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Energy Transition: Supportive Solutions



POLICY PAPER JULY 2022

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Energy Transition: Supportive Solutions

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*There is no desire more natural
than the desire for knowledge*

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GENERAL PROJECT DESCRIPTION

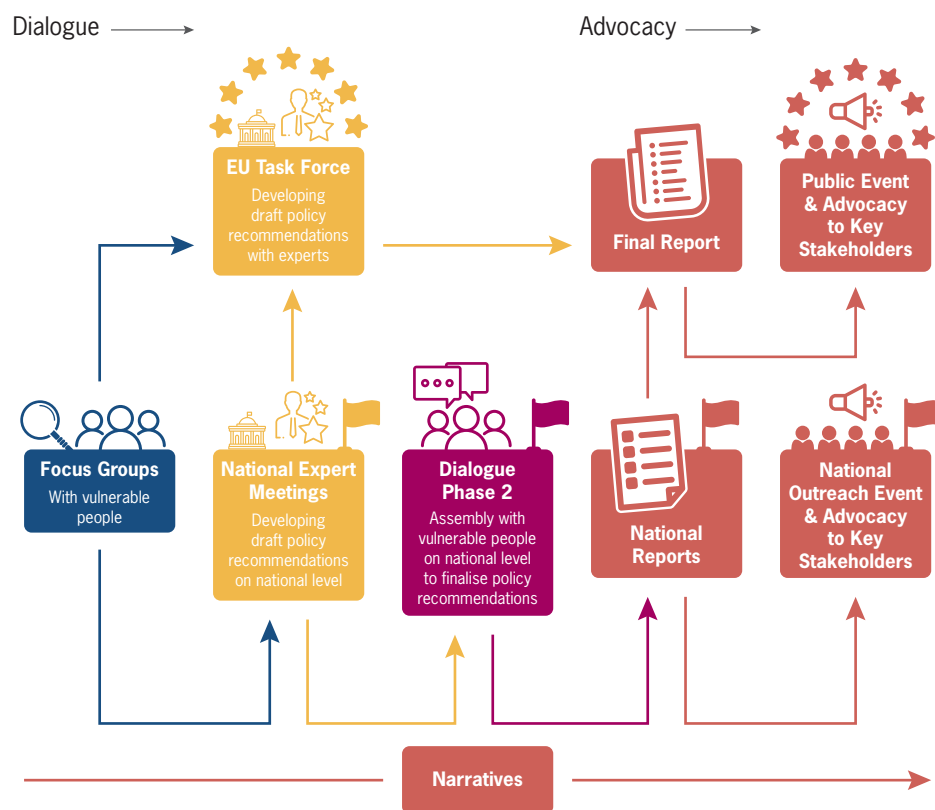
Institut Montaigne is participating in the *Fair Energy Transition for All* (FETA) project, a consortium of European foundations coordinated by the King Baudoin Foundation, in an endeavor to map out a fair energy transition for all across Europe. This project brings together nine European countries: Belgium, Denmark, France, Germany, Italy, the Netherlands, Poland, Portugal and Romania.

The objective is clear: reach the international targets of reducing greenhouse gas emissions (GHG) without leaving the most vulnerable populations behind. The project thus aims to give a voice to citizens facing energy insecurity, citizens who are often invisible in the political landscape but who must nevertheless be the focus of public policies. Embarking on a fair energy transition thus implies effectively decarbonizing our economy without sacrificing the necessary bolstering of social cohesion, while working to reduce inequalities and create credible alternatives for employees whose livelihoods are threatened by this transition.

Project figures:



The project is divided into **three distinct phases**.



First, **90 focus groups were organized** throughout Europe (about 10 in each country involved in the project). In France, these focus groups were organized by *Missions Publiques* and included 94 participants who are vulnerable in the face of the energy transition. Singled out by local structures in touch with various population segments, these participants have diverse backgrounds (e.g., single-parent families, large families, young workers, job seekers) and come from different urban or rural areas – including Romainville (93), Maisons-Alfort (94), Villeneuve-d'Ascq (61), Saint-Varent (79), Troyes (60), Millau (22), Toulouse (31) and Saint-Gaudens (31). This first step of the *Fair Energy Transition for All* project has highlighted the expectations and concerns of French and European citizens regarding the energy transition.

Missions Publiques: the organization and its mission within the framework of the project

Created in 1998, *Missions Publiques* is an independent company whose mission is to improve the dialogue between citizens, stakeholders and decision makers, for better collective choices and better decision-making, from the local to the global level. Based in Paris, Brussels and Bonn, the team is made up of about twenty people and assists public authorities, civil society organizations and companies, in the creation, implementation, coordination and evaluation of participatory democracy and consultation processes.

As part of the implementation of the FETA project in France, *Missions Publiques* coordinated and piloted 10 focus groups in the country, as well as the *Fair Energy Forum*, the closing event of this endeavor. The added value of this iterative methodology – which goes back and forth between feedback from people affected by fuel poverty, experts' analysis and proposals and then additional feedback from participants – has led to the proposals being fine-tuned into successful recommendations.

Institut Montaigne subsequently convened a working group **made up of several experts** coming from the business, associations and research spheres. Based on the observations and results from the focus groups conducted by *Missions Publiques* and the ensuing preliminary report, this working group was tasked with turning citizens' expectations and concerns into actionable recommendations for public authorities. Once the recommendations were finalized, they were presented at a **Fair Energy Forum**, which was held on Friday, June 10, 2022 in Paris. Over the course of one work day, 15 citizens (*at least one representative per focus group*) were able to react to and contribute to the experts' proposals. The members of the working group were also invited to the discussion, and the resulting feedback has been included in this paper.

These different stages have led to the drafting of the following national report, published by Institut Montaigne. After an overview of the main points raised by the citizens interviewed by *Missions Publiques* during the first phase of the project, this work details the major issues related to the energy transition in France. It then

presents a panel of seven *personas* designed to represent the varying situations of vulnerability in the face of the energy transition. Finally, the last portion of the paper sets forth a list of **11 recommendations** for the French public authorities. Implementing these proposals should allow the most vulnerable citizens to be effectively supported during this transition, in order to achieve the national objectives of reducing GHG emissions in a way that is fair for all.

The conclusions reached in this work are, in essence, geared to resonate with the reality of the French situation in terms of energy transition vulnerability. Nevertheless, the approach taken by the King Baudoin Foundation remains European in scope. To this end, a process similar to the three stages detailed above has been devised, under the direction of the King Baudoin Foundation and the Ifok organization, at the continental level. A group of experts will be charged with identifying the main persisting impediments at the European level, and with making recommendations to the European Commission, in a process that will last until the end of 2022.

INTERIM REPORT BY MISSIONS PUBLIQUES

At the end of the first phase of the project, our partner *Missions Publiques* drew up an interim report highlighting the main expectations and concerns, as formulated by the citizens who participated in the focus groups.

Typology of focus groups

In order to ensure proper representativeness in the first phase of the project, *Missions Publiques* worked with several local structures to set up focus groups which included a diverse set of participants and experiences. To this end, a total of nine structures were mobilized throughout the country: a local mission, solidarity centers, associations, socio-cultural centers and a community social action center.

In France, focus groups included 59% women and 41% men. **A majority of citizens were aged 35-49 (41%), 26% were between 50-64 years old, 25% between 18-25 years old, and 9% between 25-34 years old and over 64 years old.** Focus group composition also covered diverse levels of education: 25% of participants had at least two years of higher education, 22% had a high school diploma (Baccalauréat), 32% had vocational diplomas (CEP, BEPC, CAP or BEP), and 21% had no diploma. Finally, 51% of citizens surveyed were unemployed, and 15% were retired.

.../...

Similarly, certain characteristics of the focus groups deserve to be highlighted:

- 64% of citizens surveyed said they live in an “urban area”;
- 67% were receiving social benefits at the time the focus groups were held;
- 81% lived in rented properties and, of these, two-thirds lived in social housing.

From this portion of the project, conducted by Missions Publiques between September and November 2021, three groups of people emerged: (i) citizens who feel disconnected from issues related to the energy transition, who do not act because they feel it would have too great an impact on their lifestyle and too limited an impact on the transition (a minority), (ii) citizens who decide to act on an individual scale, without necessarily noticing a real change (a majority), and (iii) citizens who are engaged with the issues, who wish to act collectively in addition to their individual actions, without necessarily knowing how to go about it (about one third).

A few detailed conclusions can be drawn regarding the most vulnerable citizens' expectations in the context of the energy transition.

1. Citizens have high expectations for incentives and inclusive measures to encourage a fair energy transition in housing

These discussions highlighted the importance of the energy transition focusing on the **housing** sector, more so than on the transportation sector. This trend is based on the view that **energy is an essential good**, an opinion shared both by people who are aware of the challenges of the ecological transition and those who are not. As such, more so than the reduction of energy consumption itself, citizens believe that the ultimate goal of the energy transition must be to **fight poor housing conditions**, with access to energy being seen as a crucial factor.

The vital nature of energy calls for **an inclusive transition**. In the face of rising energy prices, it seems essential not to increase existing inequalities in the context of the energy transition, and to pay close attention to the most vulnerable people. To this end, a strong preference was expressed for the transition to be carried out by means of **incentives and subsidies** rather than with regulatory constraints.

This desire for inclusiveness is also reflected in the concern expressed by citizens that this transition might rely on technologies – digital, in particular – which would weaken social bonds.

In addition to the inclusive nature of the transition, **its collective dimension** was mentioned on several occasions by the surveyed citizens. Thus, concern was expressed that the main efforts would still be required predominantly from the most disadvantaged segments of the population. Conversely, citizens highlighted the need to explain the collective nature of the measures adopted and to emphasize the argument that a joint effort is necessary. In order to curb the growing feeling of resignation and make visible the impact of individual actions, it is important to increase communication surrounding the implementation of collective efforts and their repercussions.

Finally, the discussions emphasized the need to continue to **simplify the existing system**, by communicating more with the target groups, by facilitating the follow-up of files, by ensuring more accurate feedback or by setting up more in-person one-stop services. Many vulnerable people are reluctant to apply for assistance schemes for fear of not meeting the required conditions or of having to deal with administrative complexities. **Personalized support** is therefore essential.

2. Concerns about future developments in transportation, consumption and housing

In terms of transportation, the path towards greener travel, less travel or reduced reliance on private cars worries participants for several reasons. First, this could lead to **isolation** in certain areas (overseas, rural areas). Second, they might have a hard time reaching **city centers** if cars are banned in these zones (although the installation of park-and-ride facilities is seen as an acceptable solution). The need to carry on with **business trips** was also a concern, as was the **growing risk of isolation** tied to the rise of teleworking. Overall, giving up the use of private cars does not appear to be a feasible solution for the participants in the focus groups.

In terms of consumption, **pricing remains the main issue**, regardless of the carbon impact. Therefore, reconciling local and good quality products with lower prices is a significant challenge to tackle. Various opportunities have been identified thanks to the rise of digital technologies (increase in service offerings, e-commerce

and rurality) – although this does not negate the risk of social isolation or the need to ensure distribution to the last mile across the country.

In terms of housing, a major obstacle brought up by citizens is the **relationship between tenants and landlords**, whether they be social housing landlords or private landlords. The landlords' lack of interest in renovating properties to upgrade energy efficiency is often mentioned, as well as the tenants' lack of power in this matter.

More generally, participants highlighted their concern about the possible loosening of social bonds (particularly with the development of new technologies). For them, the key to a successful energy transition lies in the preservation of these social bonds and in a certain form of solidarity.

IN THE FACE OF THE ENERGY TRANSITION, CITIZENS ARE IN UNEQUAL SITUATIONS

Based on the concerns and expectations raised by the citizens in the focus groups, a group of *personas* was created with the experts involved in a working group organized by Institut Montaigne. These persona-profiles are intended to illustrate the diversity of the vulnerable citizens met in the focus groups, and by extension the variety of problems they face. Institut Montaigne arrived at a total of seven archetypal profiles with a series of specific issues linked to each one in the context of the energy transition. For each profile, verbatim quotes from the focus groups led by *Missions Publiques* serve to illustrate profile descriptions.

Profiles

PROFILE #1 – THE LAMBERTS, 75 YEARS OLD, RETIRED AND LIVING IN A VILLAGE



Description

The Lamberts, a retired couple aged 75, live in a village of 600 inhabitants. Mr. Lambert was a mechanic and Mrs. Lambert was a caregiver. Despite their frugal spending habits, their combined pension of 2,000 euros per month is increasingly insufficient to cover their needs. Due to the overall increase in prices – after two long years of restrictions because of the health crisis – the Lamberts will have to forgo their annual vacation organized by the association that runs the recycling center at which they volunteer. In choosing destinations outside the community, these yearly group trips used to be an opportunity to meet new people.

The recycling center, where they go twice a week, is twenty-five kilometers from their home, in a town of 8,000 inhabitants. This is where they access most daily services. In addition, Mr. Lambert's health condition requires regular check-ups, so they have to travel 100 kilometers from home once or twice a month for medical appointments. Their grandchildren live in this same city, and the Lamberts are happy to look after them on weekends when their son is away. The couple owns a 20-year-old diesel minivan, which Mr. Lambert is careful to keep in good condition, but which consumes an average of nine liters per 100 kilometers. Despite soaring fuel prices, the Lamberts feel they cannot afford to invest in a new vehicle and therefore limit their daily trips. They fear they will see their friends and grandchildren increasingly less over time.

The Lamberts live in a small building with four condominiums, two of which are vacant due to old unresolved undivided co-ownership situations. Their only neighbors are other modest retirees. The whole building needs to be renovated, first and foremost the roof, which is very old. The building is heated with a communal oil-fired boiler. Like their next-door neighbors, the Lamberts are unable to persuade the other co-owners to contribute to the communal renovations. Fearing the cost and the duration of the work, they put up with the situation.

Verbatim quotes from the focus groups conducted by Missions Publiques

Person 1: "For a fair transition there should be an increase in salaries (and pensions) because this transition will generate an increase in expenses."

Person 2: "Rural people need to be more organized than urban people, we can't just shop down the street."

Profile's specific issues

- **Strong resistance** to daily behavior change;
- **Difficulty accessing comprehensive information** about renovation support mechanisms, which are perceived as complex;
- **Low investment capacity** for a new vehicle and for thermal renovations, with

difficult access to financing, especially bank financing;

- **Highly carbon-dependent**, with little access to public transportation;
- **Inability to persuade the others owners in the building** to launch a renovation.

PROFILE #2 – ANISSA, 46 YEARS OLD, SINGLE MOTHER LIVING ON THE OUTSKIRTS OF A CITY



Description

Anissa, 46, lives on the outskirts of a large city where she is raising her two children alone. 19-year-old Marc is a student and 12-year-old Zoé is in middle school. Anissa is a category C civil servant and has a monthly budget of 1,632 euros, including alimony and social benefits.

Anissa and her children are tenants in an old, poorly insulated home that requires them to leave the heating on all day in winter to keep the temperature above 20°C. Following Marc's advice, Anissa contacted an energy advisor who suggested a full range of measures to reduce energy consumption. Nevertheless, despite following these recommendations, she has yet to noticed any difference on her electricity and gas bills, other than the ever-increasing amounts. She has a set of relatively old household appliances, which she deems functional and not warranting replacements. She attributes her situation to the obsolescence of the building's equipment.

Since she has a parking lot at her workplace, she finds it more convenient to drive the 27 kilometers from home to office. This also allows her to drop off Zoé at school. Indeed, despite urban continuity between her home and her workplace, public transport would take too much time in the morning and evening, whereas the drive only takes 30 minutes, including 15 minutes on the freeway. On weekends, she uses her car to go to the nearest hypermarket. As her building is located in a large residential complex, the nearest local shop is a 10-minute walk. She therefore takes advantage of her daily work commute to make any additional purchases.

