



## Panel 1: **Macroeconomic benefits and guiding principles**



**Adrian Joyce,**  
Renovate Europe

Brussels, *Belgium*

# Next Generation EU Initiative

Funding will reach **€672.5 bn** before 2023:

- €312.5 bn in grants,
- €360 bn in loans raised from the market.

Member States to prepare **National Recovery and Resilience Plans** to apply for funding:

- 37% must be on climate related actions (includes buildings),
- 20% must be on digitalisation.

# Role of Buildings in Recovery Plans (NRRP)

- Energy renovation counts as climate-related investment.
- Investments **must be matched to reforms**.
- Several opportunities to receive **technical assistance (TA)** exist.
- New Technical Support Instrument under the RRF.
- ELENA facility extended and expanded.
- Direct budget line in NRRP for TA possible.

# Why #Renovate2Recover?

- For every **€1 million invested** in energy renovation of buildings, an average of 18 jobs are created in the EU.
- Holistic, energy efficient renovation of hospitals **reduces patient stay times by about 11%** leading to a potential annual benefit of about €45 billion to the EU economy per year.
- EcoLogic finds that **France should spend > €6.4 bn** on energy renovation programmes.

## Examples From NRRP's Across the EU:

- **Croatia** will use recovery funds for energy renovation – earthquake resistance included.
- **Romania** will exceed the “fair share” proportion of its EU Recovery Funds for comprehensive renovation actions.
- **Italy** will use more than the “fair share” of its Recovery Funding on deep energy renovation in its super eco-bonus scheme.
- **Spain** intends to channel Recovery Funding into comprehensive renovation to alleviate energy poverty.



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**Stéphane Quefelec,**  
European Environment Agency

Copenhagen, *Denmark*



# From quantitative macro benefits...

Energy use in buildings, fuel mix and **dependency from foreign supply**.

EGD EC impact assessment: regarding EE, “**most savings would need to come from buildings**”.

Stimulus in the construction ecosystem and the broader economy (**Recovery plan**).

**Job market** impact - A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives:

- By 2030 an additional 160 000 green jobs could be created in the EU construction sector through a renovation wave,
- Past experience: Ireland.

## ...to the distribution of economic benefits

- European Green Deal – **Leaving no one behind** - The renovation wave initiative and the Just transition.
- **Distributive impacts** of climate change policies: what about policy supports for EE in residential buildings ?
- On going work at the EEA level (to be published in the coming weeks).
- Strong potential for **progressive policies**.



## ...and of non-monetary effect

Energy-efficient improvements allow to save on energy bills in the medium-long term.

They have the potential to have progressive income effects since lower income groups spend a more important share of their budget on energy bill than higher level income groups.

### **Non-monetary benefits:**

- Increased health: reduced mortality, improved respiratory and cardiovascular conditions, reduced symptoms of arthritis, rheumatism and allergies,
- Improved living comfort.

Benefit specific to lowest income households and particular social groups.

# Under certain conditions

Two factors to be included for EE in building policies to deliver their progressive potential:

- **Intensity** of support adjusted by income level,
- **Accessibility**/Easy access to support.

**Deep renovations** - Alleviation of **energy poverty** – energy **dependency** of households - household exposure to energy costs.

Beware of :

- Context/schema which may exclude lower income groups (e.g.: Tenant),
- Rebound effect and income level,
- Excessive insulation/health aspects.

# Take away

Increasing evidence suggests wider socio-economic benefits (health, well being...) of energy efficiency investment.

If well designed, policies to support people in investing Energy efficiency policies have the potential to:

- Have **progressive** income effects,
- **Reduce inequalities** in environmental risk exposure.

Quantifying the **non-monetary benefits** of EE efficiency action in building.

Addressing **energy poverty** is essential.



