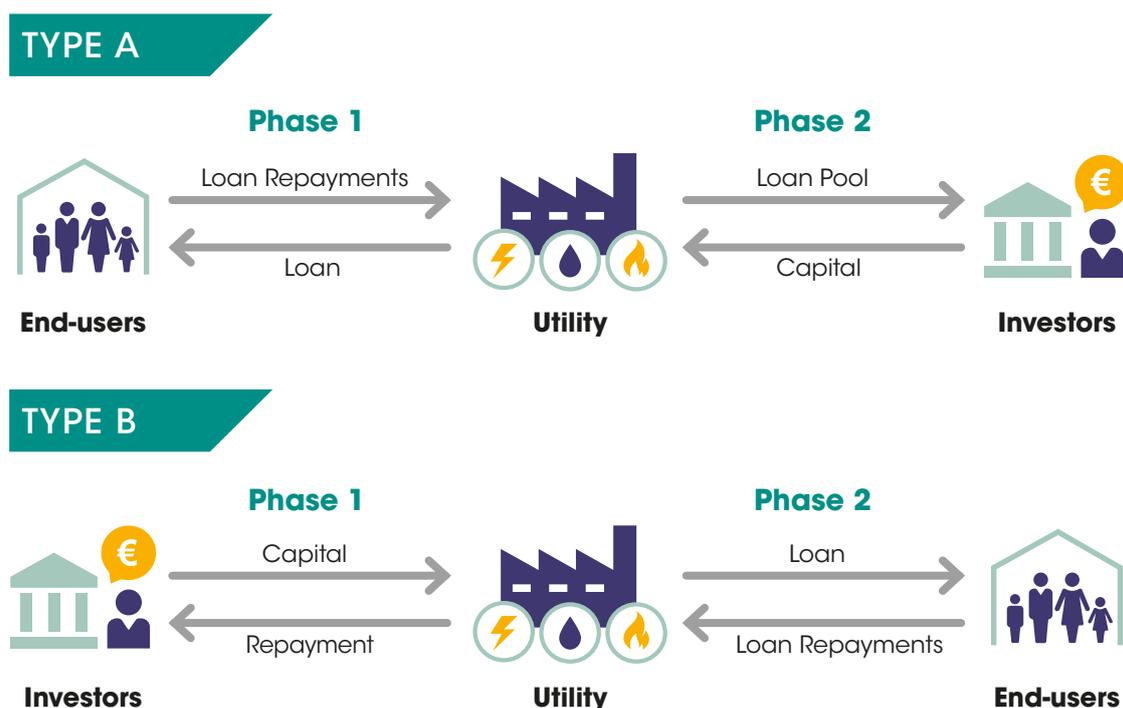


Figure 1: Model of on-bill repayment (OBR) schemes where: (a) the utility initially uses its own funds to finance the interventions, selling these loans to financial institutions in the second phase of the project, and (b) the utility raises private capital upfront.

Like other investment programmes, on-bill schemes can support either simple building renovation measures or focus on comprehensive deep retrofit executed through a staged renovation approach. Renovation measures targeting improvement in health and safety in buildings, or even e-mobility as a way integrating buildings and transport, can also be offered.

Difference with energy performance contracting

In addition to on-bill schemes, energy efficiency projects may be supported with other instruments, such as energy performance contracting. The major difference between energy performance contracting and on-bill schemes is that the former are usually associated with complex renovation projects and higher transaction costs. This makes them better designed for large buildings, such as high-rise commercial or office buildings, and less suitable for residential building renovations.

HOW DO ON-BILL SCHEMES SUPPORT RENOVATIONS?

The advantages of on-bill schemes

On-bill programmes have been active in the United States since the 1970s. They were significantly boosted when investment for renovations began to be legally recognised as a cost, rather than debt, which meant energy investments could be made without worsening the household debt position. On-bill programmes in the US cover a large variety of investments, from simple retrofit interventions to renewable energy generation.

On-bill schemes are successful in resolving some of the typical barriers energy efficiency projects may face when implemented in residential buildings, such as:

- High upfront investment costs
- Increased debt burden for families
- Low credit capacity and loan securitisation issues among end-users
- Mobilising private capital
- Owner-tenant dilemma.

The potential of on-bill schemes for resolving some of these barriers can be seen in a few examples from the US.

Examples from US on-bill programmes

US on-bill schemes support involvement of financial institutions and mobilising private capital by accompanying standard credit analysis with the most recent bill payment history. This avoids low-income households being excluded because of standard analysis perceives them to have insufficient credit capacity.

Low-cost loans for energy efficiency improvements, secured by the on-bill programme participants or through participation of third-party investors such as US government bodies, reduce indebtedness for families.

Involvement of private capital is reinforced in the US on-bill approach by allowing end-users to be disconnected from the energy supply network if they default on repayments. This measure offers a convincing risk coverage for the financial institution, and a strong incentive for the end-user to use the energy savings to service the debt, which reduces possibility of default.

WHAT ARE THE BARRIERS TO THE IMPLEMENTATION OF ON-BILL SCHEMES IN THE EU?

In order to have a better understanding of the barriers that on-bill mechanisms can face in the EU context, we look at three types of barriers – regulatory, end-user related and utilities related.



Regulatory barriers

Although the management of on-bill schemes (by utility companies and/or financial institutions) does not have to be regulated itself, **lending of money is under the competence of the financial institutions** so requires a specific legal framework in order to be used by utility companies. Implementation of relevant financial regulatory requirements in the EU takes place at the Member State level, which suggests different levels of tightness and severity. Since a utility company involved in lending should be subject to some form of supervision, this additional requirement could be a potential barrier for successful implementation of on-bill schemes.