Marc receives a bursary of 332 euros per month for his studies – his only source of income. During the week, he tries to take public transportation to get to his university every day, but sometimes he asks his mother to drop him off. He often borrows Anissa's car on the weekends to visit his friends.

Anissa's ex-husband, Edouard, is a truck driver. He is afraid of losing his job because of the company's decreasing competitiveness compared with its European rivals and with e-commerce. He is increasingly worried about the rising cost of fuel and the lack of development in alternatives to road transport.

Verbatim quotes from the focus groups conducted by Missions Publiques

Person 1: "A fair transition is a transition that allows everyone to contribute at their own level and according to their means."

Person 2: "I had to move because my home was poorly heated and humid. My children kept getting sick: pneumonia, respiratory diseases, etc. Today things are better, but I'm living above a major highway and I can see the pollution coating the living room curtains day after day."

Profile's specific issues

- A **feeling of powerlessness** in the face of the challenges of the transition: too small a scale, lack of shared new practices in their social environment, dependence on the landlord;
- Consumption of predominantly imported manufactured goods and packaged goods distributed by large retail groups;
- **Prohibitive cost** to replace appliances and to heat the poorly insulated home properly;
- Strong belief that the ecological transition only triggers significant expenses and constraints;
- Feeling of **downward social mobility**: growing generational gaps and giving up on taking action.

PROFILE #3 – THE ROSSIS, 42 YEARS OLD, LIVING NEAR A LARGE INDUSTRIAL AREA



Description

The Rossis are the parents of four underaged children. Including social benefits, they have a monthly budget of 3,270 euros. Arnaud is a foreman at a gas-intensive site and Jeanne is a nurse.

The couple owns two vehicles, which they use daily to get to their workplaces, both of which are less than 10 kilometers from home. They have no public transportation options, except for their three eldest children who get to high school and middle school thanks to school transportation services.

Arnaud and Jeanne live in her parents' former house, which has seen little renovated over the last 40 years. The current installations are not up to date with the latest standards, especially the electricity. The house is heated with gas. They are considering putting the house up for sale to buy a new home, as the cost and complexity of the work needing to be done does not seem to be within their reach. They know that there are subsidies and assistance mechanisms for renovation, but these seem too complicated. Considering the home's energy losses and the price of gas, the Rossis have practically given up heating it.

Arnaud also wonders about the sustainability of his job, given the European Union's stated ambitions regarding GHG emissions. He does not understand why France is imposing such highly restrictive objectives on itself when the major manufacturing countries still have production facilities powered by coal.

Verbatim quotes from the focus groups conducted by Missions Publiques

Person 1: "A fair transition is a transition led on a global and international scale, not solely aimed at developed countries."

Profile's specific issues

- **Poor public transportation**, especially to and from work;
- Lack of knowledge regarding the current insulation standards and the renovation assistance schemes;
- **Giving up on taking action** and accepting a situation of energy insecurity, with an energy bill that leads them to stop heating the home;
- Concerns about the husband's job in the long-run.

PROFILE #4 – BRUNO, 30 YEARS OLD, JOB SEEKER



Description

Bruno lives in a seaside resort on the French Riviera. He does not have a diploma, and he works seasonal jobs every year in the tourism sector and notes that, despite the importance given to the energy transition in the media, behaviors are not evolving in his social and professional environment.

However, he fears that the energy transition will gradually and sustainably reduce tourism, hindering his ability to find employment. He sees the energy transition as a very technical niche subject, which will only lead to limiting travel and therefore the number of holidaymakers in his area.

Moreover, his employment and training advisor never referred him to training courses that would allow him to consider developing skills related to the energy transition. He is completely unaware of the job market needs in this sector.

Verbatim quotes from the focus groups conducted by Missions Publiques

Person 1: "It's too late, nature's will is like that."

Profile's specific issues

- Definite **lack of interest** – the energy transition is seen as a threat;
- **Lack of information** on possible training that could lead to a job in the energy transition field;
- Observes that nothing is changing substantially around him: seasonal service economy, densification of the coastlines, etc.

PROFILE #5 – THE MÜLLERS, ORGANIC PIG FARMERS, 2 CHILDREN



Description

The Müllers run an organic pig farm and have two underaged children. They earn 1,200 euros net per month per person. They are particularly concerned about the environment. However, they fear that the application of restrictive measures in terms of energy would strongly damage their economic model. Their production costs are constantly increasing (food, energy) without this being carried over to their selling price because of the pressure exerted by the distribution system.

Jérôme and Lucie have therefore updated their model by directly selling part of their production at local markets. They take their professional vehicle every day to drive to the surrounding towns, but the costs involved heavily offset the additional income generated by this type of business.

Jérôme and Lucie are equipped with an electric bicycle, bought second-hand on a marketplace for individuals, allowing them to ride the 3 km which separates their farm-home from the nearest city daily.

Verbatim quotes from the focus groups conducted by Missions Publiques

Person 1: "We should not only ask consumers, but also producers, to change."

Person 2: "If big companies don't make an effort, it's not going to happen."

Profile's specific issues

- **Discouraged** in the face of rising raw material costs and the correlated loss of profitability;
- **Need for strong support** from public authorities for sustainable agriculture, particularly because of the power of mass distribution systems;
- Lacking an alternative and local distribution chain;
- **Strong dependence on "carbon"**, with a professional vehicle that consumes a lot of energy and is difficult to replace;
- Difficulties in investing.

PROFILE #6 – THE HARDINGS, 50 YEARS OLD, 5 CHILDREN



Description

The Hardings live in a medium-sized town of 15,000 inhabitants and have five children, four of whom live at home. Ben is a self-employed construction worker and Sylvie is a stay-at-home-mom. Ben earns an average monthly income of 2,500 euros, which, excluding social benefits, is the household's only income.

Ben drives his utility vehicle to construction sites every day. He drives more than 30,000 kilometers a year in an old second-hand vehicle. Despite the option to reduce his travel costs thanks to various tax measures for commercial vehicles, he is unable to make enough money to invest in a new, less polluting vehicle because of the increasing fuel prices. He does not consider the investment would be profitable compared to the financial effort he would have to make by taking out a new loan.

He notices that his customers' demands are becoming more and more specific in terms of energy consumption, which has an inflationary effect on the amounts in his quotes. His business is losing competitiveness while large companies are still able to offer attractive prices.

He does not know if it will be possible to grow his business in order to move towards less captive markets for these companies. As the purchasing power of his customers is increasingly constrained, he is convinced that this will have a decisive and lasting impact on the demand for artisanal crafts.

The Hardings live in a low-income building in the city center. The location allows Sylvie to walk their youngest children to school every morning. She does almost all the shopping for the household on her way home, allowing the couple to use the car only for the most bulky purchases.

Profile's specific issues

- Business penalized by overly high fuel costs, and buying a vehicle with lower emissions is a challenge;
- Lack of awareness of schemes and subsidies;
- Loss of competitiveness compared to large companies capable of making the necessary investments and offering more attractive prices;
- Lack of knowledge of the new regulations and training in force to meet the demand for the energy transition.

PROFILE #7 – JOSEPH, 21 YEARS OLD, OVERSEAS STUDENT IN FRANCE



Description

Joseph left Guadeloupe for Paris, where he is studying for a master's degree at university. Thanks to a scholarship based on social criteria and a 10 hour weekly job in a shop, he has a monthly income of 828 euros.

He prefers to use public transportation for all his travels but has to take the plane to visit his family. The cost of air travel is increasingly prohibitive, so Joseph can now only return to Guadeloupe once a year thanks to the Mobility Studies Passport set up by LADOM (i.e., L'Agence de l'Outre-mer pour la mobilité).

Although he feels very concerned by the subject of the energy transition, Joseph considers that as an urban student living in a student residence, he has no means of action at his level to change his energy consumption. He would like to buy short-circuit products but finds that they are far too expensive compared to those distributed by big brands in supermarkets.

Joseph lives in a student residence managed by a social housing landlord. It has just been renovated, all the equipment is electric, with individual heating. In spite of the pooled utility costs, Joseph is particularly careful about his electricity consumption. Thanks to the thermal diffusivity of the building, he heats his home very little, opting to wear warmer clothing.

Profile's specific issues

- **Difficulty accessing locally produced food**, which is too expensive, and sold in small local shops;
- **Frustrated with the lack of collective commitment** to environmental issues, partly due to a lack of awareness surrounding opportunities for associative involvement.

CHALLENGES OF THE ENERGY TRANSITION IN FRANCE

The energy transition aims to overhaul an energy system to reduce its environmental impact. This entails both a change in the energy sources used, with a transition from fossil fuels to renewable energies, and a reduction in energy consumption, which should lead to a form of “energy sobriety.” This concept is increasingly present in the public debate: energy sobriety means a voluntary and organized reduction in energy consumption through a change in lifestyles and consumption habits.

1. Ambitious energy transition goals

In France, the various public policies adopted and implemented for the energy transition are set within the broader framework of developing a **strong climate ambition at the European Union level**. In order to respect the trajectory set by the Paris Climate Agreement – which aims to limit the increase in global temperature to “well below 2°C,” and if possible below 1.5°C – the 27 Member States have committed to **achieving carbon neutrality by 2050**¹. To achieve this goal, the European Commission has adopted a set of proposals, the Green Deal, which includes an intermediate target of 55% reduction in GHG emissions by 2030 compared to 1990. This strategy includes a target of renovating 35 million buildings by 2030, with an emphasis on major renovations, and a ban on the sale of combustion engine vehicles from 2035.

¹ European Commission, “2050 long-term strategy”, European Commission, 2022
https://ec.europa.eu/clima/eu-action/climate-strategies-targets/2050-long-term-strategy_en

In order to achieve carbon neutrality, France has set several objectives that directly affect the lifestyle of households with the establishment of a **National Low-Carbon Strategy** (SNBC). Introduced in the Law of August 17, 2015, the Energy Transition for Green Growth law (LTECV), updated every five years, is a roadmap that identifies sectoral objectives and defines a trajectory towards carbon neutrality in 2050. To do so, it details the short- and medium-term objectives which must be met, called “carbon budgets.” The carbon budget for the period 2015-2018 was 441 million tons of CO₂ equivalent (Mt CO₂eq), however, this budget was finally exceeded to the tune of 458 MtCO₂eq, and the 2019-2023 budget is 422 MtCO₂eq, after an upward revision in 2020.

In terms of housing, the LTECV has set the objective of **renovating all real estate according to “Low Energy Building” (BBC) standards by 2050**. These standards ensure that housing does not consume more than 50 kWh/m² of primary energy, the most virtuous rank on the energy performance diagnosis. This would lead to highly insulated housing, with very low energy loss and therefore low energy consumption. The new SNBC of April 2020 sets the objective of carrying out 370,000 complete renovations equivalent from 2022, then 700,000 between 2030 and 2050, in order to reduce GHG emissions from the housing sector by 49% by 2030 and compared to 2015. This means doubling public and private investment starting in 2024 compared to the 2016-2018 period, according to the Institute for Climate Economics (I4CE).

In terms of transportation, the SNBC's target is the sale of **35% new electric or hydrogen vehicles in 2035, then 100% in 2040, and a 28% reduction in GHG emissions** for the sector by 2030 compared to 2015. This last challenge must be accompanied by a ban on the sale of combustion engine vehicles by the same date, which is included in the Law on Mobility (LOM). This same strategy aims to promote the use of carpooling, public transport and active modes of transport, such as cycling.

Finally, in terms of food, the SNBC intends to encourage a change in eating habits, putting greater emphasis on legumes, fruit and vegetables, reducing the consumption of meat and developing short circuits. The challenge is to promote **a diversified, local, seasonal and high-quality diet, combined with a reduction in food waste**.

2. Rising fossil fuel prices add to the challenges of a fair transition

Aim of this paper: the energy transition must include the most vulnerable households.

Low-income and vulnerable households

Different population segments may be targeted by measures promoting a fair energy transition. **The notion of a “modest household”** is not specifically defined and can be quite variable. However, it is possible to refer to the scales used by the National Housing Agency (ANAH) which considers a “very modest household” to have an income under 15,262€ per year (21,123€ in Île-de-France) for a single person, while a “modest household” has annual income of less than 19,565€ (25,714€ in Île-de-France) for a single person. Comparing with INSEE's distribution of households according to income, this amounts to including 20% to 25% of households with the lowest incomes (even reaching 40% in Île-de-France).

In addition to these low-income households, there is also a grouping of **vulnerable households**. This may include low-income households, but it also covers other categories, in this case households with higher incomes but who are highly exposed to an increase in fuel prices due to housing that is not energy-efficient, who are highly dependent on their car or travel long distances for their daily commute. A household exposed to fuel poverty (see below) may thus have resources exceeding ANAH thresholds while also spending more than 8% of its budget on energy, thus making its situation more difficult.

Although they have a smaller carbon footprint than wealthy households, **low-income households are more exposed to energy issues and their consequences**, particularly as they own equipment and live in housing that generally consume more energy. This weighs proportionally more on the budget of the poorest French people, and risks slowing down the steps they take toward the transition. For these population segments, the benefits of an energy transition that is fair to all would be significant, in terms of comfort and health as well as financial gains. These benefits would be all the more significant in **a context of rising energy prices**.

After several years of moderation, this increase in energy prices reached +21.1% in February 2022 compared to February 2021,² with an acceleration in recent months (+28% on a rolling year in May 2022),³ and an increase affecting all energy sources (+4.9% for electricity, +47.1% for gas and +22.4% for gasoline in February 2022).

In terms of housing, **low-income or even very low-income households represent 50% of the residents in poorly insulated housing** (i.e., in housing classified as F or G according to the energy performance diagnosis), while 62% of the occupants of these energy-inefficient homes are over 60 years old. The fact that most of the occupants of these poorly insulated homes are low-income households puts them in a situation of energy insecurity,⁴ forcing them to spend more on heating or to reduce their consumption at the risk of exposing themselves to the cold. For example, studies by the National Energy Poverty Observatory (ONPE) show that **11.9% of French households spent more than 8% of their income on heating in 2019-2020, and 14% suffered from the cold** in their homes. In 40% of cases, this was due to poor insulation. Furthermore, 53% of households thus resorted to heating reduction strategies in 2020.

Fuel poverty: definition and figures

Fuel poverty is defined in article 1-1 of the Grenelle II law. Thus, people in a situation of fuel poverty experience “particular difficulties in obtaining the energy supply necessary to satisfy [their] basic needs due to the unsuitability of [their] resources or to [their] housing conditions.”

.../...

² INSEE, “Consumer Price Index – Provisional Results (CPI) – March 2022,” INSEE, March 31, 2022, <https://www.insee.fr/fr/statistiques/6325575>

³ INSEE, “Consumer Price Index – Provisional Results (CPI) – March 2022,” INSEE, March 31, 2022, <https://www.insee.fr/fr/statistiques/6448356>

⁴ Fuel poverty is defined by article 1-1 of the Grenelle II law as the difficulty in obtaining the energy supply necessary to satisfy basic needs due to inadequate resources or housing conditions. It can be assessed on the basis of the energy effort rate, if energy expenses for a home are higher than 8% of the household income, and on the basis of the feeling of cold.

Three main indicators are used to count the number of people affected by fuel poverty, which partially overlap with each other:

- The energy effort rate: a household is considered to be in a situation of energy insecurity if its energy expenses for housing are greater than 8% of its income. In addition, the household's disposable income per consumption unit must be below the 3rd decile of income per consumption unit. The energy effort rate is sometimes corrected for weather to take into account the impact of milder weather.
- The feeling of cold: based on the results of a survey, this indicator aims to count the number of households that suffer from the cold during the winter. Households are considered to be in a situation of energy insecurity if they state they have felt cold for at least 24 hours during the winter, and if they are in the first three deciles of the standard of living. This indicator is intended to be paired with the previous one: some households limit their consumption, which falls below 8% of their income, but as a result they feel cold in their homes;
- The “low income/high expenditure” indicator: this factors in two conditions, one is household energy expenditure, the other is income remaining after deducting housing expenses (excluding energy expenditure). Income must be below the poverty line, and energy expenditure above the national median.

