HAUT CONSEIL
pour le CLIMAT

RENOVATING BETTER:
LESSONS FROM EUROPE

RESPONSE TO
THE GOVERNMENT REFERRAL

NOVEMBER 2020

EXECUTIVE **SUMMARY**

Decarbonation of the building sector is a prerequisite for achieving carbon neutrality, in France and in many other countries. Buildings are responsible for 36% of greenhouse gas emissions in the EU and 28% in France, including indirect emissions from electricity and heat production. Three-quarters of European buildings remain inefficient and poorly insulated, leading to high energy needs and a major problem of fuel poverty. Buildings thus consume almost 40% of final energy in Europe. Heating systems, the main consumer in buildings, remain largely carbon-based (mainly natural gas and domestic fuel oil).

The transition effort in this sector, which is already under way, must be rapidly accelerated. It requires **multi-year planning**, coordinated between the government and the territories. This planning must **incorporate support and financing for households and businesses, as well as the development of low-carbon renovation and construction sectors**, so that the entire stock of buildings is carbon-free by 2050. It must also include the challenges of adapting to climate change, particularly thermal comfort in the hot season, in a context of increasing frequency of heat waves, which will intensify over the coming decades. Taking action in the building sector is not only necessary for the climate: **the consolidation of renovations makes it possible to respond to the challenges of economic recovery, employment and purchasing power through the reduction of energy bills. It also helps to reduce vulnerabilities**. The 2020 annual report of the High Council on Climate detailed the synergies and opportunities between energy renovation, economic recovery and public health concerns.

Energy renovation, as defined in this report, includes on the one hand improving the energy efficiency of the building itself - insulation of the building shell and improvement of the efficiency of the heating system - and on the other hand switching to a carbon-free energy source or vector (electricity, district heating, biomass, solar thermal, etc.). The European Commission estimates that the annual rate of energy renovation of European buildings needs to at least double by 2030, paying particular attention to so-called "major" renovations, i.e. renovations that significantly improve the energy efficiency of buildings, and avoiding "gesture" approaches without comprehensive and coherent thinking.

France has set ambitious targets in the building sector, but has already accumulated a **significant delay on the trajectory of the national low-carbon strategy** (SNBC), with an overrun of the first carbon budget of around 11% (period 2015-2018). The rate of reduction remains more than half the rate set by the SNBC, and the number of efficient renovations is stagnating, with an average rate of 0.2% per year.

Taking into account the differences in climate and housing surface area in the residential sector, **France appears to have the worst performing housing** compared to Sweden, the Netherlands, the United Kingdom and Germany, the four countries highlighted in the government referral and studied in this report. All these countries are seeing the energy performance of their residential buildings improve over time, and France is progressing at a similar rate to the European average. Although the energy mix of French heating is no more carbon-intensive than the European average, its lower energy performance does, however, lead to higher direct CO_2 emissions. **France is also at the bottom of the pack in terms of direct CO_2 emissions from its service sector building stock.**

The delay observed in France for decarbonation of the building sector can be explained by the **many obstacles to energy renovation**: policies and measures unsuited to the needs of major renovation, the long time it takes to renovate buildings and to structure the sector, low household financing capacity, lack of incentives and support in the residential and tertiary sectors, lack of mastery of technical solutions, and a shortage of information. These obstacles hinder implementation of the structural changes needed to reduce emissions, and are found to varying degrees in the four benchmarking countries. Indeed, energy renovation remains a significant challenge for the countries studied in this report, all of which have renovation rates below their targets.

Public policies in the building sector in the countries studied provide courses of action to accelerate the low-carbon transition in France. France can draw inspiration from financial engineering in Germany, which includes the cross-compliance of aid and the use of an energy expert, the development of local heating decarbonation strategies and roadmaps for public building stock in the Netherlands, and

even the introduction of demanding standards and the development of heat networks in Sweden. In addition, the identification of several difficulties encountered in the United Kingdom, for example in the implementation of obligations to renovate thermal sieves, may help France to anticipate them.

The example of Sweden, the only country to have achieved almost total decarbonation of the building sector, shows that the success of decarbonation is based on a massive long-term effort centred on three technical pillars: good energy efficiency of buildings, in particular through efficient new construction, decarbonation of energy carriers for heating and domestic hot water, in particular through the massive and continuous development of heat networks in urban and peri-urban areas, and decarbonation of primary energy (production of electricity and heat). These characteristics make it one of today's most energy-efficient building stocks, despite winters that are harsher than in the other countries studied. The evolution of Swedish building stock and its network infrastructure is different from that of France, making it complex to transpose decarbonation policies from one country to another. Furthermore, the weight of energy renovation should be put into perspective, with high-performance new construction playing a significant role in the average performance of the two building stocks. The Swedish experience nevertheless shows the need for long-term thinking and coherent policies, with strong public intervention that combines climate, energy and socio-economic issues.

