



European Energy Network



RENOVATION WAVE STUDY

**COMPARATIVE STUDY ON THE ROLE OF
ENR NETWORK AGENCIES IN THE
IMPLEMENTATION OF PUBLIC POLICIES
FOR BUILDING RENOVATION AND THE
MAIN LESSONS LEARNED**

February 15th 2022

Agenda

1. Objectives and methodology of the Renovation Wave Study

2. Overview of the study

- Overview of the role of EⁿR network Agencies in implementing renovation policies
- Factsheets by program type
- Cross-cutting factsheets
- *Discussion*

3. Discussion on the recommendation and the added-value of the intervention of the EⁿR network

- Presentation of the 7 recommendations
- Analysis of the added value of the intervention of the EⁿR network
- *Discussion and preparation of the Round table on the Renovation Wave study – Full Meeting*

Conclusion

1. Objectives and methodology of the Renovation Wave Study

Purposes and objectives

- During its presidency of EⁿR Network in 2021, ADEME wanted to focus the work of EⁿR Network's members on the priority themes of **renovating buildings** and **decarbonising industry**.
- For the comparative study on **the role of EⁿR Network agencies in the implementation of public policies for building renovation**, the objectives are:
 - To highlight the **facilitating role** and the **expertise** of the national energy agencies, members of EⁿR network, in the implementation of public renovation policies
 - To encourage **best practice** and **knowledge sharing**
 - To position EⁿR as an **expert network** able to support various stakeholders (European Commission, European Investment Bank, etc.) in achieving the objectives of the European “Renovation Wave” strategy

Methodology

- **Questionnaire sent to the 22 EnR network Agencies in June-July 2021**
- **12 answers:**
 1. Austria - Austrian Energy Agency
 2. Bulgaria - SEDDA - Sustainable Energy Development Agency
 3. Croatia - EIHP, Energy Institute Hrvoje Pozar
 4. Finland - Motiva
 5. France - ADEME
 6. Germany - Deutsche Energie-Agentur (dena)
 7. Italy - ENEA
 8. Netherlands - RVO, Netherlands Enterprise Agency
 9. Portugal - ADENE
 10. Slovakia - SIEA, Slovak Innovation and Energy Agency
 11. Sweden - Swedish Energy Agency
 12. United-Kingdom - Energy Saving Trust
- **Document review**
- **Interview with 7 agencies** strongly committed to the subject of renovation, for an in-depth analysis
 - Germany - dena
 - Italy - ENEA
 - Netherlands - RVO
 - Portugal - ADENE
 - Sweden - Swedish Energy Agency
 - United-Kingdom - Energy Saving Trust
 - France - ADEME
- An **extensive study report** divided into 5 parts:
 1. Analysis of the roles and levers of EⁿR network Agencies to support the energy renovation of buildings
 2. Focus on four themes
 3. Analysis of the main obstacles to policies supporting energy renovation in buildings
 4. Recommendations of EⁿR Network
 5. Analysis of the added value of the intervention of the EⁿR Network Agencies
- A **summary document**

2. Overview of the study

Overview of the roles of EⁿR network Agencies in implementing renovation policies

Information and awareness programs and labels

Monitoring actions, collection and provision of data

Capacity building and qualification of actors

Technical and financial support schemes for the residential target

Technical and financial support schemes for publicly owned or commercial buildings

Networking activities and Group purchasing strategies

Contribution to research and innovation



Goals and involvement of EⁿR Agencies

Main goals:

- **Inform** on the building performance levels and on technical and behavioral solutions for efficient occupations and uses of buildings
- **Trigger investment decisions** and / or **behavioral changes**

Types of programmes run by Agencies:

- **Information and awareness-raising campaigns** aimed at:
 - Local and regional authorities
 - Landlords (public and private) and occupants of dwellings
 - Building professionals
- Support for **networks of field advisors** to raise awareness of energy saving and provide first-level advice to households
- Implementation of **quality labels** (buildings and/or materials)

Involvement of EⁿR network Agencies



Examples of programs

Italy



National Campaign "Italy in Class A"

- Includes a series of training and information activities aimed at public administration, businesses, banking institutions, households and students.
- As part of the program, an energy efficiency month is held every year in November

Portugal



Classe+ Energy Labelling system

- Energy Labelling System which aims to evaluate and communicate the energy performance of building materials (windows, insulation products, etc.).
- To promote the initiative and energy efficiency in general, ADENE runs a network of manufacturers involved in the initiative.