A concept similar to fuel poverty is energy vulnerability. According to INSEE, a household is vulnerable if its energy effort rate (the forced expenditure on energy, i.e., heating, hot water and ventilation in the case of housing) exceeds a certain threshold. Energy vulnerability can be measured for both housing and travel expenses. The threshold for housing expenses is set at 8.2%, twice the metropolitan median, and at 4.5% for travel. The most affluent households are not considered vulnerable. In 2015, according to INSEE, 14.6% of French households were affected by energy vulnerability for housing, and 10.2% for travel.

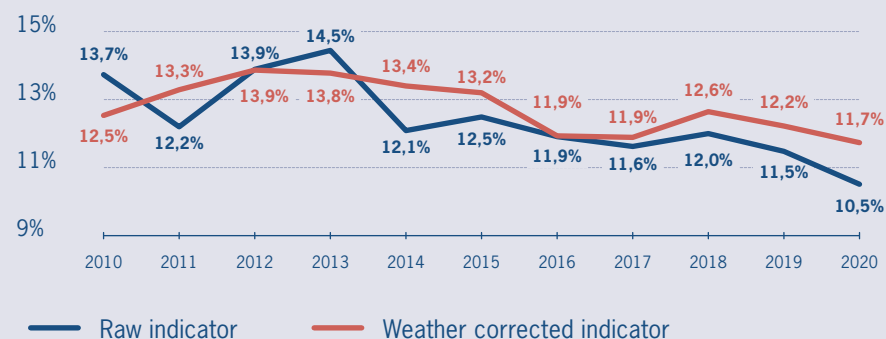
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Indicator trends since the beginning of the 2010s

Since the early 2010s, the primary indicator of fuel poverty, the gross energy effort rate, has decreased from 13.7% in 2010 to 10.5% in 2020. However, the seasonally adjusted rate for weather has changed much less from 12.5% in 2010 to 11.7% in 2020.

A significant decline in the gross rate of households in situations fuel poverty was observed in 2020 compared to 2019. In 2019, 11.5% of households were affected by fuel poverty, compared to 10.5% in 2020, or a total difference of 3 million households. Adjusted for the mild weather of the winter of 2019-2020, the indicator had also fallen slightly, from 12.2% to 11.7% of households. An income growth for the most modest households related to aid packages to cope with the epidemic and the drop in the prices of fuel oil and gas explain the rest of the trend. Data for the years 2021 and 2022 is not yet available.

Fluctuations in the energy effort rate indicator and in the weather-adjusted indicator since the early 2010s



2021, a year marked by a strong increase in the number of households reporting having felt the cold in their homes

Using other indicators, there is a sharp increase in the number of households reporting feeling cold for at least 24 hours in the winter of 2020-2021.

.../...

This rate increased from 14% in 2019-2020 to 20% in 2020-2021. The reasons for the cold being felt in these households are varied: 4 out of 10 households blamed the poor thermal insulation of their dwelling and 36% ascribed it to reducing their heating expenses for financial reasons, against 31% in 2020. 30% of households who have suffered from the cold mention the particularly harsh winter weather, compared to 21% in 2020.

In terms of transport, low-income households are also particularly affected by energy issues. Although they tend to have fewer motorized vehicles than the general population, these households have smaller vehicles, which consume less fuel, but they are also older (with an average age of 10 years compared to 8 years for the general population).⁵ Thus, the gradual implementation of low-emission zones (LEZs) to combat air pollution affects the most disadvantaged people most.

To improve air quality in cities, the 2019 LOM law enforced LEZs restricting access to city centers, excluding the most polluting vehicles. While the LOM and the implementation decrees targeted only a dozen large metropolises, such as Paris, Lyon, Grenoble and Aix-Marseille, the law of August 22, 2021 – to fight climate change and bolster resilience in the face of its effects – known as the “Climate and Resilience Law,” expands the restriction by requiring all urban areas with more than 150,000 inhabitants to have an LEZ by December 31, 2024.

According to a 2018 survey by the Ministry of Ecological Transition, **the fleet of cars owned by modest households includes two-thirds (66%) of polluting vehicles** (i.e., cars eligible for Crit'Air 3, 4, 5 and unclassified stickers), meaning those destined to be banned from city centers in the coming years, compared to 37% for the most affluent households. Moreover, although they own vehicles that consume less overall, **modest households spend a larger proportion of their**

⁵ Théma, December 2020, Maud Jolly, Ministry of Ecological Transition, available at: https://www.ecologie.gouv.fr/sites/default/files/Th%C3%A9ma%20-%20Les%20voitures%20des%20m%C3%A9nages%20modeste%20-%20moins%20nombreuses%20mais%20plus%20anciennes_0.pdf

income on fuel (5.4% and 4.1% for the 1st and 2nd deciles, compared with 2.9% and 1.7% for the 8th and 9th deciles).⁶ Thus, on the basis of a survey of 13,000 people conducted at the end of 2021, the Barometer of Everyday Mobility set up by Wimoov and the Foundation for Nature and Man highlights that **3.6 million French people find themselves in a situation of “fuel poverty”** due to low income, high fuel costs and/or restricted travel. This vulnerability varies according to place of residence, with 94% of households in rural areas owning a vehicle, compared with 67% in the Paris metropolitan area.⁷

Finally, the challenges of a fair transition for all also pertain to food. Indeed, modest households spend a higher proportion of their budget on food (18.3%) than wealthy households (14.2%).⁸ In addition, products from organic agriculture, known as “organic products,” are often more expensive than those from conventional agriculture. In France, simulations conducted by I4CE show that **a transition to a more sustainable diet could result in savings of up to nearly 30% or in additional expenses of 67%,⁹ depending on the changes in the food basket and the reduction of food waste.**

In addition to the support for low-income households detailed in this report, a fair transition is also one that requires the most affluent households to contribute more and more quickly, especially since they have a carbon footprint much larger than the average French person. This increased demand necessarily translates into constraints that are directed more towards these households.

3. The transition pace is still insufficient to achieve the climate goals

The Intergovernmental Panel on Climate Change (IPCC) has once again sounded the alarm with its sixth assessment report, published in April 2022, reminding us that there are **only three years left to reverse the curve of GHG emissions** and thus maintain global warming below 1.5°C.

In fact, France's current energy transition pace remains below that required to achieve carbon neutrality by 2050. According to the annual report of the High Council for Climate (HCC), **France has reduced its GHG emissions at a slower pace than Germany or the UK since 1990**, exceeding its carbon budget by 62 million tons of CO₂ between 2015 and 2018. The targets for the 2019-2022 budget, meanwhile, have been revised downwards. This overshoot of the budget set by the National Low Carbon Strategy (SNBC) prompted the administrative court to condemn the state for “climate inaction” in October 2021. Despite a slight acceleration in efforts in 2019, with a reduction in GHG emissions of 1.9% and the downturn due to the health crisis in 2020, **the annual rate of emissions reduction will have to almost double to 3.3% between 2024 and 2028.**

When it comes to housing and thermal renovation, France is showing mixed results. A steady decline in emissions from the sector has indeed been recorded, with a 5.5% drop between 2015 and 2018 according to the HCC, compared to a 6.3% drop in Germany, a 1.1% drop in Spain and a 0.8% increase in Italy. Yet, there is still a significant backlog in the reduction of energy consumption. Currently, only 6.6% of French real estate is classified as A or B in terms of energy consumption. Conversely, 16.8% of primary residences have a DPE label (energy performance diagnosis) of F or G according to the ONPE.¹⁰ This means that **about 4.8 million homes in France are classified as having a poor energy performance**, and some estimates even put the figure at 7 to 8 million homes,¹¹ due to the changes in the methods for calculating the energy performance diagnosis.

Moreover, current efforts to reduce this number are insufficient. The TREMI (Energy Renovation of Individual Houses) survey reveals that only 5% of renovation projects carried out between 2014 and 2016 resulted in a significant reduction in energy

6 Mainaud, Thierry. “In 2017, Households Spend 11% of Their Disposable Income on Cars.” INSEE, April 26, 2021, <https://www.insee.fr/fr/statistiques/5358250>.

7 INSEE, “Tableaux de l’économie française. Household Equipment.” INSEE, February 27, 2020, <https://www.insee.fr/fr/statistiques/4277714?sommaire=4318291>.

8 Demoly, Elvire, and Camille Schweitzer. *Lower-income households spend more on housing and higher-income households spend more on transportation*, INSEE Focus n° 203, September 2020, available at: <https://www.insee.fr/fr/statistiques/4764315>.

9 Bellassen, Valentin, et al. *Does more sustainable food increase consumer budgets?*, Climate Update #67, Institute for Climate Economics, October 2021, available at: <https://www.i4ce.org/wp-core/wp-content/uploads/2021/11/Point-Climat-Une-alimentation-plus-durable.pdf>.

10 ONPE, “Fuel poverty monitored by the ONPE within ADEME”, ONPE, 29 March 2022, <https://expertises.ademe.fr/batiment/quoi-parler-precarite-energetique-suivie-lonpe-sein-lademe>.

11 Canu, Marion and Delphine Denuit. “Real Estate: ‘7 to 8 million’ poorly insulated homes in France according to the FNAIM”, Le Parisien, January 13, 2022, <https://www.leparisien.fr/immobilier/immobilier-7-a-8-millions-de-passoires-energetiques-en-france-selon-la-fnaim-13-01-2022-E7BYNSTEGRCDLEJ46VST2CTQZE.php?ts=1655136364293>

consumption (a two step upgrade on the DPE), without necessarily reaching the BBC level (low consumption level). **The schemes thus tend to favor one-off renovations rather than comprehensive renovations, which are more efficient from an energy perspective.** The HCC report confirms this observation. Moreover, it estimates that only 0.2% of renovations carried out between 2012 and 2016 were comprehensive renovations that met BBC standards, which would necessitate accelerating to 1.9% per year by 2030 to achieve the objectives set by the SNBC. In addition, a significant portion of comprehensive renovations is currently being carried out by social housing landlords, with Action Logement aiming to start the renovation of all its F and G housing before the end of 2023. However, comprehensive high-performance renovations of individual housing remain few (4,000 according to a report by Effnergie).¹²

France is also lagging behind in the transport sector. According to the HCC, compliance with the SNBC trajectory for the sector requires a five-fold increase in the current rate of GHG emissions reduction. Indeed, the **sector's emissions made up 29% of French emissions in 2020**, and had even increased by 9% compared to 1990, in contrast with other sectors.¹³ For private vehicles, a downward trend in average carbon dioxide emissions for registered cars is noticed, as a result of the new European standards for car manufacturers. These standards were 96.8 g/km in 2020 compared to 111.5 g/km in 2019. It should be pointed out, however, that only 2.3% of the 38.2 million cars on the road at the beginning of 2020 were powered by alternative energies,¹⁴ with 0.4% using electric power.

The electrification of the car fleet is now underway. **The share of electric cars and plug-in hybrids in vehicles sold has reached 18.3% in 2021**, whereas it was still only 2.7% in 2019.¹⁵ Faced with the more polluting cars of low-income households, specific support measures have been put in place, such as the doubling of the “car conversion bonus” to 5,000 euros in 2019 for this group. The same year, more than 80% of the conversion bonuses went to non-taxable households.

¹² Ademe, *Overview of existing schemes for the efficient renovation of individual houses*, 2020, available at: https://www.effnergie.org/web/images/attach/base_doc/2448/rapport-panorama-renovation-performance-en-maisons-individuelles.pdf.

¹³ French General Commission for Sustainable Development (CGDD), *Overview of French greenhouse gas emissions 2021*, available at <https://www.notre-environnement.gouv.fr/rapport-sur-l-etat-de-l-environnement/themes-ree/defis-environnementaux/changement-climatique/emissions-de-gaz-a-effet-de-serre/article/panorama-des-emissions-francaises-de-gaz-a-effet-de-serre>.

¹⁴ Ministry of Ecological and Solidarity Transition, 38.2 million cars on the road in France, September 21, 2020, available at : <https://www.statistiques.developpement-durable.gouv.fr/382-millions-de-voitures-en-circulation-en-france>.

¹⁵ Automotive Platform, “French Automotive Market – December 2021,” Automotive Platform, January 3, 2022, <https://pfa-auto.fr/2022/01/03/marche-automobile-francais-decembre-2021/>.

However, these households remain hampered by physical obstacles, including the lack of charging stations: **France only had 58,000 charging stations in April 2022, despite a target of 100,000 by the end of 2021.**¹⁶

4. What assistance schemes are available today?

In order to support the energy transition, public authorities have already put in place a number of measures, particularly targeted at the most modest households.

For housing

- **MaPrimeRénov’**. Created in 2020, this grant is the main tool mobilized by the State to subsidize energy renovation work for individuals. It replaces the Tax Credit for Energy Transition (CITE), which mostly benefited households with the highest incomes (the 9th and 10th deciles accounted for 45% of beneficiaries).¹⁷ By contrast, MaPrimeRénov’ is a flat-rate premium, for which the renovation work itself and the household income is taken into account to determine the amount of subsidies that can be received. This grant is intended for both landlords and tenants, and can be combined with other schemes.

In order to encourage households to increase the efficiency of their renovation project, **various supplements can be paid as well**. These include a bonus for a home’s energy efficiency being improved out of “thermal sieve” status, another for achieving BBC level, and an overall renovation bonus for work that results in energy savings of more than 55%. **MaPrimeRénov’ Sérénité** (formerly *Habiter Mieux Sérénité* by ANAH) also helps low-income or very low-income households to carry out comprehensive renovations of their homes with a minimum energy gain of 35%, coupled with mandatory support.

¹⁶ Avere France, National barometer of charging infrastructures open to the public, available at <https://www.avere-france.org/publication/barometre-plus-de-55-000-points-de-recharge-ouverts-au-public-en-france/#:~:text=Become%20Adh%C3%A9rent,%5BBarom%C3%A8tre%5D%20Pl>.

¹⁷ Giraud, Joël, Information report on the application of tax measures, report on behalf of the Committee on Finance, General Economy and Budgetary Control of the National Assembly, July 2019, available at : https://www.assemblee-nationale.fr/dyn/15/rapports/cion_fin/115b2169_rapport-information.

The MaPrimeRénov' scheme has already met with great success. Launched on January 1, 2020, it was originally exclusively for households with "modest" and "very modest" incomes, and had resulted in some 200,000 applications during the year 2020.¹⁸ Extended at the beginning of 2021 to all homeowners and co-owners, MaPrimeRénov' financed 650,000 housing renovations that same year,¹⁹ without however distinguishing between one-off renovation projects and comprehensive high-performance renovations.

- **Interest free eco-loan.** This bank loan, granted with no maximum income restrictions for eligibility and covering amounts between 7,000 and 50,000 euros, is provided to finance thermal renovation work in housing. It can be granted to a lessor or a joint owner. The amount of the loan is determined by the renovation work being carried out. In 2020, 42,107 loans were distributed for an average amount of 12,561 euros.²⁰
- **Energy saving certificates (CEE).** These financial aids are given by energy suppliers without any conditions based on income, and are granted in addition to public subsidies. The amount varies according to the nature of the work and the increase in energy performance achieved, with a bonus for households in precarious situations. As of May 1, 2022, CEE aid has however been reduced for insulation work (walls, low-level floors) as part of a larger plan to fight against the many scams that promise renovations for one euro.
- **"Heating", "Insulation" and "Efficient Renovation" grants.** Paid by the energy suppliers to any homeowner, without means testing, these grants target specific work (heating replacement, insulation or reduction of primary energy consumption by at least 55%). The amounts vary according to the type of work and the recipient's income. However, the "Coup de pouce Isolation" (insulation grant) will be discontinued as of July 1, 2022.