The consolidation of energy renovation requires a strong and sustainable **increase in the amounts invested compared to past trends. The total annual investment (public and private) in energy renovation, currently estimated at around €13 billion, will have to be at least doubled in a few years.** To support this effort, public support schemes, currently in the region of €4 billion, will have to be quadrupled. The announcements of the recovery plan, in which a €7.9 billion budget is set aside for energy renovation, are heading in the right direction. The aim is to materialise and amplify this dynamic and to send an unequivocal message to market players by planning the increase in public spending throughout the decade. The expected benefits in terms of jobs, economic activity and reduced energy bills are additional arguments for increasing the financial effort of public authorities.

A renovation policy based exclusively on incentives is insufficient to achieve the French and European ambition; this is what the German example illustrates, despite its many advantages. It is therefore necessary to mobilise, alongside public aid schemes, other complementary instruments, such as regulatory obligations and fiscal tools. Furthermore, the difficulties in implementing the thermal sieve renovation obligation in the UK underline **the importance of developing a comprehensive approach**, where equity issues and the capacities of households and businesses are taken into account. The strengthening of renovation policies must indeed be carried out in a **just transition logic**, the principles of which are developed in the 2020 annual report of the High Council on Climate.

The proposals of the Citizen's Climate Convention (CCC) make it possible to supplement the public system in order to achieve the renovation targets that France has set itself. Indeed, the CCC proposes combining a trajectory of compulsory global renovation with strong financial support for low-income households, in a logic of social justice. These proposals make it possible to keep to the SNBC's renovation trajectory in a spirit of just transition and should be implemented by the public authorities.

The foreign experiences and the experiments already in place in the territories enable the High Council on Climate to **formulate major sets of recommendations** to the government in order to improve France's energy renovation policy:

- **Consolidate energy renovation**, in particular through long-term engineering and financial support, adapted to the cost and payback time of the overall renovation, taking into account energy performance and adaptation criteria and the specific needs of co-ownerships.

- **Implement the renovation obligations** of the Energy-Climate Act (LEC) in a way that is consistent with energy renovation and vulnerability reduction targets, with a view to achieving efficiency and a just transition.

- **Gradually and systematically integrate energy carriers** into renovation strategies, by developing a supply of low-carbon carriers and renewable heat in existing territorial strategies, such as heat networks in urban areas. More broadly, the energy renovation objectives need to be integrated into the framework of existing strategies and planning documents.

- **Renovate public buildings**, for example by defining roadmaps for each branch of this building stock.

- **Monitor and evaluate policies for the energy renovation** of buildings, and attach conditions to public aid at demanding performance levels.

This report does not deal with other aspects of decarbonation of buildings: efficient and sober use of buildings, reduction of the carbon content of materials used in construction and renovation, reduction of indirect emissions linked to production of the electricity and heat used, or artificial surfaces linked to the construction of new buildings. In addition, guaranteeing low-carbon new construction through regulation is essential, as a quarter of French building stock today is less than twenty years old. Addressing these issues will also be crucial to achieving our climate objectives. Furthermore, none of the countries studied has so far included an **explicit concern for summer comfort issues in the face of climate change. However, this question seems to us to be a major one and should be integrated into the French strategy in the future.**

LIST OF RECOMMANDATIONS

A summary version of the recommendations is presented below. Details of each recommendation can be found in the corresponding section of Chapter 4.

1. ESTABLISH THE CONDITIONS FOR CONSOLIDATION OF ENERGY RENOVATION

- Within three years, abolish aid for individual gestures for MaPrimeRénov' and energy savings certificates (ESCs), and only offer aid conditional on reaching a level of performance (whether the aid is global or includes a group of gestures consistent with an overall path) and on use of project management support (AMO), which must become the keystone of public support for renovation.
- Transform financial aid in the form of a lump sum into subsidies representing a percentage of the work, and increase the subsidy rate with the ambition of energy renovation.
- Abolish the reduced VAT rate of 5.5% for energy renovation work and reallocate the funds allocated to raising the BBC renovation subsidy rate.
- Increase ex-post checks on publicly subsidised energy renovation operations.
- Increase the amount and duration of the zero-rate eco-loan (eco-PTZ), following the German example (up to €120,000 over 30 years).
- Order an evaluation of the eco-PTZ, including the Habiter Mieux (Living Better) eco-PTZ, in order to understand the existing obstacles and identify areas for development.
- Communicate clearly on renovation policies for the coming decade, in order to give visibility to public and private decision-makers and the sector.
- Publish, in collaboration with authorities, a strategy for implementing the obligations of the LEC.
- Take into account all-season comfort and ventilation during the overall renovation of buildings: identify the adaptation needs of French buildings according to regions and climate zones, define a building performance benchmark in terms of all-season comfort, and use this benchmark to integrate a performance criterion in terms of all-season comfort into the packaging of renovation aids.