Goals and involvement of EⁿR Agencies

Main goals:

- To provide **reliable and shared knowledge** of the state of the energy performance of the building stock
- To allow public authorities to **propose targeted public renovation policies** and **to monitor the impact of renovation programmes**

Types of programmes run by Agencies:

- Collection, centralisation and provision of data on **energy performance certificates**
- **Surveys, barometers and observation** and **analysis** of the energy performance of stocks

Involvement of EⁿR network Agencies



Examples of programs

Great Britain

Home Analytics & Portfolio Energy Analysis Tool (PEAT)

- Provides address level data which offers a comprehensive profile of the physical and energy efficiency characteristics for all homes in Great Britain
- PEAT is a companion tool which uses Home Analytics data to recommend an optimal package of improvements within a local area

France

Energy Performance, Renovation, and Tertiary Actions Observatory (OPERAT)

- The Tertiary Decree sets targets for reducing the final consumption of existing tertiary buildings
- The OPERAT platform is developed to ensure the collection and monitoring of energy consumption in the tertiary sector



Goals and involvement of EⁿR Agencies

Main goals:

- For individuals, it is often difficult to **develop a comprehensive renovation project** and to find the best available **sources of funding**.
- To lift these barriers, some Agencies provide or support **technical and financial assistance** to individuals

Types of programmes run by Agencies:

- Some Agencies provide or support **technical assistance** to owners and/or users:
 - To advise and support households in their renovation projects
 - To guide them towards the national and local financial aid
 - To direct them to certified professionals.
- Some Agencies contribute to the definition and implementation of **financial support mechanisms**.

Involvement of EⁿR network Agencies



AEA



SEDA



ADEME



EST



EIHP



SIEA



ENEA



ADENE

Examples of programs

Portugal

Program “Edifícios mais sustentáveis” (More sustainable buildings)

- Aimed to financially support the energy improvement work of individuals, covering 4 types of intervention
- Initial budget of 4.5 million Euros raised to 9.5 million Euros to respond to the large number of requests.

Italy

Superbonus tax credit

- 110% tax credit of the expenditure established to improve a home’s energy efficiency and lower its seismic risk. Renovation must show an improvement of at least 2 energy classes.



Goals and involvement of EⁿR Agencies

Main goals:

- Publicly-owned buildings and commercial buildings represent a **significant potential for energy savings**.
- In particular, publicly owned buildings renovation can serve as a **role model** and **reference point**.

Types of programmes run by Agencies:

- Some Agencies advise and support building managers in defining and implementing renovation strategies
- Some Agencies support buildings managers in implementing Energy Performance Contracts (EPC)
- Some Agencies implement voluntary agreements to stimulate the efficient use of energy

Involvement of EⁿR network Agencies



dena



AEA



SEDA



ADEME



EST



EIHP



SIEA



ENEA



ADENE



Motiva

Examples of programs

Germany

Co2ntracting device: build the future!

- Implemented in 2019 to offer examples of EPCs in the public sector - 20 successful candidates were helped to conduct an opportunity study / 9 selected candidates benefitted from a 2-year support from dena and professional CPE advisers
- Strengthened in 2021, project aims to stimulate, support and analyze 100 CPEs by 2025.

Finland

Voluntary energy efficiency agreements

- Voluntary agreements signed between the government and different associations to improve the efficient use of energy.
- To date a total of 662 companies and 121 municipalities/associations of municipalities have signed such agreements in various sectors.