- **Grants from local authorities.** Some local authorities, like Roubaix, Montauban or Metz, may also decide to temporarily grant full or partial property tax exemptions for any household that carries out energy-saving renovation work, regardless of household income. In addition, there are various local grants to subsidize renovation work offered by the region or the municipality.
- **5.5% VAT rate.** This applies to energy improvement work, regardless of income.
- **Energy voucher.** This scheme is designed to help low-income households pay their energy bills or renovate their homes. It is sent automatically to 5.8 million low-income households, for an annual amount that can range from 48 to 277 euros per year, at an average of 150 euros, and with a utilization rate of about 80% in 2019.²¹

For transportation

- **Ecological bonus.** Granted without means testing, the bonus is paid for the purchase of new or used electric vehicles, as of July 2022. Plug-in hybrid vehicles will be excluded from the scheme. The amount varies according to the type of vehicle (new or used) and its price, and the bonus is capped at 5,000 euros.
- **Conversion bonus.** This scheme benefits households buying or leasing a low-polluting vehicle who simultaneously scrap their old diesel or gasoline vehicle. The bonus is cumulative with the ecological bonus. It varies according to income level and type of vehicle bought. An additional bonus may be granted to residents or workers in LEZs. The maximum amount (bonus and premium) can reach 11,000 euros for a vehicle worth less than 45,000 euros, for a modest household driving to work.
- **Bonuses for bicycles.** Various incentives exist for households wishing to acquire a bicycle: conversion bonus for an electric bicycle, bicycle bonus for the purchase of an electrically-assisted bicycle by low-income households, grant paid by the local authorities, etc.

¹⁸ Richir, Camille. "Energy renovation: the unexpected success of Ma Prime Renov", La Croix, June 9, 2021, <https://www.la-croix.com/Renovation-energetique-succes-inattendu-Ma-Prime-Renov-2021-06-09-1201160258>.

¹⁹ Jacque, Muryel. "Energy renovation: how France can still accelerate the pace," Les Echos, May 20, 2022, <https://www.lesechos.fr/politique-societe/societe/renovation-energetique-comment-la-france-peut-acceler-la-cadence-1408331>.

²⁰ Société de gestion des financements et des garanties de l'accès social à la propriété, Statistical review of eco-loans issued in 2020, April 2021, available at: [https://www2.sfgas.fr/documents/100157/2129693/EPZ_Bilan_de_production.pdf/66c2cab0-66ea-4a20-9f1b-85ce6a298d64/EPZ%20-%20Bilan%20de%20production%20\(Annuel\).pdf](https://www2.sfgas.fr/documents/100157/2129693/EPZ_Bilan_de_production.pdf/66c2cab0-66ea-4a20-9f1b-85ce6a298d64/EPZ%20-%20Bilan%20de%20production%20(Annuel).pdf).

²¹ Observatoire National de la Précarité Énergétique, Energy poverty scoreboard, January 2021, available at https://www.onpe.org/sites/default/files/onpe_tableau-de-bord-de-la-precarite-energetique_2020_s2_0.pdf.

RECOMMENDATIONS

Broadly speaking, it is important to identify and **convey a positive narrative about the energy transition** and about reducing the carbon footprint. For modest households worried about the making ends meet, making it to the end of the month is of more concern than the “end of the world,” it is therefore necessary to integrate the energy transition in everyday life. The tangible benefits that individuals can derive from the transition in the short term must be highlighted, beyond the ecological considerations of nature in the longer term. And for good reason, **the financial gains and, above all, improvements in terms of living conditions, are more likely to trigger** a home renovation and energy transition process, as are the increased acceptability of possible constraints related to the transition. In fact, 78% of respondents to the TREMI survey stated that they had carried out work to improve the comfort of their home, compared with 49% to reduce their energy bill and 14% to improve the environment.²²

Moreover, while these recommendations focus on support for low-income households, they must **supplement a more comprehensive approach that aims to engage all the sectors targeted below in the energy transition**. For example, to accelerate the transition in the building sector, more building professionals need to be trained in the specifics of energy renovation, particularly in high-performance comprehensive renovation. In the same way, equipping low-income households with electric vehicles will be boosted by the development of a diversified selection of electric vehicles, at lower prices than those currently offered on the market. Finally, sustainable and high-quality food can only be offered to the whole population if the entire agricultural sector is supported in its efforts to adopt more eco-responsible practices.²³

1. Improve technical and financial support for thermal renovations

While this work focuses on the thermal renovation of old housing, it should be noted that access to energy-efficient housing can also be achieved through the purchase of a new home. Access to property, and even more so to new housing, is certainly more rare for low-income households. Nevertheless, various measures exist to enable this (reduced VAT rate, subsidized access, etc.). However, the main challenge in this area remains the supply of available land, which is currently limited, with the aim of easing the price of new housing. This imperative must be reconciled with the need to reduce the artificialization of land, hence the recycling of urban wasteland and the conversion of offices into housing could provide the first line of action.

RECOMMENDATION 1

Initiate a proactive identification approach, then raise awareness and encourage thermal renovation work for homeowners and landlords of energy-inefficient housing, particularly in sparsely populated areas.

Findings

In France, low-income households generally lack information about their rights and the assistance schemes available for thermal renovation, especially since the multiplicity of offers at different levels makes the system difficult to understand. In particular, low-income homeowners are often **unaware of the existing grants** and **rarely take a proactive approach to thermal renovation**, even though the processes are simplified and the available grants are significant. Thus, before the implementation of MaPrimeRénov', 64% of French people were unable to name even one of the thermal renovation schemes – a number that is now decreasing. At the same time, only 5% were able to identify the schemes provided by the government.²⁴ In fact, 25% of homes could be renovated without public subsidies and yet are not, even though these operations would be profitable in terms of energy savings.²⁵

²² Ademe, *Survey on Energy Renovation Work in Individual Houses (TREMI)*, January 2020, available at: https://www.statistiques.developpement-durable.gouv.fr/sites/default/files/2022-03/rapport_onre_mars2022.pdf.

²³ Institut Montaigne, *Campaigning for the agriculture of tomorrow*, October 2021, available at: <https://www.institutmontaigne.org/publications/en-campagne-pour-lagriculture-de-demain>.

²⁴ Les Echos, “Energy renovation: the French are lacking information,” October 3, 2019, <https://www.lesechos.fr/patrimoine/immobilier/renovation-energetique-les-francais-en-manque-dinformations-1137086>.

²⁵ France Stratégie, *Increasing investment in the energy renovation of private housing*, October 2020, available at: <https://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/dt-renovation-thermique-octobre.pdf>.

Moreover, **despite being pervasive, fuel poverty in rural areas is generally more difficult to identify, due to certain areas being sparsely populated.**

Thus, more than a third of energy-insecure households lived in rural areas in 2009 in France.²⁶ In addition, there is a form of self-censorship from people who do not wish to admit to fuel poverty and prefer to restrict their energy consumption for fear of being stigmatized – even if this means being cold and well below average comfort levels.²⁷ This leads to people not taking advantage of the mechanisms.

Faced with these myriad challenges, France Renov' is now more reliant on a passive approach focused on welcoming people wishing to renovate their property. France Renov' relies on certain operators, such as Soliha, who identify households in precarious situations. However, France Renov' spaces, which are to be deployed in most inter-municipalities, are not intended to take a proactive approach to identifying and convincing eligible owners.

Challenges and implementation methods

To remedy this situation, France Renov's roadmap could be expanded to include a **proactive approach to identifying owners of poorly insulated properties.** Identification could be made through a local program to detect these owners with a focus on identifying individual households. It could involve France Renov' and local authorities, in particular the local social action centers or the family allowance funds (CAF), but also mobilize networks of local players, such as postal service workers, at-home helpers or associations, in order to guide those in need toward the right professionals. In order to avoid stigmatization and to reduce apprehension regarding energy renovations, identification and contact could be made through a trusted contact person, such as a social service worker.

This program could rely on IT tools for **data cross-referencing** (from energy suppliers, ENEDIS, tax authorities, DPE, CAF) to identify low-income owners of poorly insulated homes – although this must meet the requirements of the General Data Protection Regulation (GDPR). To this end, as early as 2019, Institut Montaigne recommended the creation of databases aggregating DPE and CITE information (CITE is now MaPrimeRénov'), and making them available in open format (with the

owner's consent) to facilitate access to energy efficiency players.²⁸ However, most of the coordination work must be done **at the local level.** To this end, it was also suggested that the CAF provide ANAH with a list of potential beneficiaries (i.e., homeowners in difficult situations), in order to improve identification and increase the number of renovations.

Subsequently, **a real effort to raise awareness** should be made. An approach set on convincing target audiences thus implies highlighting (i) the immediate advantages that a comprehensive renovation would provide in terms of comfort and financial savings, which would more likely lead to a positive decision than ecological considerations alone, but also (ii) the various existing technical and financial support mechanisms (Prêt Avance Rénovation, MonAccompagnateurRénov', MaPrimeRénov', etc.), in order to remove the various material and psychological barriers faced when considering committing to the significant project that is the comprehensive renovation of one's home. This endeavor to raise awareness could also focus on low-income tenants living in "thermal sieve" homes, so as to inform them of their rights in terms of renting decent housing, but also able to engage with their landlords to encourage them to undertake renovation work.

To raise awareness, **digital tools, such as mobile applications,** could facilitate the understanding of the financial stakes by simulating the financial gains that can be made by undertaking various works, or by the use of an electric vehicle, and by comparing these with current household expenses – similarly to what has been done in the fight against smoking. This does not preclude the use of more traditional communication campaigns, particularly through the local press or community newsletters.

This effort to go toward people will necessitate **a reinforcement of human, electronic and financial resources,** both for first level local contacts (mail carriers, CAFs, social workers) and for the professionals involved in thermal renovations. This should go hand in hand with **social support,** which can be provided through a partnership approach with the central social activity funds (CCAS) or the CAF. The aim is to adopt a global approach capable of accompanying households regarding the different aspects of fuel poverty, while removing a wide variety of barriers. This social support may be particularly necessary for "highly precarious" households, who are deprived of heating or no longer pay their bills.

26 Pelletier, Phillipe, et al. *Report of the Task Force on Fuel Poverty*, December 2009, available at: http://www.hclpd.gouv.fr/IMG/pdf/Rapport_Pelletier_precarite_energetique_cle0ddb6a.pdf.

27 Le Roux, Dominique. "Energy precariousness in rural areas in France: the role of mediation structures," *Europe in Training*, vol. 378, no. 4, 2015, pp. 90-104, <https://doi.org/10.3917/eufor.378.0090>.

28 Institut Montaigne, *Energy renovation: a project accessible to all*, July 2019, available at : <https://www.institutmontaigne.org/publications/renovation-energetique-chantier-accessible-tous>.

This proactive approach could be developed further in order to **encourage homeowners living in sparsely populated areas to join together to undertake thermal renovation work**. This grouping would make it possible to massify the volumes and thus lower the cost of the work. It would therefore be interesting to scale up the “EnergieSprong” initiative. This initiative identifies dwellings with similar thermal renovation needs, negotiates with businesses to arrange the purchase of the necessary materials in large quantities and at preferential prices, and manages the work in a short timeframe, while also maintaining a financial balance for the occupants.

Impacts on the personas

- The Lamberts and their neighbors could be convinced to go ahead with comprehensive renovation work thanks to a reinforced awareness-raising process led by local players whom they trust (La Poste, FranceRénov', etc.). These middlemen could overcome their reluctance in terms of cost and duration of work, by directing them to service providers offering a comprehensive support approach. In order to convince them, it could be relevant to explain the amount they would save on their energy bill after a renovation, which would likely allow them to go on their annual trip again.
- The Rossi could be contacted by France Rénov' or one of its partners, for example by a service in the average-sized municipality in which they live – which would have launched a program to identify the owners of individual “thermal sieve” homes. This awareness-raising process could encourage them to embark in a renovation process, in particular by showing them how to simply benefit from assistance schemes and by explaining how they could put an end to their heating restrictions. The Rossi's could even be encouraged by the municipality to group together with other residents in their area to lower the costs of renovation, which they may currently deem too high.

RECOMMENDATION 2

Increase technical support for low-income households opting for thermal renovations, notably by improving access to a project management assistant.

Findings

Although the comprehensive renovation of a home is the most appropriate solution in terms of both comfort and energy savings, few households dare to embark on this path. Aside from financial issues – such as the remaining uncovered costs, the search for subsidies, the advancing of uncovered costs – **the need for technical expertise and the uncertainties in the execution of the work** can increase the reluctance of modest households. They tend to perceive the work as a perilous undertaking, in which the results in terms of insulation and energy gains may be uncertain. However, information and support are still underdeveloped. Thus, in 2018, only 15% of households in single-family homes who have carried out work have benefited from an information and support process.²⁹

Hence, initiatives to simplify and increase support have been launched in recent years.³⁰ **A single point of initial contact**, France Rénov', **as well as a project management assistant**, Mon Accompagnateur Rénov', **have been set up** under the impetus of the Climate and Resilience Act. This project management assistance (AMO) brings together existing solutions (e.g., ADEME's FAIRE network, Renovation Information Points, etc.) under a single reference brand. Since January 2022, this assistance can help determine the necessary work, assist in the choice of companies and assess quotes, or provide support for administrative procedures and the mobilization of funding. Today, this support is only mandatory in the case of a comprehensive home renovation benefiting from MaPrimeRénov' Sérénité.

A draft decree implementing Article 164 of the Climate and Resilience Law provides for an extension of this obligation to provide guidance from September 2023 for work benefiting from the “comprehensive renovation” bonus and for work packages receiving a premium of more than 10,000 euros. This same draft decree should expand the guidance role to communities or private operators, but prohibit the latter from carrying out “directly the execution of work” to ensure independence in the advice and absence of conflicts of interest.

²⁹ Ademe, *Survey on Energy Renovation Work in Individual Houses (TREMI)*, 2018, available at: <https://bibliothèque.ademe.fr/cadic/1672/enquete-tremi-2017-010422.pdf?modal=false>.

³⁰ Sichel, Olivier, *Report for a massive, simple and inclusive energy rehabilitation of private housing* Report made for the Banque des Territoires, March 2021, available at <https://www.banquedesterritoires.fr/sites/default/files/2021-03/RAPPORT%20sichel.pdf>.

Challenges and implementation methods

As proposed by the HCC in its November 2020 report (see *above*), **more systematic support by a certified energy expert** could be implemented for low-income households. This expert would provide comprehensive support, including social support, which would strengthen the confidence of households in the renovation process. The thresholds for the relevant work could be lowered to 5,000 euros rather than 10,000 euros as planned in the decree currently being drafted, in order to encourage households to undertake more renovation work, rather than just single item renovations.

This mechanism would be accompanied by an **increase in the level of subsidies**, similar to what is available in Germany – where subsidy are between 50 and 80 percent of the total amount of the service. According to the HCC, the AMO and the energy audit were only subsidized up to 600 euros in 2020, which is significantly less than in Germany, where these services can be subsidized up to 2000 euros. The remaining costs could be covered by the various equity advance schemes (micro-credit, interest-free eco-loan, renovation advance loan). The Sichel report estimated the overall cost of mandatory and reinforced support at 370 million euros per year.

However, an increase in support will only be possible if **the user pathway is made more fluid**, which implies reducing the number of middlemen and stages. Potentially interested people can easily be led to give up on their renovation process, especially since these households are often overwhelmed by administrative complexity.

In addition, more consistent support implies **ensuring adequate training for a sufficient number of advisors and experts** to guarantee the relevance of the advice and of the renovations undertaken, and to allow for a sufficiently large amount of support time to be given to each household. Otherwise, there is a strong risk of ending up in the situation exposed in May 2022 by *60 Millions de Consommateurs*,³¹ where the poor training of diagnosticians ends up leading to a lack of reliability in the energy performance diagnoses.

