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## INTRODUCTION - EUROPE FACES A BUILDINGS' RENOVATION CRISIS

The EU has established climate objectives in line with its zero emissions target and climate law, where buildings' energy efficiency plays a central part. Yet we are also in a buildings' renovation crisis, where renovations are insufficiently frequent and insufficiently deep. We are yet to fully comprehend the true dimensions of this problem and implement the proposed solutions to deliver relevant actions.

Climate Strategy proposes the implementation of a plan that takes root in the approach of the Marshall Plan for Europe in the late 1940s, to better articulate policy solutions and direct assistance to stimulate Europe's economy, deliver benefits to its citizens, and meet its climate objectives.

### A TRILLION EUROS FOR THE RENOVATION WAVE

The energy performance of most buildings in Europe is poor, as three quarters were built before construction codes even considered energy performance. These older buildings are a legacy that will remain standing, well beyond the point to which EU economies need to be emissions negative.

Launched in late 2020, the EU Renovation Wave Strategy to improve the energy performance of buildings calls for doubling the renovation rate to cut emissions, boost recovery and reduce energy poverty. More specifically, this strategy intends to see 35 million buildings renovated in the next decade with an estimated total investment need of nearly a trillion euros ( $\in$ 900 billion). Experts assert that achieving these objectives requires the EU to more than double the renovation headline rate of 1% per annum and increase the number of "deep" renovations by a factor of ten (as, at present, only one fifth of buildings renovations are designed to deliver substantial energy savings, meaning over 60% of prior energy use).

## HOW TO ADDRESS 35 MILLION BUILDINGS IN 9 YEARS

The 1947 Marshall plan was designed to revitalise European economies and worked with recipient countries in straight-forward steps. In the context of our generation's Covid-19 recovery plan, a Renovation Wave needs to be presented to European citizens and buildings stakeholders in three simple steps: Identify/Finance/Execute. Each step requires complimentary policy support and instruments from EU institutions as well as Member States together with appropriate instruments to support the already strong allocation of recovery funding in the renovate flagship area.

<sup>&</sup>lt;sup>1</sup> CS is an unregulated consulting firm offering strategy and business consultancy in areas related to Clean Energy, Clean Technology, Energy Efficiency, Sustainability and Climate Change and related Policy work. Climate Strategy is not a financial advisor and it does not provide nor promote financial investment, fundraising nor financial advisory services.

<sup>&</sup>lt;sup>2</sup> EEFIG was established by the European Commission's DG ENER and the United Nations Environment Programme Finance Initiative (UNEP FI) to accelerate private finance to energy efficiency. EEFIG's current policy focus is on the European Green Deal and within the EU Recovery Plan frameworks.

Member States will also need to help support the matching of the right set of stakeholders with the correct cluster of buildings, and projects with the adequate mix of grants of finance to ensure the success of individual renovation works.

### IDENTIFYING WHAT NEEDS TO BE DONE

European buildings need to be assessed using two criteria:

- A building physical state; and
- The occupants' eligibility for funding or finance support (grants, loans, or tax breaks).

These criteria are not unknown and – for most building owners or occupants – should not be unknowable. The problem is one of communication and technical competence. The general information of state, ownership, and occupancy of buildings is good in most Member States, and this data (in aggregate) is provided in their long-term renovation strategies.

Energy Performance Certificates (EPCs) are also essential components of renovation efforts. EPCs have been around since 2002 and are a partial answer to the absence of physical building energy performance data, as they make energy use more visible especially during sale or rental transactions.

Nevertheless, currently only 11 Member States upload EPC data to public databases and fewer of these EPC related datasets are made available to owners and the members of the renovation industry in those 11 countries. Best practices are found in the Netherlands, whose government has produced visualisation tools for renovation works, and leading Dutch banks provide apps that flag energy efficiency with their banking and mortgage customers. Other countries, including France, Italy and Germany, help buildings owners by providing access to certified renovation professionals, and – in fewer cases – confidential access to buildings' energy data directly to renovation professionals.