2. MAKE ENERGY RENOVATION AND VULNERABILITY REDUCTION TARGETS COHERENT

- Order an evaluation in 2021 of Anah's Living Better programme.
- Implement a trajectory to reduce the energy decency threshold to 330 kWh/m²/year to include F and G level buildings by 2025.
- In the LEC implementation strategy, identify the thermal sieves associated with vulnerability, include elements to support tenants of sieves and inadequate housing in application of the law and clarify the role of the authorities and state services in this application.
- Use the energy renovation strategy section appended to the multi-annual energy programme (PPE) to specify the objectives for the efficient renovation of thermal sieves in connection with France's roadmap for sustainable development objectives.
- Carry out an evaluation of the energy voucher scheme and its impact on the living conditions of households in fuel poverty.

3. FURTHER INTEGRATE DECARBONATION OF ENERGY CARRIERS INTO THE RENOVATION STRATEGY

- Include transition objectives towards a supply of low-carbon carriers and renewable heat in existing territorial strategies, taking into account local specificities.
- Include precise strategies for decarbonation of the energy supply for heating and cooling of buildings in the new energy renovation section of the PPE, based on regional planning documents, with means targets.
- Following freezing of the carbon tax, order an assessment, by June 2021, of the financial and economic obstacles to development of heat networks in France today, and the solutions envisaged to remove them.

4. DEVELOP INSTRUMENTS FOR CO-OWNERSHIPS

- Evaluate annually the support mechanisms for the renovation of co-ownerships to enable them to reach maturity sufficiently in advance of the renovation obligation recommended by the CCC, or an equivalent mix of measures.
- Reinforce the obligations to take on board renovation work in order to bring them into line with future renovation obligations.

5. BETTER INTEGRATE RENOVATION POLICIES INTO REGIONAL PLANS AND PROGRAMMES

- Conduct a study to identify existing territorial strategies and planning documents, in order to systematically include energy renovation objectives in them. Set up platforms for regional councils, EPCIs and municipalities to regularly discuss policies and feedback.
- Involve regional energy renovation players in creation of the next SNBC and the section on energy renovation associated with the next PPE.
- Pay particular attention to the specificities of overseas regions

6. PUT IN PLACE A STRUCTURAL AND COHERENT STRATEGY FOR RENOVATION OF PUBLIC BUILDING STOCK

- Develop roadmaps by branch and sub-branch of the stock of public buildings: State, local authorities, and the various public institutions (hospitals, universities, public agencies, etc.). Encourage dialogue between the French State-Owned Real Estate Department (DIE) and the public players occupying the premises in order to think about useful surfaces for the future before investing.
- Order an assessment by 2022 of the public building renovation projects financed under France Relance, in terms of work carried out, energy performance gains measured and lessons learned for work on other buildings.
- Reinforce support and incentives for public players to support the creation of new renovation projects and set the momentum for subsequent years.

7. STRENGTHEN MONITORING AND EVALUATION OF THE ENERGY RENOVATION OF BUILDINGS

- Publish the progress made on the energy renovation observatory by the end of the first quarter of 2021. This observatory will have to provide open databases for mapping renovation needs at territorial level.

HAUT CONSEIL
pour le CLIMAT

RENOVATING BETTER:
LESSONS FROM EUROPE

www.hautconseilclimat.fr
@hc_climat

ABOUT THE HAUT CONSEIL POUR LE CLIMAT (THE HIGH COUNCIL ON CLIMATE)

Thee High Council on Climate (HCC) is an independent body tasked with issuing advice and recommendations to the French government on the delivery of public measures and policies aimed at reducing France's greenhouse gas emissions. Its purpose is to provide independent insight on government climate policy. The HCC was established on 27 November 2018 by the President of the Republic and then by Decree in May 2019. Its members are chosen for their expertise in the fields of climate science, economics, agronomy and energy transition.