This increased reliance on certified experts to design projects and verify implementation would allow for **greater control over the distribution of grants**. Given the amount of the subsidies paid for energy renovations, it is important to reduce the

risk of fraud or misuse of public funds (e.g., the €1 insulation scam). As a guarantor of quality for the renovation, the advisor would be in charge of **verifying the relevance of the project and the chosen companies** (price and quality of services, certifications, coordination between professionals), and of **trying to increase its scope, but also of measuring the energy performance achieved**. In an aggregated way, this would allow for an assessment of the efficiency of public expenditure in thermal renovation – relevant data is currently fragmentary.

Finally, as provided for in the draft decree, it is important to **rely on initiatives taken by the private sector or local authorities in terms of comprehensive support**. While guarantees must be provided with regard to preventing conflicts of interest and the independence of experts, reliance on private operators is a relevant means of ensuring the rapid growth and quality of this network of technical advisors. In fact, private players already offer solutions that make it possible to remove the financial and technical barriers encountered by households, particularly low-income households, undertaking technical renovation – and without requiring the creation of public structures which would be longer and more complex to operate.

Impacts on the *personas*

- The Rossis could opt for a comprehensive renovation, the reinforced guidance making it possible to overcome their apprehensions pertaining to the technical complexity of the work and the multitude of available assistance schemes and grants. This would allow them to replace the gas boiler with a heat pump and to better insulate their home. Having given up on heating today, the increase in comfort for this household would be a convincing argument.
- Ben Harding is concerned about competition from large groups in the housing renovation market. Thanks to the development of renovation support, particularly in sparsely populated areas, Ben could be referenced among the service providers that these AMO will call upon for individual renovations, which are less likely to be targeted by large groups.
- Today, Bruno is a seasonal worker and is guided by an employment and training councillor. Faced with the strong demand for thermal renovation advisors, his councillor could direct Bruno towards training to become a project management assistant within a public network (ANAH, ADEME) or as a private operator. The high demand in the future would provide him with a more stable job than he currently has, but also with better pay.

³¹ Guibert, Fanny. "New DPE : errors galore!", *60 Millions de Consommateurs*, May 2022, <https://www.60millions-mag.com/2022/05/24/nouveau-dpe-diagnostic-performance-energetique-erreurs-pagaille-20067>.

RECOMMENDATION 3

Develop financing mechanisms to encourage households to undertake comprehensive high-performance renovations, both in terms of subsidies and equity advances, making a balanced cash flow possible for households before and after renovation.

Findings

Since January 1, 2020, MaPrimeRénov' has replaced the tax credit for ecological transition (CITE). This new scheme has corrected several of its predecessor's shortcomings, including insufficient targeting of the most efficient work and use primarily by the most affluent households. In this respect, the results are quite satisfactory: **81% of the grants went to low-income or very low-income households**, according to the France Relance evaluation committee. However, in a first audit dated September 2021, the Court of Auditors indicated: "while the objective of massification is undoubtedly perceptible, the verification of the quality and effectiveness of the work carried out to improve poorly insulated homes and to solve energy insecurity is not assured."

MaPrimeRénov' thus seems to encourage a massification of small renovation works but may not be effective enough to lead to efficient comprehensive renovations, which are necessary for the objective of reaching an average BBC level in 2050 for all real estate. In fact, **a significant number of individual endeavors do not allow major energy gains**. MaPrimeRénov' supports 86% single-item renovations, while only 3% of the grants awarded are for at least three simultaneous renovation works. The evaluation committee of the Recovery Plan estimates that 55% of the requests only include changing the heating system. However, **increases in the grant have been introduced** in the event that the home is no longer a "thermal sieve," or that the renovation is comprehensive (with a performance gain of at least 55%), or if the home achieves BBC level. Finally, since it is paid as a lump sum, MaPrimeRénov' is likely to create **windfall effects** for certain companies in terms of the prices charged, and thus lead to inflation in the costs of renovation work.

In addition, **financial obstacles persist and can delay the decision to begin a comprehensive renovation** because of the significant amount of work needing to be done. First of all, the remaining costs can remain high, reaching an average

of 38.6% for very low-income households and 55.7% for low-income households in 2021,³² even though the cumulative amount received was increased to 90% of the eligible expenditure for very low-income households and 75% for low-income households. However, very low-income and low-income households are often not able to advance the significant remaining sums, especially since these bonuses are paid once the work is completed.

The Renovation Advance Loan (PAR), which has been in place since January 1, 2022, should provide the first steps toward a solution, provided that it is distributed and actively promoted. It has the advantage of allowing very low-income and low-income households to repay the capital once the renovation work is completed, when the property is inherited or sold, and to pay the interest as it is due or after the fact. In addition, the amount of the loan can reach up to 70% of the value of the property before work is carried out, and is guaranteed by the State up to 75%.

Challenges and implementation methods

As MaPrimeRénov' was recently set up to correct the shortcomings of the previous CITE system, a complete overhaul does not seem appropriate at this time. The current system has the advantage of giving households a certain visibility on the lump sums they will be able to receive and of being relatively easy to understand. These elements have contributed to the success of this system since its introduction. Adjustments could nevertheless be made, particularly for low-income homeowners, in order to increase the search for energy performance based on the recommendations of the HCC report "Renovating better, lessons from Europe," dated November 2020.

- **Targeting subsidies in favor of comprehensive efficient renovations**

In the short term, this could translate into **a significant increase in bonuses for comprehensive renovations and for the achievement of BBC status**, in order to limit the remaining costs. The financial incentives in this area are currently insufficient, with bonuses of only 1,500 euros for low-income and very low-income households. According to the HCC, the combination of MaPrimeRénov' and CEE for a comprehensive renovation to achieve BBC level would range from 11,000 to

³² France Recovery Plan Evaluation Committee, *First Report*, October 2021, available at: https://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/fs-2021-rapport-evaluation-plan_france_reliance-octobre.pdf.

15,000 euros in 2020, while Germany offers subsidies of up to 48,000 euros. In addition, the total amount of subsidies that a household can receive for the renovation of a property is currently limited to 20,000 euros every five years. Finally, the total amount of the eco-PTZ is currently limited to 50,000 euros in France, whereas it can reach up to 120,000 euros in Germany. On the other hand, reducing support for some single action renovation works could be considered, as these often respond to short-term political objectives without achieving a BBC level renovation.

As proposed by the HCC, the increase in public support could be financed by eliminating the reduced VAT rate of 5.5% for energy renovation work, which benefits all renovation work regardless of its energy performance. Credits, which represented a tax expenditure of 1.39 billion euros in 2021,³³ could be redeployed to increase support for BBC level renovations.

In the longer term, and in line with the HCC, **a gradual shift towards a system of subsidies conditional to the achievement of real thermal performance gains** could be studied. Several methods are possible.

A first possibility would be to change the flat-rate financial aid to a subsidy offered as a percentage of the work, with **an increasing subsidy rate according to the energy ambitions** of the project, as in the German system. This would be accompanied by increased subsidy for support by an AMO (see below), while random verifications at the end of the work would be reinforced in order to check the performances of the companies responsible for the renovation.

An alternative could be the implementation of a **“conformity booklet”** to encourage multi-action renovations. While homeowners are reluctant to simultaneously engage in several elements of renovation work because of their high cost, there is nonetheless a need to opt for a multi-action renovation to achieve an efficient renovation. This mechanism would see subsidies increase for owners engaging in a multi-year approach for their renovation work.

• Developing solutions that reduce the need for advancing costs

In order to remove the financial obstacles hindering energy renovation work, it is important not only to reduce the amount of the remaining costs for low-income

33 Annex to the 2022 Finance Bill, Assessment of Ways and Means, Volume II, p. 179, available at: <https://www.budget.gouv.fr/documentation/documents-budgetaires/exercice-2022/le-projet-de-loi-de-finances-et-les-documents-annexes-pour-2022>.

households but also to **support the development of solutions that allow these same households to avoid having to advance costs**.

By making it possible to eliminate any early payment from a household's personal funds, the dispensation and large-scale promotion of the renovation advance loan are significant solutions. However, it is necessary to involve a greater number of banks than the only two currently involved (Crédit Mutuel and Banque Postale) and to encourage them to distribute these types of loans more widely to low-income households, who often do not have access to conventional real estate loans. In addition, an effort could be made to reduce the loan rate, which is currently at 2% (i.e., a higher rate than the average for real estate loans at the beginning of 2022), possibly thanks to a State-financed subsidy.

However, bank loans are only one of many potential solutions. To meet the demand of households for whom this solution is not an option, increased support for third-party financing companies could be sought. These companies could not only provide complete technical and financial support to households, but also advance the amount for the work and be reimbursed through the energy savings achieved. The renovation would thus be painless in terms of cash flow. Broadly speaking, this financial support must be accompanied by social support in order to remove all barriers that may be putting off households.

Simplifying the distribution of the interest-free eco-loan (eco-PTZ) is also necessary, as mentioned by the MP Bénédicte Peyrol (La République En Marche – LREM) in a report of June 2021,³⁴ especially because of the cumbersome procedures used to study the files and their criteria of attribution.

Thanks to this combination of increased and redirected subsidies and facilitated bank financing, it is possible to **engage in a massification of efficient comprehensive renovations that allow for a balanced cash flow before and after the renovation work** for households. Studies, and the work of certain associations such as DoRéMi, have shown that it is possible to achieve BBC level energy consumption in a large number of individual houses. **The substantial reduction in the energy bill makes it possible to finance the monthly installments of the loan taken out to pay the uncovered amount owing.**³⁵

34 Peyrol, Bénédicte, Annex No. 23 to the Report on the Draft Budget Settlement and Account Approval Act for the Year 2020, Financial Commitments of the State, Report on behalf of the Committee on Finance, General Economy and Budgetary Control of the National Assembly, May 2021, available at: https://www.assemblee-nationale.fr/dyn/15/rapports/cion_fin/15b4195-a23_rapport-fond.

35 Enertech, Effinergie, Médiéco, Institut Négawatt, Ademe, *Perf in Mind*, November 2021, available at: <https://librairie.ademe.fr/urbanisme-et-batiment/5265-perf-in-mind-renovation-performante-de-maisons-individuelles.html>.

Impacts on the personas

- Thanks to this assistance scheme for a comprehensive renovation, the Lamberts and their neighbors would be motivated to undertake various works in their condominium, in particular the insulation of the walls and the roofs. Without this, they might have been satisfied with only changing their oil-fired boiler without improving the rest of the building. Deciding to do this work across the whole building and overcoming the problems linked to the vacant apartments can be done by reinstating the simple majority vote for undertaking energy efficiency work in condominiums, as proposed by the Institut Montaigne in 2019,³⁶ and would be particularly useful. In order to assist them financially, a renovation advance loan would be granted. The Lamberts approve of the system since it would be deducted from the amount of the succession and they would thus bequeath a property that has increased in value to their children.
- The Rossis, guided by their *AccompagnateurRénov'*, could combine the various existing schemes, in particular *MaPrimeRénov'* Sérénité, the CEE and even some grants attributed by their municipality. The remaining cost could be financed by an interest-free eco-loan (*éco-PTZ*), whose monthly payments would be reimbursed in part thanks to the savings made on heating and the fuel savings they would make by giving up one of their two vehicles in favor of a bicycle.
- Thanks to the acceleration of the energy transition that the various measures would allow, Bruno could find a more permanent job in the thermal renovation sector. His employment counsellor could guide him towards training in this field, especially since the demand for labor to meet the growing number of renovations is high.
- The acceleration of comprehensive renovations and the growing volume of the thermal renovation market would fill Ben Harding's order book, guaranteeing business for several years. In order to carry out this specific kind of renovation work, he must nevertheless train and take the necessary steps to get "Recognized guarantor of the environment" status (RGE).

RECOMMENDATION 4

Improve the financial incentive for landlords to renovate their properties through increased short-term assistance schemes that decreases gradually, combined with tighter rental restrictions.

Findings

Landlords may be reluctant to undertake major thermal renovation work that affects the profitability of their property. However, French rental properties currently include more of the energy-intensive properties (23% with F or G labels, compared to 17% for owner-occupied housing).

Because of this, the Climate and Resilience Act introduced **a progressive ban on renting** thermally inefficient flats, which can lead to the decision to renovate. However, the deadlines set (class G in 2025, F in 2028, E in 2034) are far in the future when considering the magnitude of the climate emergency, and they do not address "moderately" efficient housing. These increasing bans do not therefore provide a sufficiently ambitious trajectory to aim for an average BBC level in housing by 2050. In addition to this, there is a ban on increasing the rent for "thermal sieve" housing (classes F and G) when they are subsequently rented, and on increasing the rent during the course of the lease, as of August 25, 2022. Finally, as of January 1, 2023, a property cannot be considered decent housing if its final energy consumption exceeds 450 kWh/m² (the threshold for belonging to category G), which affects only 90,000 dwellings, 70,000 of which are private.³⁷

More incentivizing schemes have also been put in place. **Both homeowners and landlords are eligible for *MaPrimeRénov'***, under the same conditions in terms of resources and renovation work. Landlords must commit to renting the property for at least five years and cannot benefit from the scheme for more than three rented properties. The ANAH programs, on the other hand, are subject to even stricter conditions (35% improvement in energy consumption, controlled rent, renting to a modest household, etc.)

³⁶ Institut Montaigne, *Energy renovation: a project accessible to all*, July 2019, available at : <https://www.institutmontaigne.org/publications/renovation-energetique-chantier-accessible-tous>.

³⁷ Government, "Prohibiting the rental of housing with high energy consumption from 2023", *Government*, 31 March 2021, www.gouvernement.fr/actualite/interdiction-a-la-location-des-logements-avec-une-forte-consommation-d-energie-des-2023.

Challenges and implementation methods

Since households owning an additional apartment which they put up for rent are on average better off,³⁸ it is possible to seek to entice this segment of the population to make thermal renovations first, as they are more able to afford it. This would benefit more modest tenants who are sometimes in a situation of energy insecurity. In order to increase the number of renovations undertaken by landlords, it seems necessary to act on the two levers which are constraints and financial incentives. In this respect, **a double long-term perspective could be given to landlords.**

First, **a reinforced and increasing ban on renting out properties with low energy performances** could be adopted, drawing a more ambitious trajectory by 2030 while providing a perspective beyond the current deadlines of 2034. Such a perspective would weigh on the financial profitability of the least efficient properties, negatively affecting their value in case of resale. However, this implies a prior reinforcement of the credibility and relevance of the energy performance diagnosis, as its overhaul has been cause for recent criticism.

Second, such a measure could be combined with **schemes that are reinforced in the short term, but decrease gradually.** The pincer effect of an increase in constraints and a gradual decrease in subsidies could boost renovations in the short term, provided that landlords are widely informed about the profitability prospects for their properties.

There are several possible ways to increase the financial incentives. The simplest solution would be to **increase the eligibility thresholds**, potentially in exchange for an increase in the energy consumption gains to be achieved. The MaPrimeRénov' scale is in fact identical regardless of the owner is renting out the property or living in it. However, lessors tend to be better off, on average, than owner-occupiers. Such an increase would nevertheless raise questions regarding the social acceptability and efficiency of public spending. Indeed, a windfall effect could then be created in favor of the most affluent households, while these are the ones who already have sufficient means to comply with the future obligations.

In order to focus schemes on the least well-off landlords, at a constant cost, **increased modulation of support programs according to income** could also be studied. This would mean increasing the amounts for the most modest households

³⁸ There are half as many poor or modest households among owners of multiple properties as there are in the general population (19% versus 41%). INSEE, "Social portrait of France," INSEE, November 25, 2021, <https://www.insee.fr/fr/statistiques/5435421>.

and, possibly, reducing the support for the most affluent. However, this requires the establishment of clear thresholds to distinguish between lessors who can or cannot easily afford to finance this work. Alternatively, **modulation according to assets** could be considered, as it would focus support and raise the thresholds for households with a single rented property.