Goals and involvement of EⁿR Agencies

Networking activities:

Main goals:

- To promote the pooling of knowledge and know-how;
- To promote and exchange good practices.

Type of programmes run by Agencies:

- The Agencies initiate stakeholders' networks, lead them or contribute to their animation or development.

Group purchasing activities:

Main goals:

- To massify the demand for products / renovation works to stimulate a high-performance offer at controlled costs

Type of programmes run by Agencies:

- Group purchasing strategies for the development of new products, systems and processes
- Support and capitalization of pilot demonstration programs

Examples of programs

France

BEEP Network

- Created in 2009 by ADEME, the Réseau Bâti Environnement Espace Pro (BEEP) brings together national associations and regional resource centers whose activities are wholly or in part dedicated to the environmental quality of buildings.
- This network aims to share experience and expertise

Sweden

Network-based procurement for technological development

- SEA coordinates innovation clusters for housing (BeBo), commercial and public premises (BeLok), and low-energy buildings (LÅGAN).
- The network acts as a meeting platform and brings together industry stakeholders, authorities and academia to create cooperation and engagement.



Goals and involvement of EⁿR Agencies

Main goals:

- To support the skills development of building professionals (initial and ongoing)
- To allow individuals and owners to identify the most competent professionals
- To allow the establishment of an eco-conditionality of public aid for energy performance work

Types of programmes run by Agencies:

- Training (initial, ongoing) of building professionals (auditors, craftsmen)
- Qualification of building professionals (auditors, craftsmen)

Involvement of EⁿR network Agencies



Examples of programs

Germany

Energy efficiency expert list for federal funding programmes

- Germany subsidizes energy renovation advice by independent and qualified experts.
- The intervention of a qualified advisor is required to benefit from federal support mechanisms.
- To facilitate the identification of certified advisors, dena has developed the “Energie Effizienz Experten” portal

Italy

School of Energy

- Born from the collaboration of ENEA and the Metropolitan City of Rome Capital.
- Based at the ENEA research center in Rome, and offers academic and professional training program (initial and ongoing) in the fields of energy efficiency and renewable energies.
- The School of Energy provides both theoretical and action training.



Goals and involvement of EⁿR Agencies

Main goals:

- To establish responses to societal expectations and provide support to the public authorities in constructing public policies
- To foster the emergence of new energy and environmental solutions and technologies

Roles of Agencies:

- Accompany research, development and innovation projects
- Strengthen the coordination of EU, national and regional research work

Involvement of EⁿR network Agencies



Dena



ADEME



EST



SEA



ADENE



ENEA

Examples of programs

Sweden

E2B2 research programme

- Vast research program that looks at the entire life cycle of buildings, from site planning to demolition, including the stages of production or renovation, and energy consumption habits.
- It is possible to apply to E2B2 through calls for proposals twice a year.

France

Call for research projects "Towards responsible buildings"

- Dedicated to cross-disciplinary research consortia (technical, organizational, sociological) in the building and renewable energy sectors.
- 93 projects have been supported since 2013, representing a total investment of 38 million euros (incl. 7.5 million euros from ADEME).

Focus on four themes

- "One-stop shop" type advice centres
- Combating energy poverty and supporting low-income households
- Supporting self-renovation practices
- The place of energy renovation in the recovery plans



Goals and involvement of EⁿR Agencies

Main goals:

- “One-stop shops” are local places to advise and support residents in their home renovation efforts.
- The objective is to bring together in one place the services that may already exist in a dispersed manner, to make them complementary and easy to access.

Types of programmes run by Agencies:

Agencies can:

- **Encourage** the creation of OSS
- **Support the financing** of all or part of the services offered by OSS
- **Equip** OSS
- **Communicate, promote** awareness of the existence and role of OSS
- **Network advice** centres at local or national levels to promote the sharing of experience.