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**Yamina Saheb,**  
IPCC Author

Paris, *France*

# The renovation wave's objectives and timeline are not aligned with the Paris climate Agreement

## Paris Climate Agreement:

Annual renovation of 33\* million dwellings to net zero energy/carbon standard

1.5°C target

2015

2020

Doubling renovation rates

Global CO<sub>2</sub> budget depleted

2028

2030

35 million building units renovated

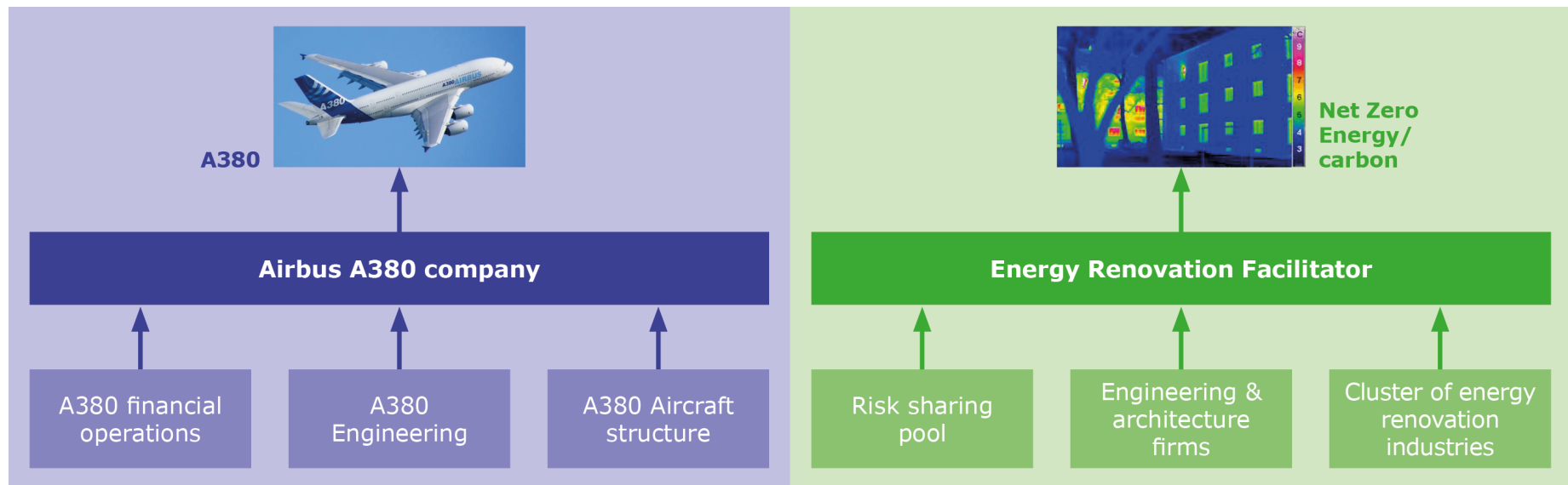
## EU renovation wave:

Doubling renovation rate = 880,000\* deeply renovated dwellings per year

35 million building units renovated by 2030 = 3.5 million building units renovated per year

\*calculated by considering a stock of 220 million building units and 0,2% of units deeply renovated per year as provided in the renovation wave communication

## Energy renovation requires an Airbus model to implement mandatory one shot zero energy/carbon renovation





## Panel 2: **Financing and operationality**



**Peter Sweatman,**  
EEFIG Rapporteur

Madrid, *Spain*

## **3/4 of buildings were built before construction codes considered energy performance**

The EU's Renovation Wave strategy calls for the energy efficient renovation of 35 million buildings in the next decade:

- Euro 900 billion of estimated total investment,
- 2x of the headline buildings renovation rate of around 1% per annum.



## Step 1: **Identification of renovation wave targets**

### **Combination of:**

- A building's physical state,
- Occupants' eligibility for funding or financial support (through grants, loans and/or tax breaks).

*// EPCs are a partial answer to this lack of physical data //*

### **Vulnerable communities:**

- Energy poor and communities in transition need to be identified through transparent grant eligibility criteria.