Impacts on the personas

- Anissa is currently experiencing fuel poverty due to the lack of renovation in her rental property. With the harsher constraints on renting out under-performing flats, the owner of Anissa's apartment could be encouraged to have it renovated, otherwise it will not be able to continue to be rented out. The owner may decide to do so sooner rather than later as the subsidies received are likely to decrease. Such a renovation would allow Anissa to make substantial savings on her energy bill since she will no longer have to leave the heating on all day thanks to better insulation.

RECOMMENDATION 5

Extend the scope of the clean vehicle microcredit to other expenses related to the ecological transition, in particular for efficient household appliances, and align the threshold with the personal microcredit.

Findings

In France, a **"clean vehicle" microcredit was introduced in March 2021** to support very low income households in the acquisition of a clean vehicle, as they are often turned down by the traditional banking system. This microcredit can be combined with other government schemes to reach a maximum amount of 5,000 euros, repayable over 5 years, of which the State guarantees 50% of the amount. However, this amount does not always cover the remaining cost of purchasing a clean vehicle, despite the various forms of government grants available. There is also a **personal microcredit** intended to finance a project designed to improve the social or professional integration of very modest households – e.g., the purchase of a professional vehicle or attending professional training. This microcredit is currently capped at 8,000 euros over 7 years.

These two schemes are for specific expenses, which do not include household appliances and housing equipment. However, **household appliances constitute a major expense**, whether it is for the purchase of new equipment or the renewal of obsolete equipment, due to the high price of the appliances but also because of their energy consumption. A 2021 study conducted by ADEME calculates that refrigerators and freezers (11.2%), washing and drying machines (6.4%), kitchen appliances (6.2%) and lighting (3%) account for a significant portion of the average home's electricity consumption.³⁹ Available financing is scarce for these expenses, apart from loans of a few hundred euros granted by pension funds or CAFs to help struggling families buy basic equipment.

Challenges and implementation methods

The scope of the microcredit for clean vehicles could first be extended to other expenses related to the energy transition. Such a scheme could notably enable **the acquisition of efficient new or second-hand household appliances**. Although this could compete with consumer credits, the scheme would round-off the current financing offers, especially for households that are not welcome in the traditional banking channels. In addition, a subsidized rate could be offered for these durable goods, in order to provide an advantageous alternative. Support in choosing equipment could be offered in this case, by connecting the household with associations specialized in this field.

Additionally, **raising the threshold and duration of clean vehicle microcredits by aligning them with the threshold and duration of personal microcredits** could increase the scope of eligible expenses while maintaining a reasonable amount. This would make it possible to cover a larger share of the remaining expenses related to the purchase of an electric vehicle.

Impacts on the personas

- Anissa could gradually renew her household appliances, using a microcredit to buy more energy-efficient equipment – the obsolescence of her current equipment is leading to overconsumption. Part of the energy savings could be used to reduce the energy bill. While Anissa is particularly affected by these problems, many

other personas would also benefit from this scheme to acquire more sustainable appliances.

2. Encourage the development of various sustainable mobilities

The choice was made not to address the development of the main transport infrastructures in the recommendations below, in particular those related to the public transport offer, the deployment of which often requires longer-term actions – which was at the focus of the *Transport Infrastructures: Towards a Sustainable Future!* report published by Institut Montaigne in April 2022. Similarly, the need for more efficient distribution of public transport infrastructures was the focus of a series of dedicated proposals in the *Daily Commute: Setting the Course for Carbon-Free Travel* report, published by Institut Montaigne in December 2021. However, it should be kept in mind that public transportation remains the most effective alternative to private cars, particularly in rural and suburban areas, where the use of bicycles and carpooling is more difficult.

Nevertheless, this last report advocated for the **development of multimodal roadside interchanges on expressways** and for bus-only lanes departing from these interchanges, offering a solution that can be rolled out in the short term for suburban areas. By providing access to expressways, regular service, and secure parking, these hubs can reduce transportation costs and travel times while easing congestion on the roads.

It would also be useful to simultaneously **develop more Bus Rapid Transit (BRT) lines or an express bus network** in less dense areas. For a limited cost, these alternatives would make it easier to reach previously isolated areas, increase the frequency of service, and extend service hours to meet the needs of low-income people who often work staggered hours or late shifts.

RECOMMENDATION 6

Increase the use of carpooling for home-work trips by setting up dedicated infrastructure, increasing financial incentives and developing inter-company mobility plans.

³⁹ Enertech, RTE and ADEME, *Household appliances panel*, March 2021 available at : <https://bibrairie.ademe.fr/changement-climatique-et-energie/4473-panel-usages-electrodomestiques.html>.

Findings

At a time when rising fuel prices are weighing on households' purchasing power and cities are seeking to reduce the amount of car traffic, an April 2022 study conducted by Vinci shows that more than **8 out of 10 drivers travel alone on a daily basis**, a proportion that reaches nearly 90% on home-to-work trips. Despite the development of digital applications to expand the transportation offer, carpooling remains uncommon. The perceived lack of flexibility does not encourage drivers to forego their own vehicles (schedules, routes, stops along the way). Yet carpooling can be a powerful solution to rising fuel prices. In 2021, the Ministry of Ecological Transition estimated that a person living 30 km from their work could save 2,000 euros per year by carpooling daily,⁴⁰ and this was calculated before the current price hikes.

A series of measures have already been adopted, notably under the impetus of the 2019 LOM and the National Plan for Daily Carpooling, which aims to **triple the number of trips by 2024**. These include the establishment of internal agreements or the development of mobility plans within companies, experimenting with dedicated lanes, national calls for projects, or the possibility for local authorities to set up financial incentives. In addition, employers can now pay a sustainable mobility bonus (bicycle, carpooling, *free-floating*), exempt from taxes and social contributions, but the adoption of such a scheme remains optional.

Challenges and implementation methods

As proposed in Institut Montaigne's report *Daily Commute: Setting the Course for Carbon-Free Travel*, a multidimensional policy could be implemented to accelerate the use of carpooling.

A first component would focus on **increasing the development of infrastructures by the local authorities**. This could include dedicated carpooling lanes, with park-and-ride facilities, to improve the flow of traffic into cities, particularly on busy commute roads such as ring roads and bypasses. In the same way, it may be appropriate to normalize the reservation of parking spaces or the development of spontaneous carpooling lines in rural areas. By redistributing public road space and improving travel time and regularity, it is possible to initiate a sustainable change in transportation habits.

A second component would **facilitate the payment of subsidies for carpooling** and, more generally, for "gentle mobility." The law on mobility (LOM) introduced the sustainable mobility package, which encourages a company to finance sustainable transport for its employees while exempting them from social contributions up to 500 euros per year. However, only 20% of employers have adopted this scheme,⁴¹ a penetration rate that suffers from the complexity of this tool and the need to prove the proper use of funds paid. For example, as outlined in the December 2021 report *Daily Commute: Setting the Course for Carbon-Free Travel*, it would be possible to offer **a single application to manage the sustainable mobility package and require mobility operators to accept the interface** to facilitate tracking of expenditures. This would simplify processes and reduce transaction costs, building on the legal provisions introduced by the LOM and the law of August 6, 2015 for growth, activity and equal economic opportunity, known as the "Macron law". These have opened up the possibilities for using data from transport and mobility services.

Finally, **employers and local authorities must be more involved in deployment and in raising awareness**. Indeed, companies remain the most relevant level for initiating carpooling. To this end, the 2019 LOM introduced the obligation to lead an annual social dialogue on employee mobility, and modulated the obligations to establish mobility plans introduced by the 2015 LTECV law. However, these mobility plans do not always manage to reach critical mass at the company level, or at least not enough to encourage carpooling. Moreover, inter-company mobility plans remain an under-used tool. Based on the "partners' committees" that bring together companies and users, which local authorities have had to set up since the LOM, it could be relevant to encourage or even require mobility players to set up **these inter-company mobility plans in business parks**. Support for non-salaried people should not be forgotten, thanks to more ambitious schemes supported by local authorities, but also by ensuring that the fees charged by the platforms are moderated to maintain a financially attractive system.

To raise awareness, a sustained effort must be made along the lines of what has been done for bicycles (see *below*). The objective is to **develop a "carpooling habit"**. To this end, it is necessary that the relevant people be able to test a journey and thus experience that carpooling is easily usable. While this can be initiated by the employer, through collective company activities, special attention must also be paid to people living in more isolated areas, where offers can be developed but require a more tailored approach.

⁴⁰ Ministry of Ecological and Solidarity Transition, *Carpooling in France, benefits and current regulations*, October 27, 2021, available at : <https://www.ecologie.gouv.fr/covoiturage-en-france-avantages-et-reglementation-en-vigueur>.

⁴¹ ADEME, *Sustainable Mobility Package Barometer*, 2021 available at: <https://librairie.ademe.fr/mobilite-et-transport/4636-barometre-forfait-mobilites-durables.html>.

Impacts on the personas

- Her employer's carpooling offer could persuade Anissa to offer carpooling spots to colleagues or employees working in the same business area. She could carpool them to her place of residence or pick them up at a carpool stop at the highway entrance. This would allow her to save on fuel costs and increase the return on investment for her vehicle.
- Due to the lack of adequate public transportation, Arnaud Rossi uses his car to get to work, which is less than 10 km from his home. With the development of a shared mobility offer across the different companies of the gas-intensive site where he works, Arnaud noticed that another employee with similar schedules lives near his home. Thanks to the mobile application, they could carpool and alternate vehicles, save on fuel costs and benefit from the sustainable mobility package paid by their company.

RECOMMENDATION 7

Develop bicycle use through safer infrastructure, financial incentives targeted at low-income households and increased awareness.

Findings

At a time when cities are developing a denser network of bicycle lanes, this form of transportation represents an effective means for reducing travel time, the carbon footprint and household fuel costs. Public authorities, especially local authorities, are supporting this trend by paying several bonuses that encourage the purchase or restoration of bicycles.

Launched in 2018, the **Bicycle Plan** aims to triple the share of trips made by bicycle by 2024, to reach 9%. To this end, a series of actions have been initiated, in particular calls for tenders for bike lanes, the identification of new bikes, support for the purchase of electric bikes or the development of secure parking at train stations. In addition, certain communities with more or less developed infrastructures have proactive policies and have been able to take advantage of the current health crisis to permanently ensconce the temporary bicycle paths that were set up during Covid. The health crisis has strengthened the momentum, with the use of bike lanes increasing by 78% in Paris since 2019, 42% in Grenoble and 74% in Annecy.⁴²

However, several obstacles to the development of this type of mobility still endure.

In France, **the lack of safe infrastructure** is common knowledge. First of all, the **network of bicycle lanes is still insufficient**, particularly in the outskirts of major cities. The network of bicycle lanes is estimated at 25,000 kilometers today,⁴³ (i.e., equivalent to 2% of the road network in France). However, according to the 2018 barometer from the French Federation of Bicycle Users (FUB), 80% of respondents approve the development of exclusive dedicated pathways and 41% consider that the spaces provided are still insufficient to use bicycles more frequently.⁴⁴ **The lack of secure parking**, which is intrinsically linked to the high rate of theft in urban areas, is another major obstacle. In 2003, 80,000 users gave up using or buying a bicycle each year due to theft.⁴⁵ Similarly, in 2018, only 20% of users surveyed by the Federation of Bicycle Users felt that they could park easily in cities.

These different elements contribute to **a strong feeling of insecurity for users**, as relayed during the *Fair Energy Forum* organized by *Missions Publiques*. Indeed, bicycle users remain among the most likely users to be victims of accidents in public spaces (227 deaths in 2021, +21% compared to 2019, in a context of decreasing road fatalities overall with a total of 2,944 deaths).⁴⁶ Moreover, there is a lack of ease in cycling, with 2% of the adult population not knowing how to ride a bicycle, and **20% who consider that they do not feel comfortable using a bicycle** – this includes a higher proportion of women. Finally, cycling is also declining among young people, which will influence future adult trends, as noted in a report by ADEME in 2020.⁴⁷

Bicycles are thus rarely part of the transportation options available to low-income households for commuting – 49% of working people whose commute is less than one kilometer use their car for that trip.⁴⁸ In this respect, the cost

42 Vélo & Territoires, *Bicycle use in France 2022*, Bulletin n° 1, May 2022, available at: https://www.velo-territoires.org/wp-content/uploads/2022/06/2022_06_01_Bulletin_Frequentation-vlo-en-France_1.pdf.

43 Vélo & Territoires, *National map of bike routes*, March 2021, available at: <https://www.velo-territoires.org/schemas-itineraires/schema-national/>.

44 Bicycle Friendly Cities and Territories Club, *Bicycle Safety*, 2018 available at: <https://villes-cyclables.org/le-velo-au-quotidien/la-securite-du-cycliste-et-du-velo/la-securite-des-cyclistes>.

45 Federated Institute for Research on Industrial Economies and Societies, *Bicycle Theft: Analyzing the Phenomenon and Methods of Prevention*, 2003, available at: [http://isidoredd.documentation.developpement-durable.gouv.fr/document.xsp?id=Temis-0045405&n=142&q=\(%2B\(question_word%3Aurban+question%3A%7Curban%7C\)\)&](http://isidoredd.documentation.developpement-durable.gouv.fr/document.xsp?id=Temis-0045405&n=142&q=(%2B(question_word%3Aurban+question%3A%7Curban%7C))&).

46 Road Safety, *Final Road Accident Figures for 2021*, May 2022, available at: <https://www.interieur.gouv.fr/actualites/communiqués/chiffres-definitifs-de-l'accidentalite-routiere-en-2021-nombre-de-morts-en>.

47 Ademe, in collaboration with the DGE, the DGITM and the French Cycling Federation, *Economic impact and potential of the development of bicycle use in France*, April 2020, available at: <https://www.entreprises.gouv.fr/files/files/entreprises-etudes-et-statistiques/dossiers-de-la-dge/impact-economique-et-potentiel-developpement-velo-en-france.pdf>.

48 Brutel Chantal and Jeanne Pages, *The car remains the main mode of transport for commuting, even for short distances*, INSEE Première, n°1835 January 2021, available at: <https://www.insee.fr/fr/statistiques/5013868>.

of the trip, travel time, and ease of use are determining factors in the choice of transport mode. In addition, while households may use bicycles for certain trips or for leisure purposes, they are still often more reluctant to use bicycles in their daily lives, particularly because it is less convenient than a car for carrying out various tasks during the same trip (shopping, dropping off and picking up children, etc.).

Finally, there is the issue of **price**: while entry-level electric bicycles cost around 500 euros, a standard quality model costs between 800 and 1,400 euros.⁴⁹ Most of the subsidies for the purchase of bicycles are currently provided by local authorities, through different schemes. The State has also introduced **a bicycle bonus with restrictive conditions**, the annual income must be less than 13,489 euros per tax unit, and the bonus must be a supplement to the grant from a local authority. Furthermore, the threshold is set at 200 euros, from which the amount of the grant provided by the local authorities is deducted.

Challenges and implementation methods

A multi-faceted policy could be pursued to increasingly encourage bicycle use, and make it part of the range of options readily available to modest households.

First, public authorities must **develop standardized and safe infrastructures**. It is necessary to develop a network of **integrated and safe bicycle paths**, providing better connexions between the suburbs and the metropolis, including routes in less densely populated areas, in order to have an impact on travel time and regularity. With this in mind, in its 2021 report, *Daily Commute: Setting the Course for Carbon-Free Travel*, Institut Montaigne recommended that guidance be provided for local authorities to provide standardized bicycle paths and support the increase in the skills of the departments in charge, in order to accelerate the development of good quality facilities.