Involvement of EⁿR network Agencies



ADEME



ADENE



EST



Motiva



ENEA

Examples of programs

France

Espaces Conseil France Rénov'

- Espaces Conseil France Rénov' (formerly FAIRE) inform, advise and support individuals and condominiums in their energy renovation projects on a technical and methodological level.
- They guide them towards the national and local financial aid to which they are entitled, and direct them to certified professionals

Scotland

Home Energy Scotland Network

- Home Energy Scotland is a network of advice centres and online resources to provide independent information on renovations and the different financing options available.
- The centres provide personalised telephone, online and face-to-face advice and help to householders on their specific requirements. Home visits are organized for the most vulnerable households, or those undertaking a particularly complex renovation project.



Goals and involvement of EⁿR Agencies

Main goals:

- Fuel poverty is a difficult phenomenon to grasp on a European scale in the absence of a shared definition of the phenomenon.
- The European fuel Poverty and Energy Efficiency project (*EPEE, 2007*) proposes three main causes of fuel poverty: low household income; poor quality of housing; rising energy prices.

Types of programmes run by Agencies:

- Contribution to the national debate to promote the inclusion of energy poverty in public policies
- Contribution to national reflections to propose a shared definition and shared indicators
- Observation and monitoring of vulnerability and energy poverty
- Networking activities between players involved in the fight against energy poverty; capitalising on and sharing their experiences;
- Support (technical, financial) for the energy renovation of buildings, through systems specifically targeting vulnerable households.

Examples of programs

France

National Fuel Poverty Monitoring Agency (ONPE)

Created in 2011, the main tasks are:

- To observe energy poverty and analyse related public policies
- To contribute to the national debate
- Promote and disseminate the results
- Carry out monitoring and forecasting work in conjunction with partners.

Wales

Warm Homes Program

- Aims to end fuel poverty, reduce carbon emissions and accelerate economic development and revitalization in Wales.
- Plan based on two complementary flagship programs:
 - **The Arbed programme**, deployed using an area-based approach within vulnerable communities.
 - **The Nest programme**, deployed for households



Goals and involvement of EⁿR Agencies

Main goals:

- For various reasons, some households prefer to renovate their homes themselves.
- Self-renovation is a widespread practice throughout the world and has always existed.
- We can distinguish three types of self-renovation:
 - Autonomous self-renovation;
 - "Mixed" self-renovation
 - Supported self-renovation

Types of programmes run by Agencies:

- In France, ADEME supports **assisted self-renovation aimed at low-income groups**.
- Strategies to support self-renovation practices are still not widespread among the other EnR Network Agencies. Various tools deployed by the Agencies can be used by households, such as:
 - Free practical guides
 - (Self-)training resources available online (guides, thematic files, videos, etc.)

Examples of programs

France

- **Assisted self-renovation aimed at low-income groups**
 - For several years, ADEME has supported assisted self-renovation aimed at low-income groups through the work of the Compagnons Bâisseurs network.
 - The network helps low income households renovate the housing they rent or own. The families are provided with both technical and social assistance.
- **Fostering self-renovation for all publics ?**
 - ADEME now wishes to study self-renovation practices in order to evaluate their possible contribution to energy transition, by opening up discussions with the players in the professional sectors concerned to involve them in the reflection on new support professions.

