Construction

FRANCE COMMITTED TO SUSTAINABLE HOUSING

"Housing is the key to ensuring quality of life for everyone and social cohesion among all communities. We must work together to build sustainable cities based on our vision that fosters resilience, comfort, solidarity, and social and functional diversity."

EMMANUELLE COSSE
Minister for Housing and Sustainable Habitat

"France hosted the COP21 Climate Change Conference at the end of 2015, and is currently working to rapidly implement the Paris agreement. The French government has taken the initiative to create a global alliance for buildings and construction and is committed to drawing up new environmental regulations for the construction industry to include more stringent energy performance and low greenhouse gas emission requirements."

SÉGOLÈNE ROYAL
Minister for the Environment, Energy and the Sea, responsible for international climate relations.

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

MINISTÈRE DE L'ENVIRONNEMENT, DE L'ÉNERGIE ET DE LA MER

MINISTÈRE DU LOGEMENT ET DE L'HABITAT DURABLE

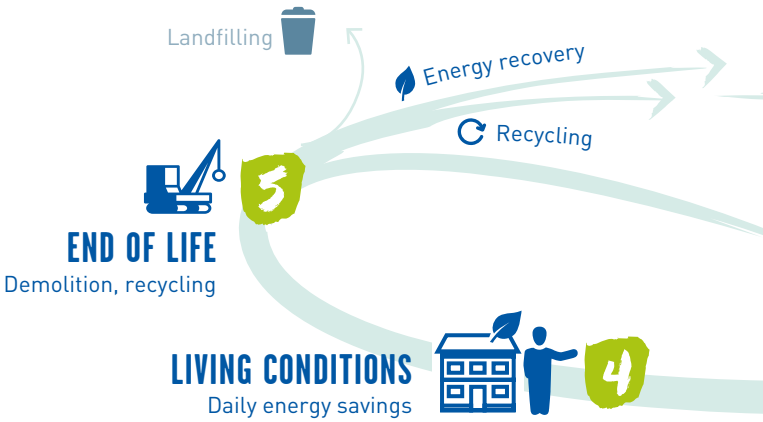
TOGETHER TOWARDS H III HABITAT III

Posi

LOW-CARBON BUILDI

By 2018, the energy transition law promoting green energy growth will enable the implementation of a new and ambitious environmental standard. The Government, economic stakeholders and associations are joining forces to achieve this goal and will be focusing on two key aims:

- Widespread positive energy buildings;
- The deployment of a low-carbon strategy, which will reduce the carbon footprint of buildings by determining their environmental impact at all stages of their life cycle, from their design to their demolition.



3 ACTIONS

PROMOTING POSITIVE ENERGY BUILDINGS

1 Building on current commitments

Thermal regulations currently in force (RT2012) have led to an increase in the number of low-consumption buildings and a two-thirds' reduction in the energy consumption of new buildings in relation to previous regulations. Future regulations will make positive energy buildings more widespread. In addition to having a more efficient structure and energy systems, these buildings will be supplied with renewable energies: photovoltaic panels, geothermics, supply by a renewable heat system, etc.

2 Implications for all communities

Energy self-consumption will be one of the driving forces behind the rolling out of positive energy buildings, promoting better alignment between the needs of users and the production of renewable energy in all neighbourhoods and blocks.
This strategy will also be beneficial in getting neighbourhoods behind energy transition and the gradual greening of local energy networks:
injection of biogas in gas networks, biomass heating, geothermics, renewable electricity.

3 Adapting regulations to the local context

The energy transition law makes it possible for local communities to support neighbourhood-wide projects that use renewable energy sources.
By the same token, regulations will be adapted to local contexts.
Different levels of "positive energy buildings" will be proposed to make them accessible to everyone regardless of geographical or climatic constraints.
Therefore, an isolated building not connected to a local energy supply can be "a positive energy" building with a lower level of requirement than a block of flats designed in a more favourable environment.

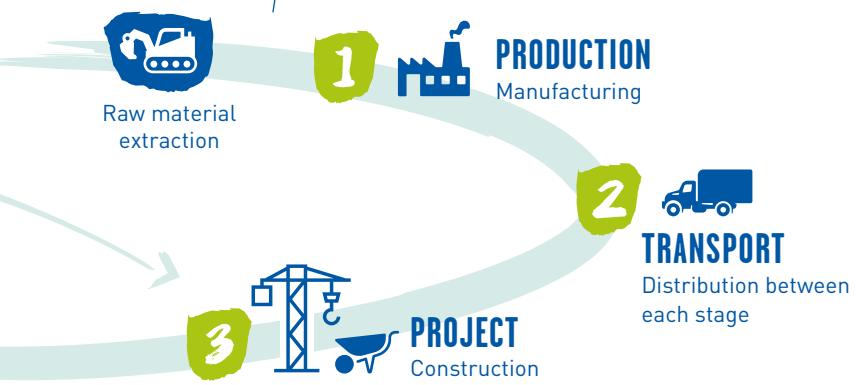
DID YOU SAY PEB?