Nevertheless, buildings' owners, occupants, and contractors still lack the tools to quickly identify and price a cost-optimal renovation, and to promote the benefits of deep renovation to households and buildings owners where public support is available. Finally, in the case of vulnerable communities, the energy poor, and communities in transition, the competent local authorities can be engaged in their identification and support through one-stop-shops and a nationwide exercise of priority assessments with transparent grant eligibility criteria. Transparency here is critical to provide visibility on the eligibility for these grants as – in most cases – they are just one component of the renovation funding package.

#### A PROGRAMMATIC RESPONSE FROM BANKS

Many building renovations are currently self-financed by owners. This may of course account for their shallow depth and their infrequency. Home improvements such as boiler replacements are easy and often necessary to fund from savings accounts, or even suppliers.

However, the deep renovations identified by the Renovation Wave will cost the same as a new car, and – order of magnitude – up to 10% of the building's value, depending on market and local factors. Furthermore, these deep renovations do not currently benefit from the myriad of competitive lease financing packages that a car dealership offers its clients.

Despite this, significant amounts of money will be available to promote deep renovations in the form of technical and project development assistance, and to pay for some components whose return takes more time, like insulation or heat pumps. Renovation contractors have called for a "Renovation Dealership" where they can go with a deep renovation project plan and get a best available package of grants and low-cost loans to finance an energy efficient renovation.

The multiple benefits of near-zero energy bills, healthier living, and onsite power production is passed by "word of mouth", and studies have proved that the public recognition and eventual adoption of renovation works is based on "seeing is believing". Unlike the purchase of a car, or financing a mortgage, there are few entities that offer prefinanced deep renovation packages in a way that is both easy to understand and simple to execute. This is a particular challenge for SMEs (employing under 50 workers), organising Europe's 19 million construction workers that contribute 9% to Europe's GPD. The developing market for deep renovations needs to offer financing-approved and certified renovation project managers in local buildings renovation firms to deliver against this challenge. Successful buildings renovation funders, like KfW in Germany, Kredex in Estonia, VIPA in Lithuania, the Czech Renovation Fund, IDAE in Spain, have built a trusted network of agents and collaborators who are able to identify qualifying buildings renovations projects, undertake the work, and provide the necessary information to apply to blended financing packages.

Germany has a network of over 11,000 government accredited energy experts that work with the State bank KfW and Germany's energy agency Dena that can prepare renovation plans. Much like an independent financial advisor, these independent renovation advisors and project managers have the proper backgrounds to prepare a technical project and arrange its financing. Likewise, they are required to co-sign the loans as a testament to their technical inputs, and their interest as a reference in case the project does not deliver against the owners' expectations.

Over the years, retail business models have expanded resulting in entire renovated communities/neighbourhoods, yet the overall renovation process, related business models and finance supply chain remain complex to articulate. This points to a revolutionary new instrument which can rationalise the supply chains of finance and renovation together.

# NEW INSTRUMENT: AN EU RENOVATION LOAN

European residential buildings are estimated to be worth  $\in$ 17 trillion and are home to 220 million households. There are around  $\in$ 7 trillion of mortgages in Europe, and hence, by subtraction, there is  $\in$ 10 trillion of home equity against which owners can borrow for deep renovation.

Converting this equity into energy savings and local jobs is the essence of the EU Renovation Loan we envisage. At a time when energy prices have spiked up, quickly unlocking just 10% of the  $\in$ 10 trillion of home equity, often in the hands of the older generations<sup>3</sup>, will stimulate renovation jobs, increase comfort and lower their energy costs – and deliver the Renovation Wave.

In May 2020, Climate Strategy developed the "EU Renovation Loan" (ERL) which allows a homeowner to costeffectively unlock home-equity for a deep renovation with nothing to pay until sale, transfer or after 30 years. The EU Renovation Loan is long-term (30 year) financing with a zero coupon structure<sup>4</sup>, where homeowners borrow the amount they require to transform their home through a deep renovation and do not have to pay cash interest until the property is sold or transferred (or the loan matures).