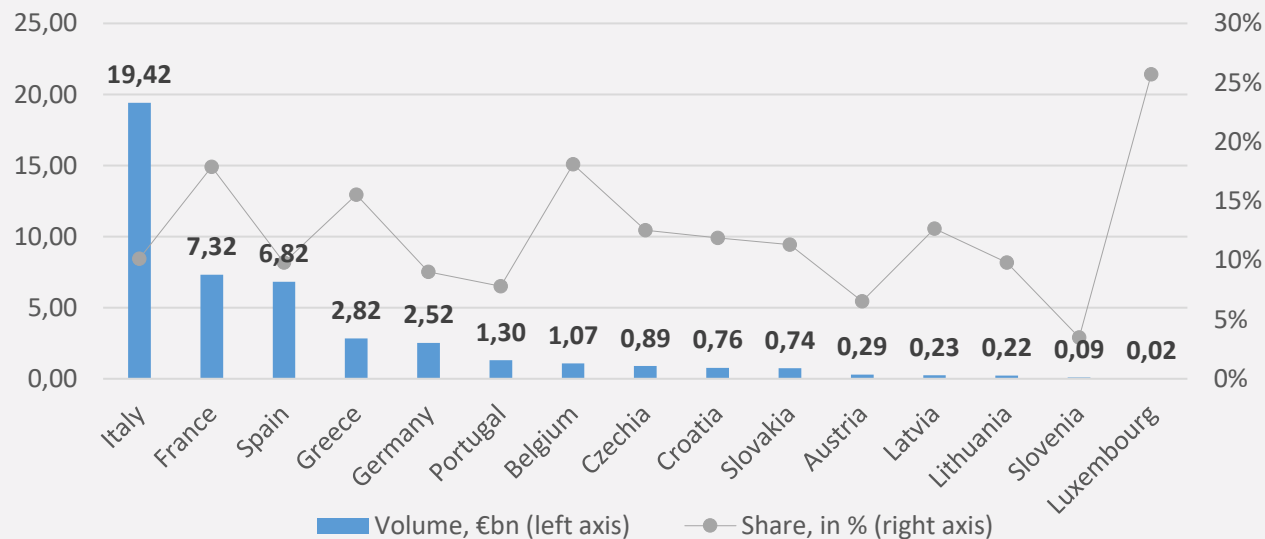


Context and methodology

- The 27 EU Member States agreed at the July 2020 European Council on a historic recovery plan: NextGenerationEU.
- It includes the “Recovery and Resilience Facility” Plan to support Member States’ recovery efforts, which encourages massive investment in the ecological and digital transition.
- Member States must present, in National Recovery and Resilience Plans (NRRPs), the investments for which they are seeking funding from the RRF.
- The Bruegel think tank has analysed 15 of the 19 NRRPs adopted by the European Council in October 2021, and reallocated the planned funding according to the 7 priorities set by the European Commission, especially the flagship **“Improvement of the energy and resource efficiency of public and private buildings”**

Volumes of financing requested by Member States under the Facility and allocated to the energy performance of buildings

(according to the database proposed by the think tank Bruegel)



- Out of a total of 401.8 billion euros to be paid to the 15 Member States with an approved plan, 44.5 billion euros are currently allocated to the energy renovation of buildings.
- Overall share of funding allocated to energy renovation in the 15 Member State: 11%.

3. Discussion on the recommendation and the added- value of the intervention of the EⁿR network

The 7 recommendations of the EnR Network

1

Support the development of
one-stop shops

2

Create a **loan mechanism**
dedicated to the energy
renovation of buildings

3

Evaluate the role that
assisted self-renovation
can play in the massification
of energy renovation

4

Foster **capacity building**
and **qualifications of group**
of professionals

5

Foster **capacity building** for
the installation of **circular**
and **low carbon solutions**
for building renovation

6

Strengthen **area based**
approaches

7

Support the use of **digital**
tools to facilitate the
projection and engagement of
stakeholders

1. Support the development of one-stop shops

Main obstacles to tackle

- *Dispersed incentives available*
 - *Lack of technical assistance to support project design*
 - *A renovation offer too fragmented by field*
- **One-stop shops aim to provide a simplified user experience and to facilitate access for households and building managers to various public aids.**
- **They have been identified by the European Commission as a lever for massification of energy renovation work.**

Inescapable principle

- Deploy counters that support project leaders in a transversal manner, intervene in a multi-thematic support approach
- Upgrade the skills of project leaders beyond the simple fact of providing information, financing, standard specifications, etc.