Positive energy buildings (or PEBs) are buildings that produce as much energy or more energy than they consume. They do this by:

- **reducing their energy consumption;**
- **prioritising renewable energy consumption (heat, electricity);**
- **contributing to the production of renewable energy.**

itive energy
NGS ON THE HORIZON!

Saving energy and reducing greenhouse gas emissions throughout a building's life cycle



3 GOALS
TO PROMOTE LOW-CARBON BUILDINGS

1 To reduce greenhouse gas emissions throughout a building's life cycle

Adopted by France in November 2015, the national low-carbon strategy sets out the goal to halve greenhouse gas emissions in the construction sector by 2030 and to cut these emissions by 87% by 2050. This strategy involves a new method of calculating a building's carbon footprint, which is now assessed at each stage of its life cycle: beginning with the manufacture of components, going through component implementation, use of the building and its demolition and finishing with the recycling of rubble.

2 To determine the carbon footprint from the construction of a building

The impact of the construction of a building and the use of a building's energy systems is practically the same in terms of emissions. The only difference is that in terms of the total life of a building, the construction stage is very short. The environmental calculation method will therefore assess the impact of the construction phase, which will require the use of innovative materials and products with a low-carbon content.

3 To recover reusable materials and develop a circular economy

To consider the full environmental impact, the regulations take the complete life cycle of a building into account in order to support and develop the material recyclability sector.

CONSTRUCTION AT THE HEART OF THE ENERGY TRANSITION

123 MILLION TONNES OF CO_2
are emitted per annum by the construction sector.

75,000 JOBS
could be created in the construction sector due to the acceleration of energy renovation.

44% OF ENERGY CONSUMED
in France is produced by the construction sector (compared with 31.3% for the transport sector).

From 2017,
500,000 DWELLINGS will be thermally renovated each year.

A TRANSITION ALREADY IN PROGRESS

400 POSITIVE ENERGY NEIGHBOURHOODS
benefiting from funds amounting to 750 million Euros over 3 years resulting in a drop in CO_2 emissions.

THE ENTIRE CONSTRUCTION SECTOR IS READY TO TRIAL THE BUILDING OF THE FUTURE

A trial phase
TO CREATE IMPETUS

The Government wants to help willing developers to anticipate future regulations. These developers will therefore test the technical and financial feasibility of building construction in accordance with future regulations. In this respect, public developers intend to pave the way by integrating renewable electricity production systems into their buildings and by developing low-carbon construction processes. A test observatory will collect feedback and best practices to refine indicators and establish future regulatory thresholds.

A permanent dialogue
WITH INDUSTRY STAKEHOLDERS

The mobilisation of all professionals will play an essential role in ensuring the success of the "building" part of the energy transition and green growth law. In this regard, discussions have been taking place over the past year with builders, developers, energy specialists, NGOs and ecolabel associations.

A label
TO REWARD PILOT PROJECTS

To reward the first buildings constructed under the new regulations, the Government has introduced a new label that will assess the technical and economic feasibility of the new requirements. Intended to distinguish positive energy buildings in the same way as low-carbon buildings, this label will incorporate several performance levels. The values to be achieved are adapted according to the climate zone or type of building.

CLIMATE-FRIENDLY CONSTRUCTION

Spurred on by the president of the COP 21 conference, the construction sector is pulling together to tackle climate change and to move towards a low-carbon society. This strategy falls within the sector's policy of cooperation on an international scale. To coincide with COP 21, at the end of 2015, France launched a global Building and Construction Alliance, bringing together twenty countries, 8 major groups and over 50 organisations. The United Nations Habitat III conference, due to take place in Quito, Ecuador, in October 2016, constitutes the next step in defining sustainable urban development policies and in preparing for COP 22, which is scheduled to take place in Marrakesh, Morocco, in November 2017.

Design, pre-press and infographics: CITIZENPRESS, Paris. **Translation:** LCI. **Photos :** Arnaud Bouissou/Terra, iStockphoto. Ministry of the Environment, Energy and the Sea. Ministry of Housing and Sustainable Habitat- Planning and Nature Conservation General Direction-92055 La Défense cedex, France.