## Step 2: **Financing**

### **Trusted network of agents and collaborators:**

- Identify qualifying buildings renovation projects,
- Undertake the work and provide the necessary information to apply for blended finance packages.

***// Residential buildings are estimated to be worth € 17 trillion //***

### **€7 trillion of mortgages:**

- Leaves €10 trillion of home equity against which homeowners can borrow for deep renovation,
- Convert home equity into energy savings and local jobs.

## Step 3: **Execution**

### **35 million european buildings:**

- Renovation Wave over a decade will require 350,000 accredited project managers,
- Home renovations estimated at 25k each.

***// Europe's 18 million construction workers contribute 9% to EU GDP //***

### **Successful EE renovations can:**

- Drive for quality,
- Stimulate innovation,
- Accelerate the uptake of new smart technologies and materials to reduce renovation cost.



## Panel 2: **Financing and operationality**



**Bettina Dorendorf,**  
KfW

Berlin, *Germany*

# Energy efficient construction and refurbishment

## Summary

### KfW promotional funding programmes for energy efficient construction and refurbishment:

- **Domestic flagship & best practice program established in 2006** – EUR 180 bn financing volume since start.
- Combining **loans and grants**.
- Available / same logic for **all types of buildings**.
- Going **beyond legal requirements** -> justifying public support.
- The higher the ambition the higher the support.

# Energy efficient construction and refurbishment

## Summary

- Establishment of “**efficiency house**” standards.
- Improve **trust and understanding by involving an independent energy expert** on the ground -> quality assurance.
- **On-lending** ensuring a wide distribution channel.
- Supporting market penetration of advanced technologies / standards (**technology open approach**).
- Supporting employment primarily with local SMEs.

# The role of the energy expert

Investor support and quality management

**Mandatory involvement of an independent energy expert - from application to approval.**

**Since 2012 (residential), as of July 2021 for all building types:**

- Guidance, support and comfort for the investor,
- High degree of quality and reliability regarding energy efficiency level achieved, targeted use of public funds,
- **Membership requirement** in a targeted pool of experts **established** in 2012, (KfW, dena, BMWi) managed by the German Energy Agency (dena) - [www.energie-effizienz-experten.de](http://www.energie-effizienz-experten.de).

# The role of the energy expert

## Investor support and quality management

Approx. 13.000 experts supporting implementation of promotional programs.

**Website allows for a regional search for experts as well as search for specialization** (residential buildings, non-residential buildings, single measures).

Listing requires proof of professional experience and quality (minimum: right to issue energy performance certificates).

Requirement for a re-listing every 3 years; catalogue of professional training obligations.

Financing: grant available to cover the cost (up to 50%).





## Panel 2: **Financing and operationality**

**Kristina Klimovich,**  
GNE Finance



*Utrecht, Netherlands*

## Renovation is local

Cities and regions are at the forefront of galvanizing the renovation wave.

### **Strong national support is key:**

- Mandatory minimum requirements,
- Fiscal incentives,
- Funding for renovation and technical assistance,
- Avoid market distortions due to subsidies.

**The Renovation Wave is calling for massive action. The public sector cannot do it alone!**

## **Renovation is a public-private endeavor**

We need to attract private players to develop effective & economically self-sustainable renovation programs to achieve scale.

Effective PPPs combine public sector's leadership and resources with private sector's expertise in demand generation, technologies, and financing.

PPPs can simulate an eco-system of energy services professionals and create local jobs.

## Funding the Renovation Wave

Investment gap of 325 billion annually, with approximately EUR 250 billion for residential sector.

### **Public money has a role to play in:**

- Technical assistance,
- Credit enhancement instruments to attract private capital,
- Subsidizing interest rates,
- Subsidies and grants for vulnerable groups.

Innovative financing schemes are key to reach the 2030 goals. **Home-based financing** can help unlock the private funding by securing debt to property.

# Public-private partnerships in Spain

Technical Support + Affordable Financing + Smart Funding = Trust to Renovate



Catalonia



Basque Country



Balearic Islands