2. Create a loan mechanism dedicated to the energy renovation of buildings

Main obstacles to tackle

- *Access to financing is a key element to allow the rise in ambition and / or the realization of energy renovation projects*
- *A need to make renovation affordable for all households, including those with a limited ability to cover upfront costs*

Inescapable principle

- Set up a zero-interest loan mechanism accessible to all households and covering all of the renovation work, capped and repayable over an adjustable period of up to 30 years, and attached to the renovated property

3. Evaluate the role that assisted self-renovation can play in the massification of energy renovation

Main obstacles to tackle

- *A shortage of qualified workers to carry out sustainable building renovation*
- *A need to renovate on a massive scale to meet the performance standards, and to make renovation affordable for all households*

Inescapable principle

- To assess the opportunities and risks of self-renovation practices
- To highlight the key conditions to secure the environmental and economic gains from self-renovation projects

4. Foster capacity building and qualifications of group of professionals

Main obstacles to tackle

- *A shortage of qualified workers to carry out sustainable building renovation*
- *A need to better coordinate building professionals interventions to foster deep renovations projects*

Inescapable principle

- Act on the training and labelling of **groups of coordinated companies** (recognition of the competence of a group of professionals).

5. Foster capacity building for the installation of circular and low carbon solutions for building renovation

Main obstacles to tackle

- *The need to bring down embodied carbon in buildings foster the use of circular and low-carbon solutions*
- *The installation of circular and low carbon solutions require specific technical knowledge*
- **Players of the construction sector have to adapt their skills and know-how to new materials and agencies and organisations of the EⁿR network must play their part to address the issue of building renovation carbon footprint.**

Inescapable principle

- Provide information on circular and low carbon building materials in existing training schemes
- Bring the issue of embedded carbon of renovation materials to the curricula of players involved in one-stop-shops

6. Strengthen area based approaches

Main obstacles to tackle

- *Today, energy renovation is most frequently carried out building by building*
- *However, carrying out operations on the scale of a group of buildings or districts can allow economies of scale in the design, the purchase of materials and services, the pooling of equipment, coordination with other actions on the development of the district (e.g., mobility).*

Inescapable principle

- Implement collective facilitation mechanisms for area-based projects, to promote pooling and economies of scale
- These area-based projects must consider the thermal renovation of housing and the production of renewable energy

7. Support the use of digital tools to facilitate the projection and engagement of stakeholders

Main obstacles to tackle

- *The uptake of and investments into digital and innovative technologies by the construction sector remain low*
- *Digital tools can facilitate the processing of renovation operations from the household awareness phase through to acceptance of the work. These tools can help optimizing the coordination of the interventions of professionals.*

Inescapable principle

- The deployment and provision of these tools must guarantee the buildings managers wide access to data (work on open data on consumption data) and integrate the data of the operations carried out to show the results of operations.

Analysis of the added value of the intervention of the EⁿR network

- A key mobilization role of all stakeholders in the service of the massification of energy renovation
- A role of analysis and observation
- Intersectoral and multidisciplinary expertise
- A role of stimulating collective dynamics at different territorial scales
- A long-standing contribution to research and innovation in the field of energy performance
- A role in promoting European leadership in energy transition on the world stage

Discussion

- Among these 7 recommendations, which one should be primarily presented to the European Commission as a proposal from the EⁿR Network?
- What roles / added-value of EⁿR Network do you think are keys for the implementation of these recommendations? In what way do they support the presented key principles?

The 7 recommendations of the EnR Network

1

Support the development of **one-stop shops**

2

Create a **loan mechanism** dedicated to the energy renovation of buildings

3

Evaluate the role that **assisted self-renovation** can play in the massification of energy renovation

4

Foster **capacity building and qualifications** of group of professionals

5

Foster **capacity building** for the installation of **circular and low carbon solutions** for building renovation

6

Strengthen **area based approaches**

7

Support the use of **digital tools** to facilitate the projection and engagement of stakeholders



RÉPUBLIQUE FRANÇAISE

Liberté

Égalité

Fraternité