Interest on an EU Renovation Loan would accrue at EU borrowing costs, and could be provided (as EU guarantee) in place of the underutilised loan component of the recovery plans by Member States.

Customers cannot default on a zero-coupon loan, as there are no interest payments to make (which makes them very cheap to manage), and all the cash savings (from lower energy bills and associated operational costs) and home improvements will be realised immediately.

This is particularly attractive to those with restricted incomes (e.g. pensioners) and clearly all the non-cash thermal, comfort, accessibility and acoustic benefits would also start immediately.

This zero-coupon financial instrument will be backed by a junior lien on the property (so as not to reduce collateral available to the existing mortgage) and can benefit from central bank liquidity – so that there will always be a secondary market for this asset for originating banks. Banks can make fees through ERL origination, they will improve the creditworthiness of their clients, green their mortgage books and align their assets more quickly with the Paris Agreement. This is genuinely a win-win-win.

As example, if the deep renovation of an EU semi-detached home costs €20,000 and the zero-coupon interest rate was set at 1% (above EU borrowing costs), then the borrower would have to pay back around €27,000 plus distribution fees in 30 years. It is hard to imagine that the value increases due to renovation and overall market increase would not cover this amount over that time.

Clearly, EU Renovation Loans are not a replacement for grants due to the vulnerable and energy poor. Nevertheless, their attractive structure allows homeowners without savings and with tight budgets address affordability from a cash perspective by delivering cashflow savings directly and rolling up interest payments until the end. Grants and renovation loans should be compatible instruments and used in conjunction when addressing the less able to pay segments of society.



<sup>3</sup> The Economist. (2020). Home ownership is in decline. [Website]. Retrieved from https://www.economist.com/special-report/2020/01/16/home-ownership-is-in-decline

# CONCLUSIONS

- We must deliver at scale: Almost none of the current instruments, programmes nor approaches are able to deliver at the scale required (€900 trillion through the deep renovation of 35 million buildings in just 9 years).
- We need to train 350,000 qualified renovation project managers: If each can deliver 10 deeply renovated buildings per year, as a result, the Renovation Wave would require 350,000 accredited project managers in the EU to solve a possible "capacity bottleneck" across countries. A €900 billion renovation market where project managers expect to earn 10% of an executed project leads to potential aggregate salaries of €9 billion for the 350,000 trained people.
- The EU Renovation Loan can solve the renovation finance gap at the right scale: At present, there are no banks in the EU offering a zero-coupon accrual renovation loan product. The EU Renovation Loan is unique in its ability to guarantee cash savings immediately alongside all the multiple benefits of undertaking a deep renovation. Additionally, the junior status and EU guarantee makes the ERL accessible to all homeowners who demonstrate their home is not in negative equity. At EU-borrowing rates the rolled-up cost is probably lower than the house price inflation over the next 30 years. So it "pays for itself".
- Retail banks can be more engaged to convert their existing mortgage portfolios to green: The existence of a bank distributed ERL that provided customers enhanced credit (positive cash from day 1) and did not impact the expected recovery of the existing mortgage, and yet earned distribution fees is a strong way to engage retail banks to deliver millions of renovations.

In 1947, at Harvard University when describing the rehabilitation of Europe, General Marshall said: "[T]he problem is one of such enormous complexity that the very mass of facts presented to the public by press and radio make it exceedingly difficult for the man in the street to reach a clear appraisement of the situation". He might have been describing how many Europeans and their policymakers view buildings renovation today.

The Marshall Plan did not seek to provide explicit instructions for Europe's post-war recovery, but it offered jointly developed policy solutions and aid in a coherent package to stimulate Europe's economy. This is what the EU Renovation Loan is and how we can mobilise citizen engagement in delivering a net-zero emissions built environment.

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