Another barrier to consider is the completely different regulatory framework and approach to disconnection in Europe compared to the US. While the **possibility to disconnect the end-user from the energy supply grid** in case of default is a key ingredient of on-bill schemes in the US, this is not replicable in the EU because of a regulatory framework that traditionally protects consumers. Other tools must therefore be found in the EU to reduce the financial risks for lenders.



End-user barriers

The most important end-user barrier is the dilemma of **split incentives between owners and tenants**, where the benefits and costs of energy renovation are unevenly distributed. In short, owners tend not to invest energy savings measures that primarily benefit tenants, while tenants are not willing to make investments in residential units they do not own. Despite a positive financial outcome on the investment, split incentives may easily result in inactivity on both sides.

The most relevant type of split incentive in on-bill schemes is a **temporal split incentive** which may arise when the owner or tenant knows they will leave the building before the energy efficiency investment is fully repaid. Because the end-user will not be able to fully enjoy the benefits of the energy improvements, they are less likely to be interested in making an investment.



Utility barriers

Barriers affecting the utility companies participating in on-bill schemes can be broadly classified in two groups: a) corporate strategy related barriers, and b) programme operation related barriers.

Corporate strategy barriers originate from an obvious conflict between energy efficiency and energy sales, where the former diminishes the latter and worsens the utility's financial performance. Although the level of exposure to this barrier may depend on the energy utility company type and its ability to be profitable by offering energy services, the general rule is that companies involved in energy production will be affected more than energy retailers.

Programme operation barriers may emerge from the complexity of on-bill schemes. Utility companies face more complicated billing processes, market segmentation and management of suppliers and installers. They may need to significantly adjust their operations in response, which could hinder or prevent the implementation.

HOW CAN ON-BILL SCHEMES SUPPORT DELIVERING THE RENOVATION WAVE?

The Renovation Wave is setting in motion a wide range of policies, measures and tools to overcome existing barriers to building renovations and mobilise all actors, including citizens, local authorities, investors and the construction value chain, towards the decarbonisation of the buildings sector. On-bill schemes can also play a key role in this context; they can be a suitable tool to boost renovation of residential buildings by counteracting the existing lack of resources to finance upfront investment.

The RenOnBill project, funded under the EU's Horizon 2020 research programme, explores how the implementation of on-bill schemes in the EU can scale up renovations of residential buildings. It will provide detailed guidance for Italy, Germany, Spain and Lithuania, explaining how these countries can move towards replicating on-bill schemes. The research and analysis carried out under RenOnBill suggests that the following enabling conditions would facilitate the mainstreaming of on-bill schemes in Europe:

ENABLING CONDITIONS



- A suitable legislative framework allowing **utility companies to get involved in lending activities**: If utility companies can lend money to end-users, on-bill schemes would benefit from a smooth flow of capital and a reduced number of scheme participants. This would significantly increase the chances for success of on-bill schemes.



- Support for **using utility bill repayment history as a proxy for addressing the end-user's credit risk**: Utilities or financial institutions could use bill payment records as a way to get a clearer picture of an end-user's risk profile. This will reduce the investors' perceived financial risks, and eventually increase the level of the energy renovation investments. Progress in this area could come under the theme of 'de-risking energy efficiency investment' mentioned in the Renovation Wave Action Plan.



- Provisions to solve the **split-incentive dilemma**: Member States should introduce **owner-tenant laws** that would enhance the fair distribution of the investment costs, for example by using a share of the energy benefits for investment repayments and making the renovation investment equally appealing for both groups.



- Provisions for **protecting investors from default on the repayment of renovation costs while maintaining consumer protection**: If energy savings are lower than the contracted repayments, end-users may face problems in repaying the renovation loan. Increasing credit protection would allow investors to relax their lending criteria, allowing much easier and more efficient uptake of on-bill schemes. For **vulnerable groups of people**, we recommend that public authorities act as guarantors in case of end-user default; this would replace potentially undesirable means of securitisation, such as grid disconnections.

Member States are currently drafting their national recovery and resilience plans (RRPs), to be submitted by April 2021, in order to access EU recovery money. This could be a good window of opportunity to push for national reforms. Besides detailing 'investments' needed in different sectors of the economy, Member States are required to lay out 'reforms'; that is, policies to support implementation of change. 'Renovate/Energy Efficiency of Buildings' is one of the seven flagships of the EU recovery, and the Commission has advised Member States to include roll-out of on-bill schemes as one of their reforms in their recovery and resilience plans.¹ If the right enabling conditions are put in place with a combination of action at EU and Member State level, on-bill schemes can help boost renovations and deliver the objectives of the Renovation Wave.

Glossary

On-bill scheme	A method of financing energy efficiency improvements using the utility bill as the repayment vehicle.
On-bill financing (OBF)	On-bill scheme where capital for upfront costs is provided by the utility that finances the energy efficiency interventions with its own or public funds.
On-bill repayment (OBR)	On-bill scheme where the lender is a private third party that provides the capital and where the utility acts as repayment intermediary.
Utility company	A company which supplies utilities, such as gas, electricity, water and similar.
Energy producer	A company involved in conversion of primary energy, such as oil or wind, to energy ready to be distributed and sold to end-users.
Energy retailer	A company making the final sale of energy to end-users.
Credit analysis	Method for measuring debtors' ability to repay their loans, based on various indicators such as number of open accounts, total levels of debt and repayment history, to name a few.

¹ European Commission. 2020. Example of component of reforms and investments – Renovation Wave.



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