In terms of infrastructure, it is also essential to offer more **secure storage solutions**, especially in disadvantaged suburbs where urban planning and residential buildings were not designed for this. Public parking lots could provide secure storage spaces on a massive scale, particularly in the city center, especially as car use in the city is declining. However, the issue of appropriate pricing and incentives to use these secure storage solutions in public spaces has yet to be unresolved.

⁴⁹ UFC-Que choisir, *Electric bikes: How to choose your electric bike*, available at: <https://www.quechoisir.org/guide-d-achat-velo-electrique-n8147/>.

It is also important to **encourage people to purchase bicycles**. First, this means **increasing subsidies for the purchase of bicycles for low-income households**, in particular for electrically assisted bicycles (EABs), by expanding the number of eligible households, eliminating the obligation to combine the subsidy with grants from a local authority, and increasing the amount allocated. Additionally, given the success of certain schemes – such as Véligo in the Île-de-France region – it may be appropriate for local authorities and companies to encourage **the development of shared fleets** in order to increase the number of bicycles available, diversify the type of equipment available (electrically-assisted bicycles, cargo bikes, three-wheelers), and make it easier to link up trips (to the kids' daycare, to run errands, to go to work, etc.). As is the case for electric vehicles, the development of preferential electric bicycle leasing offers could also be studied.

Finally, **a stronger education and awareness campaign** is needed to make this transport solution part of the daily landscape for low-income households – without this the aforementioned actions will remain fruitless. In this respect, two aspects are particularly important. First, it is important to **increase people's ability to use bicycles**. Measures already exist for young people, such as the “Learn to ride a bike” program for children in elementary school, which was developed under the Bicycle Plan. These should be extended to all schools, so that each age group can obtain a “bicycle license”. This could also include additional “Get back in the saddle” workshops for people in the most remote areas, as well as dedicated awareness campaigns.

Spreading the use of bicycles as a habit in everyday life would be advantageous. In addition to taking action from an early age, this involves getting households to try out a home-work trip or other daily trips, to remove psychological barriers and demonstrate the practicality of such trips. To do this, it is necessary to support the awareness actions carried out by certain associations, allowing them to do this on a larger scale, or the initiatives of local authorities and companies (bike challenges, bike schools, bike buses, etc.). In this respect, the inclusive mobility and sustainable mobility service platforms run by Wimoov are an example of an effective social and professional support solution that can be scaled up to encourage cycling and the use of other “gentle” modes of transportation such as carpooling (see above).

Impacts on the personas

- At ease on a bicycle, Anissa would be only a few minutes away from the local shop. She would then have sustainable and diversified transportation options, each

adapted to her different situations – bicycle for shopping, carpooling for work, increased public transportation for Zoë, all contributing to reduce her use of the private car.

- Equipped with electric bicycles and new safe bike paths, the Rossis could reach their work quickly, since it is less than 10 km from their home. This would allow them to save on fuel costs and even pair down to one vehicle, leading to major savings for them. In order to take their youngest child to school, they could split the days when one uses the family car. One of their two bikes could even be adapted to allow them to ride to school with their youngest child. These changes were suggested to them during the annual bike challenge organized by Arnaud's company.
- The Müllers have already acquired an electric bicycle and could therefore be convinced to use it more. With increased support, they could purchase a second one. They could also try to buy a cargo bike to sell their produce at nearby markets or for deliveries.

RECOMMENDATION 8

Refocus and expand the various subsidies that encourage vulnerable households to purchase an electric vehicle (in particular the ecological bonus, the conversion premium and leasing).

Findings

The fast-growing development of mobility LEZs in the coming years will coincide with a ban on the most polluting vehicles – mostly owned by modest households. The latter also tend to favor the purchase of second-hand vehicles rather than new ones, due to cost constraints, slowing down the rate of renewal for the overall vehicle fleet. However, in the current context, marked by the sharp rise in the price of fuel, **having more economical or electric vehicles is a significant factor in maintaining purchasing power** for a vulnerable household (modest household or high-mileage driver), especially if the vehicle is used on a daily basis. This also entails a continued development of the electricity production capacity in order to meet the additional demand and avoid a spike in electricity prices.

In order to encourage households to buy electric or hybrid vehicles, various schemes have been introduced in recent years, notably the conversion bonus for the purchase of a new or used low-emission vehicle, and the ecological bonus for the purchase of a hybrid or electric vehicle (see above). The 345,000 premiums and bonuses distributed in 2021 amounted to 1.1 billion euros (i.e., an average of 3,188 euros per vehicle across all households).⁵⁰

However, **the current schemes are not well targeted**. The ecological bonus is not means-tested and is only modulated according to the price of the vehicle, while the conversion premium is paid to all households, – although it can be increased for the most vulnerable households (low-income households or high-mileage drivers). These schemes therefore primarily benefit the most affluent households. Indeed, these households are often better able to invest in electric vehicles, which are more expensive – thus indirectly subsidizing the automobile industry.

While this system of subsidies is relevant to launching the transition of the automobile market and to increasing demand, the massification of electric vehicle production volumes, partly linked to the availability of public subsidies, and the increasing constraints in terms of emission standards, should lead to an increase and diversification in electric vehicles in the years to come. This would make it possible to democratize the purchase of less polluting vehicles without necessarily needing to subsidize the investments of more affluent households.

Challenges and implementation methods

Faced with these prospected trends, a series of measures could be considered to provide support for the purchase of new electric vehicles.

First, **the environmental bonus could be better targeted toward vulnerable households**. The ecological bonus could be increased at least for the most vulnerable households, similar to the 1,000 euro additional premium that exists today for residents of overseas territories. Such a measure would be particularly relevant in light of the upcoming 1,000 euro reduction on July 1, 2022. A more significant change could lead to only households in the first three or four income deciles and high-mileage drivers gradually benefiting from the bonus; since the wealthiest households have the means to acquire cleaner vehicles in order to adapt to the new constraints imposed by the LEZs.

⁵⁰ Senate, "2022 Budget Bill: Ecology, Sustainable Development and Mobility," Senate, 2021, <http://www.senat.fr/rap/121-163-311-1/121-163-311-115.html>.

Similarly, the **eligibility conditions for the conversion bonus could be overhauled**. The increased bonus of 5,000 euros (compared to 2,500 euros for the rest of the households) is currently limited to high-mileage drivers and modest households with a tax income per unit of less than 13,489 euros, or to very modest households with a tax income per unit of less than 6,300 euros. This strongly limits the scope of the scheme. It would therefore be appropriate to make these conditions more flexible in order to include more vulnerable households. Indeed, during the focus groups, several low-income households pointed out that they were not eligible for this scheme. Like the ecological bonus, this could be paired with a gradual removal of the conversion bonus for wealthy households.

Other schemes to facilitate the acquisition of electric vehicles by vulnerable households could also be considered. One example is the proposed **development of a subsidized electric vehicle leasing offer**, put forward by several candidates in the 2022 presidential election. Such a solution has the advantage of being based on a practice that is increasingly common among households, since leasing financed 47% of new vehicle registrations in 2021.⁵¹ Since leasing consists of an initial payment of a few thousand euros followed by a rental payment, the challenge would be to reduce this initial payment, in particular by mobilizing the purchase incentive systems or by using guarantees provided by the State.

Despite these subsidies, **the purchase of a new electric vehicle may still be too expensive for modest households**. This phenomenon could be made worse due to the rise in raw material prices and the supply difficulties encountered by manufacturers, which are currently contributing to an increase in the price of new electric vehicles. Entry-level vehicles are thus more expensive and less available, since manufacturers prefer to sell vehicles with higher margins. However, the influx of demand that the schemes described above could represent, in the face of a constrained supply, would likely fuel a rise in prices.

Moreover, facilitating access to electric vehicles for the poorest population segments could be achieved through **increased support for the purchase of green used vehicles**. The electrification of the vehicle fleet trickles down from company fleets, car rental companies and wealthy households. The ecological bonus for the purchase of a used vehicle, which currently amounts to 1,000 euros and is not means-tested, could be increased for low-income households and reduced for wealthier ones.

⁵¹ Feitz, Anne. "Leasing accounts for 47% of new car registrations," *Les Echos*, January 3, 2022, <https://business.lesechos.fr/entrepreneurs/idees-de-business/0700431664717-le-leasing-represente-47-des-immatriculations-de-voitures-neuves-346504.php>.

In order to lower market prices, and thus facilitate the acquisition of affordable models by low-income households, increased public support for car manufacturers will be necessary. It is important to increase supply in the longer term, by helping manufacturers to secure their supplies and increase their capacity to build electric vehicles in France. This is what has been done for battery factories through the France Relance plan.

ADDITIONAL RECOMMENDATION

If subsidies can alleviate the financial constraints on the purchase of an electric vehicle, it remains necessary to remove the physical barrier of recharging, especially in condominiums, since most charging occurs at home or at work.

It is therefore necessary to support the growing trend in recent years with a reinforced right to plug in for electric vehicle users. But above all, the procedures for installing charging points in condominiums via the mechanisms for pre-financing the collective infrastructure should be simplified, whether this is entrusted to the distribution network operator or to a private charging operator. Lastly, the substantial financial support provided by the ADVENIR program, with a 100 million euro budget over the period 2020-2023 to install 45,000 charging points, could be extended and expanded, in addition to the existing tax credit for the acquisition and installation of charging systems for electric vehicles.

Impacts on the *personas*

- The Lamberts are not currently eligible for the conversion bonus. An extended and increased bonus, by reducing the leftover cost, could persuade them to scrap their old and more polluting vehicle. This would also allow them to reduce their fuel expenses and thus save money to better accommodate their grandchildren.
- Like Ben Harding, the Müllers could change their energy intensive outdated business vehicle thanks to the subsidies targeted at high-mileage drivers or low-income households, which will reduce their leftover costs. This would lead to an improvement in their margin, thanks to the lower fuel costs, and thus a quicker return on their investment. For the Müllers, this would also cover the additional cost of traveling to supply short circuits compared to deliveries to supermarkets.

- Despite Bruno's fears, the development of electric vehicles will make it possible to maintain individual transport over long distances, in particular for vacations, thanks to the development of fast charging stations in freeway service areas. In addition, a reduced fuel bill for modest households could allow them to put a little more money aside to go on vacation and to spend more locally, which would maintain many seasonal jobs.

3. Facilitate access to local and good quality products for low-income households

RECOMMENDATION 9

Provide low-income households with nearby locally-grown and better quality products by supporting the development of urban agriculture and short circuits in the most disadvantaged neighborhoods and in higher education institutions.

Findings

For low-income households, and especially for low-income students, access to a balanced diet at a reduced price remains a major issue, which has been highlighted by the health crisis linked to the Covid-19 pandemic. Since the law for the balance of commercial relations in the agricultural and food sector, and for a healthy, sustainable and accessible food for all (EGalim law), collective catering aims to serve meals with 50% quality and sustainable products, including 20% products from organic farming. However, since 2022 meals at home remain a struggle. **Low-income households tend to consume less fish and seafood and less fresh and processed fruit** than wealthier households. Conversely, these households consume more cereal-based products, fatty foods and meat.⁵² In addition, they consume less organic or eco-labeled products than the wealthiest households (see *below*).

Disadvantaged neighborhoods are often outside the distribution networks of short circuits, although initiatives do exist, often led by associations. Local

⁵² Laisney, Céline, *Social Disparities and Food*, Center for Studies and Forecasting, Ministry of Agriculture and Food, December 2013, available at : <https://agriculture.gouv.fr/disparites-sociales-et-alimentation-document-de-travail-ndeg9>.

authorities can also support the movement through territorial food projects (PATs), set up by the 2014 law on the future of agriculture, food and forestry, which aims to relocalize agriculture and food by supporting, among other things, the creation of short circuits. However, local authorities have provided patchy support for this crucial issue. For example, Seine-Saint-Denis launched a project in 2021 to improve the accessibility of sustainable products for all, in response to the observation that there are ten or so pockets of "near food deserts" where residents have difficulty accessing fresh food. However, these PATs are more likely to be implemented in rural or semi-rural areas, which have a denser agricultural network.

Challenges and implementation methods

Within higher education institutions, supply and demand could be reconciled by developing short circuits for students who are more environmentally conscious with producers who sometimes have low incomes. Spontaneous initiatives have appeared in recent years, often the result of student associations that have set up AMAPs on campus, such as the NOISE association at ESSEC or the GREEN association at the University of Nantes.⁵³ Structuring these systems means that the institutions – or any other player, yet to be identified – be responsible for setting up these networks. The challenge would be to guarantee a sufficiently constant and predictable demand, since these institutions are not attended in the summer, which is also the peak production period.

In the most disadvantaged neighborhoods, the increase in the number of short circuits could be accompanied by the development of solidarity grocery stores and the spread of territorial food projects. In terms of PATs, the State and local authorities, in particular regional authorities, could increase their financial support for the emergence of these projects, targeting in particular the most disadvantaged neighborhoods or areas.⁵⁴ The National Food Program's 2021-2022 call for projects is thus endowed with only 1.8 million euros. Furthermore, it is necessary to consolidate these sectors over time, in line with the efforts undertaken by the France Relance plan, which outlines a budget of 77 million euros to support existing projects. In the same way, it could be relevant to perpetuate the support provided by the recovery plan for the development of projects promoting access to

⁵³ Association for the maintenance of a peasant agriculture.

⁵⁴ Several parameters could be considered to target these neighborhoods as a priority. In addition to the usual parameter of priority neighborhoods based on city policy (QPV), it could also be interesting to identify the "food deserts" more specifically. This concept, developed in the United States, identifies territories that lack healthy food sources at an acceptable cost, places where the population is socio-economically disadvantaged.

healthy and higher quality food for the greatest number of people (itinerant shops, solidarity grocery stores, start-ups, assist in structuring producers, etc.).

These different efforts could be part of a more global framework for modernizing and stabilizing the management of associative action in disadvantaged neighborhoods, as proposed by Institut Montaigne in a June 2022 report,⁵⁵ by (i) systematizing multi-year agreements for associations' objectives in these neighborhoods, (ii) adding incentives and performance bonuses, and (iii) mobilizing local authorities to manage these agreements.

The development of urban agriculture, supported by certain local authorities and by the ANRU (National Urban Renewal Agency) within the framework of urban renewal programs, is an interesting way of providing residents with a local food resource while also greening the urban space. A rise in the number of initiatives such as the ANRU's Quartiers Fertiles call for projects would thus contribute in part to increasing the supply of local and responsible products for modest households.

By relying as much as possible on local and citizen initiatives, by facilitating the deployment of urban agriculture and by encouraging the emergence of short circuits, it is possible to create a bond of trust between citizens and producers, but also to recreate social ties between citizens in disadvantaged neighborhoods.

Finally, there remains the problem of the additional cost of buying organic or ethical products. In addition to local supply, it is important to offer high quality food, which requires the development of organic or high environmental quality production. While, for the same food basket, local and organic products are more expensive than those sold in a discount supermarket chain, a change in meal composition (less animal and processed products, more fruits and vegetables) and reduced waste can lead to a lowered average additional cost – as demonstrated by the simulations carried out by I4CE (see below). This implies, however, that **food education**, including workshops to learn how to cook the products, must be provided beforehand, and adapted to the eating habits of the target audience.

⁵⁵ Institut Montaigne, *The future will unfold in the poorer neighborhoods*, June 2022, available at: <https://www.institutmontaigne.org/publications/lavenir-se-joue-dans-les-quartiers-pauvres>.

