

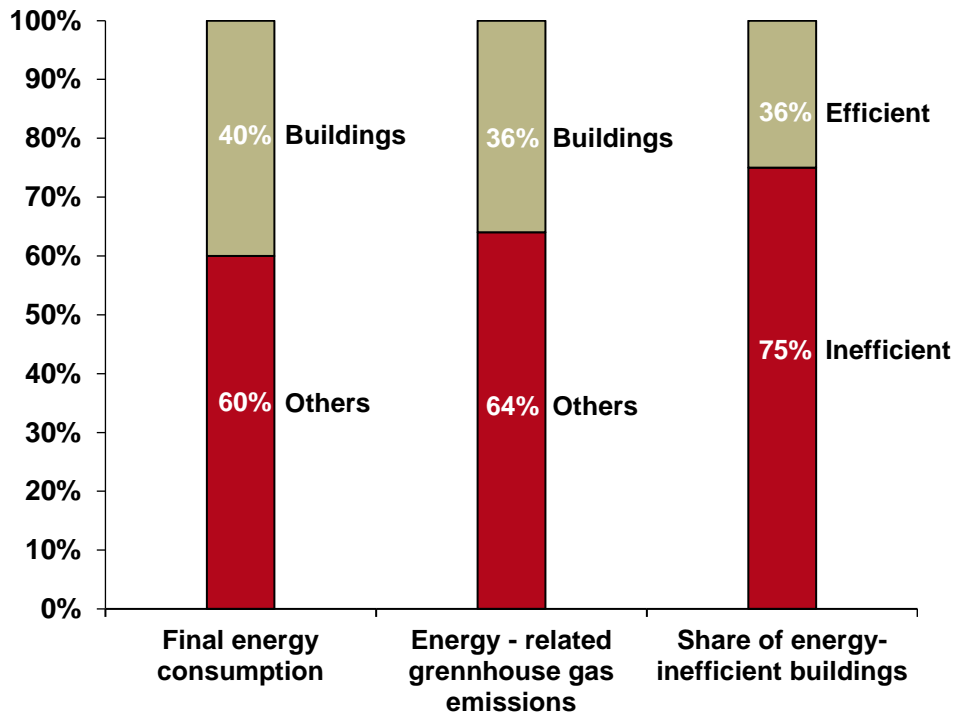
Innovative financing schemes to accelerate home renovations

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Energy renovation of buildings is essential for the complete decarbonisation of the European economy by 2050

Impact of the building stock on the European energy efficiency landscape



- The Energy Renovation of Europe's building stock can lead to significant reductions in energy consumption and greenhouse gas emissions, but the benefits do not stop there:
 - Reducing the energy consumption of buildings will reduce dependence on energy imports and mitigate the effects of volatile energy prices
 - Improving the airtightness of the building envelope will lead to health benefits by reducing exposure to pollutants and improving thermal comfort
 - The EU Commission estimates that the renovation of buildings will create 160,000 green jobs in the construction sector

Sources: European Commission "EPBD Recast" (2024)

Public funding alone is not sufficient to perform all the necessary home renovations, it must act as a support to unlock the private investment

Main barriers that prevent consumers to renovate their households

- High up-front costs**
 - The investment required for a deep renovation is similar to the cost of buying a new car
 - Consumers can rarely afford to carry out energy renovations on their own and must seek external financing, which increases the overall cost of the renovation.
- Lack of trust**
 - Residential consumers usually do not understand the proposed technical measures to reduce energy consumption, which can lead to situations where they refuse to install technically and economically viable measures
- Long payback period**
 - Energy savings bring economic benefits, but these are not enough to pay for the investment quickly
 - The payback period typically varies from 8 to as much as 20 years
- The tenant's dilemma**
 - In some EU countries (such as Germany) there are more tenants than homeowners
 - This creates two problems
 - The landlords are less willing to pay for the investment because they do not see the benefits
 - The tenants perceive the energy renovation as a restriction on their mobility

Sources: Horizon 2020 EU project “RenOnBill” (2022); Horizon 2020 EU project “Refine” (2022); European Commission “EPBD recast” (2024)

Innovative financing schemes help overcome those barriers

Most common innovative financing schemes¹

	Name	Description
<p>On-bill and on-tax schemes</p>		<ul style="list-style-type: none"> The municipality (on-tax schemes) or the utility (on-bill schemes) finances the energy renovation and bears the financial risk The consumer repays the investment periodically through their municipal taxes (on-tax) or energy bills (on-bill) Utilities/Municipalities have special tools to enforce the payment of the energy bill/municipal taxes, thereby reducing the risks Examples: <ul style="list-style-type: none"> - On-Bill: Green Deal/PAYS scheme (UK, 2009 – 2011) - On-Tax: EU project FitHome (The Netherlands, 2024)
<p>Energy Performance Contracting (EPC)</p>		<ul style="list-style-type: none"> An ESCO (Energy Service COmpany) carries out the energy renovation, bearing the upfront costs and financial risks The consumer repays the debt to the ESCO with the achieved economic savings; the consumer does not perceive the reduction in bills until the debt is repaid, but can enjoy a renovated house The ESCO can use a lender's funds or finance the investment itself Popular for industrial and tertiary building renovations
<p>Green mortgages, loans and bonds</p>		<ul style="list-style-type: none"> The lender offers preferential terms to a homebuyer or homeowner who can demonstrate that the property meets or will meet certain environmental standards The homeowner uses the funds to purchase an energy-efficient home or to renovate their current home The preferential terms are usually a reduction in the interest rate, or a reduction in commissions and loan-related payments



Note: ¹Based on the measures highlighted in the recently adopted EPBD recast
Sources: Horizon 2020 EU project “RenOnBill” (2022); BEUC “How to accelerate home renovations through innovative financing” (2023)

While these solutions address some of the barriers to energy renovation, they also have drawbacks that need to be considered

Advantages and Disadvantages of the considered financial schemes

Financial schemes	Advantages	Disadvantages
1 On-Bill and On-Tax schemes	<ul style="list-style-type: none"> • The consumer avoids upfront costs • The consumer signs a contract with a trusted party • Liability is based on the building and not the person 	<ul style="list-style-type: none"> • Requires specific national legislation to operate • Can result in a complex set of procedures that may confuse the consumer
2 Energy Performance Contracting	<ul style="list-style-type: none"> • The ESCO is an EE expert who can resolve any technical doubts • Few parties involved, which simplifies the scheme 	<ul style="list-style-type: none"> • A minimum consumption is usually required to ensure the ESCO's profitability • Usually only offered to a group of households (e.g.: blocks of flats)
3 Green mortgages, loans and bonds	<ul style="list-style-type: none"> • Lenders have more control over who receives the funds, reducing risks • Consumers have more flexibility to choose the company they want to carry out the energy improvements 	<ul style="list-style-type: none"> • Not an option for vulnerable consumers • Consumers see it as a traditional loan • Lenders are unsure whether 'green' really means lower risk; there is no relevant reduction in the cost of finance

When implementing an innovative scheme, it is essential to study the specific context of the municipality and consider the combination of several solutions

Sources: Horizon 2020 EU project “RenOnBill” (2022); BEUC “How to accelerate home renovations through innovative financing” (2023)



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