Impacts on the personas

- Marc receives a bursary and does not ask Anissa for help. He could now buy healthy, better quality products at a reasonable price at his university. A student association has even patterned with the one that set up the AMAP to offer courses to teach students how to cook. Marc had been used to usually eating processed dishes and foods. In addition, Anissa takes advantage of the new weekend market set up by the town hall in her large residential complex to buy fresh and local produce, which allows her to shop even closer to home.
- The Müllers could sell their entire production directly to the consumer thanks to the new short circuit networks set up around their home. This could be done through partnerships with the local university, solidarity grocery stores set up within the framework of PATs, or expanding markets. The Müllers could thus diversify their sources of income but also limit the downward pressure exerted by large-scale distribution systems on their margins by selling their product directly to the consumer. However, since organic meat is more expensive to produce, this means also working on the development of food vouchers to support demand.
- Joseph's university would like to set up a short circuit with local producers in the area and could rely on environmentally conscious student associations. By joining such an initiative, Joseph could participate, get involved and have levers of action at his level. Moreover, thanks to the development of this system, he could access good quality products within his university and at a reasonable price, which would meet his consumption aspirations.

Creating a food voucher for “responsible” food products

The food voucher – a proposal made by the Citizens' Convention on Climate Change, taken up by the Government, – aims to help households face rising food prices and allow them to consume local and healthy products. Despite the initial announcements about the vouchers, this measure, included in the 2021 Climate and Resilience Law, has yet to be implemented.

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This measure is part of **a context of accelerating food price inflation** in recent months, due in particular to disruptions on international markets. With a 3.8% year-on-year increase in food prices recorded in May 2022, the issue of constrained household spending and food insecurity is all the more pressing. Furthermore, due to higher prices on average, good quality products from sustainable or organic agriculture are now mainly consumed by the most privileged categories of the population. According to a Nielsen study, 20% of the **population purchased 66% of organic products in 2019**. Moreover, in 2021, the organic products market contracted for the first time, which highlights a slowdown in the growth of demand and may require a rise in the number of regular consumers. Finally, modest households tend to develop a feeling of stigmatization if access to these products is only possible through solidarity networks, which raises obvious questions of integration and living together.

Such a voucher would make it possible to **act in a targeted manner for food**, which would not be possible with a broader scheme aimed at increasing the purchasing power of modest households. Moreover, the advantage of the food voucher is that it **concentrates public expenditure on the most modest** – unlike a VAT reduction on organic or sustainable agriculture products, which would benefit all consumers indiscriminately. Finally, this measure **circumvents feelings of stigmatization**, by giving low-income households the ability to consume better quality goods equivalent to those consumed by wealthier households, and the option to shop through traditional distribution channels. This system would be similar to the “consumption voucher” proposed by É. Chaney and J. Damon in a note for the Institut Montaigne in December 2020, which aimed at overcoming the crisis triggered by the Covid-19 pandemic and at supporting modest households.

However, **some questions regarding the technical implementation modalities have yet to be resolved**.

- **In terms of distribution**, it could be distributed fairly easily to low-income households, in particular through the family allowance funds (CAF). However, management would remain complex, as this system would add a layer of complexity to the social assistance system.

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- **In terms of eligible products**, relying on an existing label would probably be the most effective way to deploy a scheme targeted at responsible products. However, this could be detrimental to some local products if these are not labeled, while properly labeled but imported organic products could benefit, despite their significant carbon footprint. Additionally, some products with local or organic labels could be purchased even if they have low nutritional qualities. A simpler solution, but less targeted, would be to **focus the voucher on the purchase of only fresh** (fruits, vegetables, legumes, etc.) **and other unprocessed products**, regardless of the mode of production or origin.
- **In terms of payment provisions**, it is necessary to find a technical solution allowing producers to easily cash this voucher, in order to encourage the growth of short circuits. A system similar to dematerialized cards for meal vouchers could be considered.

As mentioned above, such a measure will be all the more effective if it is paired with **reinforced teaching about food and nutrition**. This should be aimed at helping the most vulnerable households in order to encourage their purchase of less processed and more balanced products – even though they may sometimes lack the time or equipment to cook at home. This awareness-raising approach could cover topics like budgeting, nutrition and meal preparation, and could be expanded to include and rely on initiatives that already exist at the local level and are often supported by the associative sector.

It should be noted, however, that the food voucher could have inflationary effects on certain food products, and that it would mean a potentially significant cost for public finances. A voucher of 50 to 60 euros per month, as mentioned by the Minister of Agriculture, which would be distributed to 8 million French people, could lead to an additional gross expenditure of 4 to 6 billion euros (excluding indirect tax revenues linked to the consumption induced by these vouchers). Finally, the creation of the voucher should not happen at the expense of initiatives carried out by associations at the local level to finance solidarity baskets or grocery stores.

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A positive impact for the *personas*. Anissa currently has insufficient income to buy quality products, hence she focuses on promotions and big brand industrial products. The voucher would allow her to shop in a higher quality supermarket or with local producers – which is gratifying – and enable her to feed her children healthier food. However, Anissa would need guidance in order to learn how to cook the products she buys and how to balance her budget, but she also needs to have time and efficient appliances. The additional demand generated by the voucher could also benefit the Müllers. By supporting the demand for more sustainable products, the food voucher would benefit them. However, they are concerned about how they will be able to cash them in a simple way. Finally, despite his eagerness to consume sustainable and local products, Joseph is deterred by their cost. The food voucher would allow him to shop at the supermarket down the street, but also go to more specialized grocery stores or markets with local producers in Paris.

4. Targeting the most modest households with financial support measures

RECOMMENDATION 10

Shift from generalized energy price regulation mechanisms to more targeted measures for vulnerable households, in order to support them directly during the energy.

Findings

Faced with soaring energy prices, the government has put in place massive energy price regulation measures over the past several months: freezing gas prices, limiting the increase in electricity prices, a 0.15 euro/liter discount on fuel, a 100 euro inflation allowance, etc.

While these measures were necessary to deal with the urgency and magnitude of the price hikes, **their effectiveness could be called into question.** Indeed, **they benefit both the poorest and the wealthiest, and they strongly diminish**

the price signal in favor of more virtuous behavior for all categories of the population.

Moreover, the total cost of these measures – many of which have a negative impact on the longer-term process of the energy transition – already reached €22 billion at the beginning of March 2022, which also means **less capacity to invest in the energy transition.** By comparison, the cost of these measures reached an amount equivalent to two-thirds of all government spending considered environmentally friendly in the 2022 budget (i.e., €32.5 billion).⁵⁶

In addition, the energy voucher has shown mixed results. In a February 2022 report, the French Court of Auditors pointed out that **the energy voucher finances all types of energy and that its targeting is not very effective.** 25% of households facing fuel poverty do not receive the voucher, while 50% of beneficiaries are not considered to be in fuel poverty.

Challenges and implementation methods

First, targeted measures could be considered for those **most affected by rising energy prices**, including vulnerable “high-mileage drivers” and low-income households. This support would be temporary, and would be combined with increased support for more environmentally friendly transport solutions. In April 2022, the government mentioned the introduction of a specific scheme for these two segments of the population, which would be triggered “quasi-automatically” when fuel prices rise sharply. The overall cost of such a system would thus be lower for public finances, while having a greater impact on the most vulnerable people.

The Court of Auditors suggests **refocusing the energy voucher** on households facing fuel poverty, with the possibility of increasing and modulating the amount of the voucher.⁵⁷ However, this would lead to significant changes in the number of beneficiaries, which would require a transition phase. There is also the issue of implementation, which is intrinsically complex. The challenge would be to identify precisely which households are suffering from fuel poverty.

⁵⁶ Government, “Green Budget: increasing environmentally friendly spending in 2022,” *Government*, October 11, 2021, <https://www.ecologie.gouv.fr/budget-vert-augmentation-des-depenses-favorables-lenvironnement-en-2022>.

⁵⁷ Cour des Comptes, *The energy voucher*, Presentation to the National Assembly’s Committee on Finance, General Economy and Budgetary Control, February 2022, available at : <https://www.ccomptes.fr/fr/publications/le-cheque-energie>.

In addition, in order to reintroduce a real incentive to reduce energy consumption, **a shift from price regulation mechanisms to price signaling mechanisms** would be necessary. To promote acceptability, the revenues from these levies should be assigned to the ecological transition, in particular through **increased financial assistance for the most modest households**. This would allow these households to be better supported in the energy transition, while at the same time **mitigating the impact of the price signal increase**. In terms of ecological taxation, the effort rate of the poorest 20% of households amounts to 4.5% of total annual income, compared to 1.3% for the wealthiest 20%.⁵⁸

A boosted energy voucher, refocused and targeted at the most virtuous energy sources, could thus **compensate for possible increases in carbon taxes for the most modest**. However, this would require a more complex allocation system than the current one, since allocation is now based on the type of housing, heating method and mobility constraints.

However, it is essential to think about how to **boost take-up rates** more efficiently, since 20% of people who receive the voucher do not use it. As a first step, this will involve simplifying the notification letter and making more widespread use of the “explanation of rights meetings” set up by the CAFs. In the longer term, it would be appropriate to set up automatic payment methods, deducting the amount of the voucher from the energy bill, which requires extensive coordination between the State and energy suppliers.

Impacts on the *personas*

- Thanks to a scheme targeted at the most modest households when fuel prices increase, the Lamberts could more readily afford to use their vehicle to go to their medical appointments in the city 100 km from their home, without giving up on babysitting their grandchildren in the same city from time to time.
- As a beneficiary of the reinforced energy voucher targeted at the most energy-poor households, Anissa would be able to cope better with her electricity and gas bills, which are continually increasing despite following the recommendations she has received to reduce her consumption.

⁵⁸ General Commission for Sustainable Development - Budget Department - General Directorate of the Treasury – Directorate of Tax Legislation, *Report on the Environmental Impact of the State Budget*, September 2020, available at : <https://www.vie-publique.fr/sites/default/files/rapport/pdf/276480.pdf>.

- The Rossis sometimes suffer from the cold during winter, practically having to give up on heating their home because of the high price of gas and their home’s “thermal sieve” situation. While waiting to begin the renovation of their home – thanks to a more targeted and more generous energy voucher for the most modest households – they could improve their heating situation.
- Like the Müllers, Ben Harding is a high-mileage driver and could benefit from the government scheme, allowing him to maintain sufficient profit margins.

RECOMMENDATION 11

Create an energy transition account for low-income households.

Findings

The most modest households often do not have the means to invest in the lifestyle changes (electric vehicle, energy efficiency renovation work) that would allow them to rebalance their budget, despite being more dependent on carbon than the average French person. The various allowances and bonuses currently in place (energy vouchers, inflation bonuses, etc.) are costly, poorly targeted and do not provide a structural response to the problem (see above).

Challenges and implementation methods

Like the very popular Personal Training Account (CPF),⁵⁹ **a personal energy transition account would allow the State to put money aside for the most modest households, in order to finance their purchase of sustainable equipment** (electric bicycle or vehicle, heat pump, insulation, etc.). The amount allotted by the State each year could be modulated according to income, the number of vehicles, the performance of the housing, the number of kilometers traveled for work, etc. These credits would accumulate to form a kind of “kitty,” which would be used to supplement other schemes (MaPrimeRénov', conversion bonus, etc.).

⁵⁹ Robinet, Charlotte. “Covid, remote activity... why the Personal Training Account was a hit in 2021,” *Le Parisien*, January 2, 2022, <https://www.leparisien.fr/economie/emploi/covid-distanciel-pourquoi-le-compte-personnel-de-formation-a-fait-un-carton-en-2021-02-01-2022-MS3SFIKA55B53NGDM5MKVNVQAE.php>.

This type of account could be offered to the first five or six deciles of the population, the vast majority of which are exempt from income tax (i.e., approximately 24 million fiscal households). Given the difficulty in distinguishing between people who have already made sustainable investments and those who haven't, both households that have and those that have not already begun an ecological transition process would be indiscriminately eligible. **The annual amount allocated could vary from 50 to 400 euros per tax unit, with an average amount of 200 euros per tax unit,** and a limit of 1,000 euros per year for households combining multiple precarious living conditions. The total amount amassed on the account could not exceed a certain threshold, set for example at 5,000 euros, similar to the CPF.

Once up and running, such a system would mean a total theoretical support of 5 billion euros per year for low-income households. However, the real impact on public finances could be significantly less, depending on the actual take-up rate and would be alleviated by the jobs and tax revenues generated by the credits consumed and spent by households.

This account could potentially serve as a **"Renovation Account,"** as suggested in the Sichel report. In the case of a thermal renovation project, it could be an account for depositing subsidies, advances or a contribution from the household's personal savings. However, this would not be a tax-free savings account, the sustainable development account already exists for this purpose.

While the "green voucher" proposed by Terra Nova may come close to this proposal, in that it enables the purchase of environmentally beneficial goods and services, the methods differ.⁶⁰ The green voucher is intended to pay out a fixed amount each year, and cannot be saved for later, which limits the scope of sustainable goods or services that can be purchased. On the other hand, by adding to a "kitty," the energy transition account would make it possible to finance more substantial goods or services, with a greater impact on fuel poverty for low-income households.

Summary of the prioritization of proposals

To conclude the *Fair Energy Forum*, on June 10, 2022, participants were asked to vote for a rank, score, and priority given to the recommendations according to various criteria identified by *Missions Publiques*. These criteria were discussed with participants before each recommendation was voted individually.

Method used:

Participants were asked to rank the recommendations according to four criteria, answering the question, *"In your opinion, is the recommendation..."*

1. ... **relevant** to the challenges of energy transition;
2. ... **corrective** in terms of resolving social injustices;
3. ... **inclusive**, in that it supports a large part of the population;
4. ... **urgently** needing to be implemented.

For each recommendation, and based on each criterion, participants ranked proposals from 1 to 4 ("Strongly agree," "Agree," "Disagree," and "Strongly disagree").

This prioritization method was divided into two phases. First, a collective discussion to clarify how each participant understood each criterion. Then, an individual multi-criteria vote. This allowed participants to reflect on the objectives of each proposal, but also to determine which were, according to them, those that conclusively met the proposed criteria.

Each vote is assigned a number of points. The sum of the points gives a final score on a scale of 1 to 10.

Overall recommendations ranked (in descending order):

- Recommendation 10 (9.8)
- Recommendation 2 (8.9)
- Recommendation 3 (7.9)
- Recommendation 11 (7.7) and Recommendation 7 (7.7)

.../...

⁶⁰ Cohen, Daniel, et al. The Green Voucher, crisis exit tool, Terra Nova, December 2020, available at <https://tnova.fr/economie-social/protection-sociale-solidarites/le-cheque-vert-instrument-de-sortie-de-crisis/>.

- Recommendation 6 (7.65)
- Recommendation 9 (7.2)
- Recommendation 1 (6.9)
- Recommendation 3 (6.75)
- Recommendation 8 (5.9)
- Recommendation 5 (4.3)

Top three recommendations per criteria (from highest rated to lowest rated):

- **Relevant:** Recommendation 2, Recommendation 7 and Recommendation 1,
- **Corrective:** Recommendation 10, Recommendation 2 and Recommendation 6,
- **Inclusive:** Recommendation 10, Recommendation 11 and Recommendation 9,
- **Urgent:** Recommendation 10, Recommendation 2 and Recommendation 3.

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Energy Transition: Supportive Solutions

France is lagging far behind in the energy transition: although the country has reduced its greenhouse gas emissions since 1990, the rate of reduction has been lower than in Germany or the UK. Consequently, in order to meet the commitments made under the Paris Agreement in 2015, the annual rate of emissions reduction will have to be almost doubled, to reach 3.3% between 2024 and 2028. Faced with this major break, the challenge of supporting the most vulnerable populations is high. Although they have a lower carbon footprint than the average, vulnerable households are more likely to be confronted with energy issues and their consequences. Specific support must be provided to them to ensure the implementation of an energy transition that is fair to all.

The Institut Montaigne is participating in the *Fair Energy Transition for All* (FETA) project, initiated by the King Baudouin Foundation at the European level, which advocates for the needs and expectations of the most vulnerable citizens to be considered in the framework of the energy transition. This note proposes that the French public authorities focus their action on four areas: improving technical and financial support for thermal renovation, encouraging the development of various forms of sustainable mobility, facilitating access for low-income households to a range of local, quality products, and targeting financial support to the most vulnerable households.

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