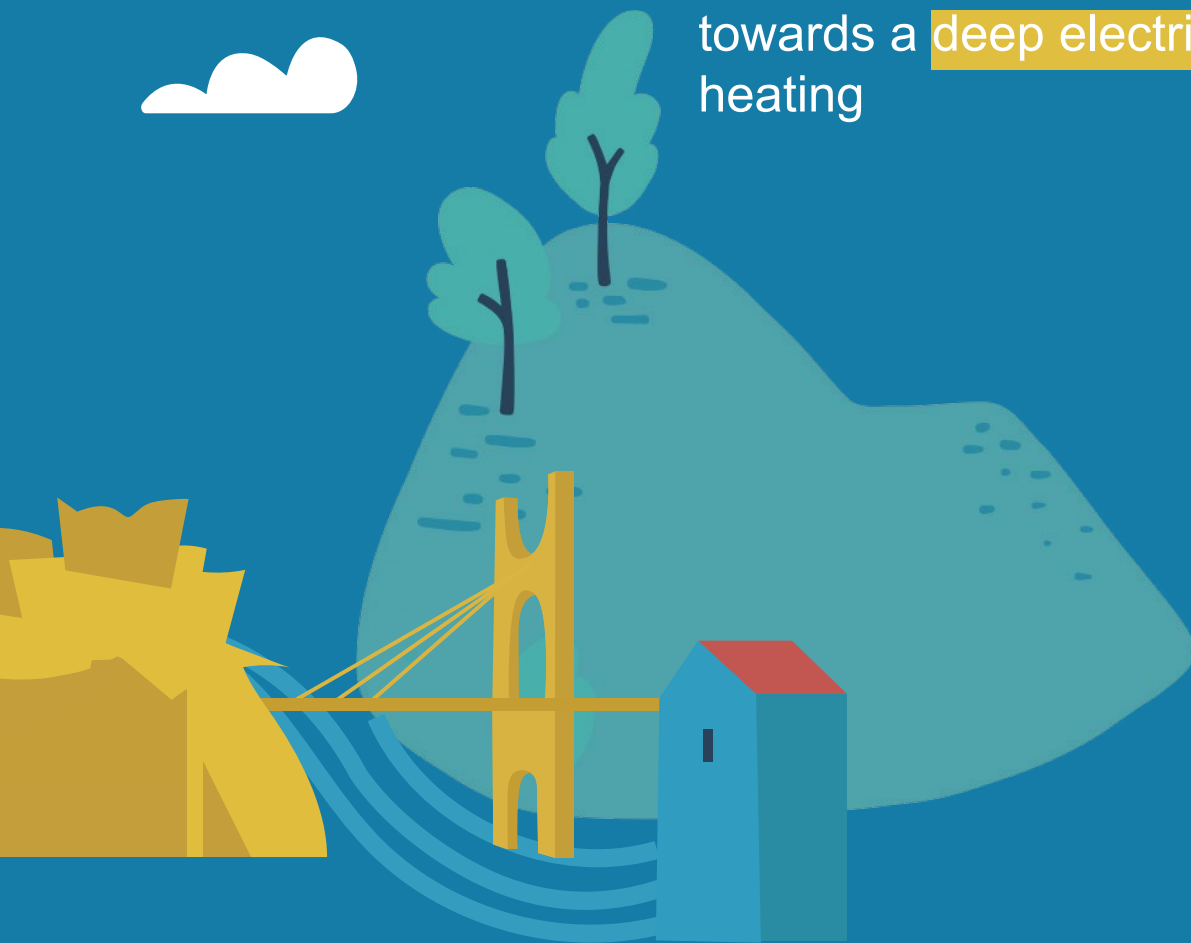


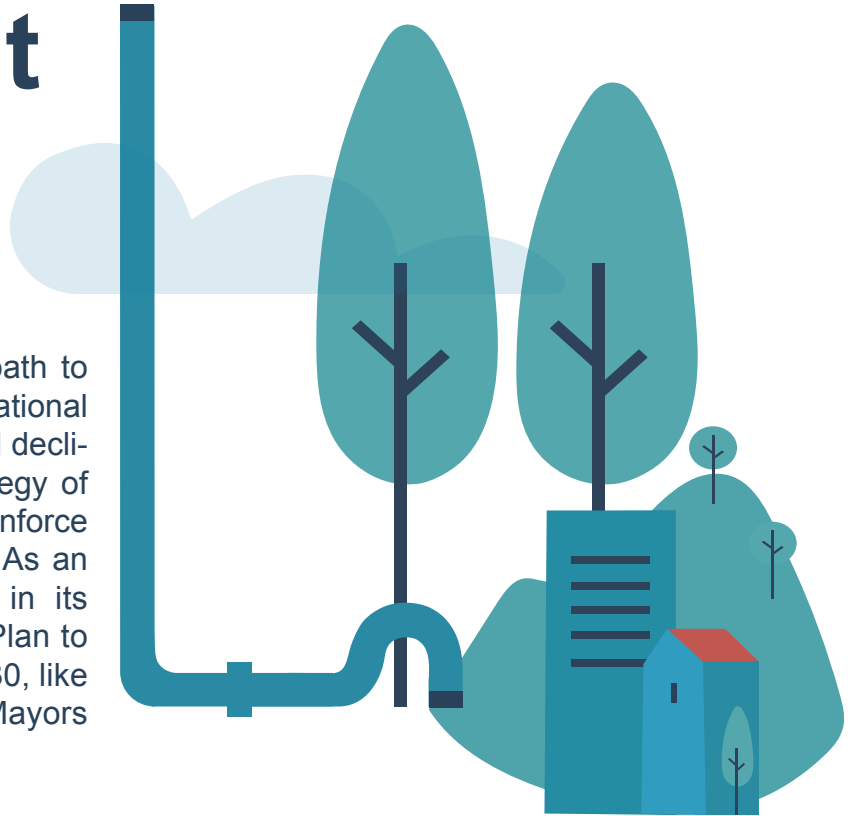
Bilbao

A former industrial hub heading towards a deep electrification of heating



A strong commitment to climate neutrality

Bilbao embraces the Spanish national path to becoming carbon neutral by 2050. The National Energy and Climate Plan finds its regional declaration in the 2050 Climate Change strategy of the Basque Country. These two plans reinforce Bilbao's commitment to decarbonization. As an intermediate target, the city committed in its Sustainable Energy and Climate Action Plan to reduce by 55% its GHG emissions by 2030, like the other signatories of the Covenant of Mayors for Climate and Energy.



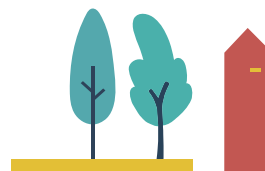
A collective-led transition

To develop its new plan for decarbonized heating, the city administration invited many stakeholders to sit around the table. The current Commission for Mobility and Sustainability of the municipality has played a key role in this work, as it is in charge of the city's energy transition process. But many more stakeholders were also present such as technicians from different municipal departments, local and regional institutions and companies, and utilities. By pooling their expertise, they were able to assess the different options in a comprehensive way.

An energy strategy to complete the urban reconversion of Bilbao

One major characteristic of the city of Bilbao is the impressive urban reconversion process that transformed the city from an industrial hub to a dynamic and service-focused city. The implementation of a new energy strategy is thus integrated into this successful transformation.

The commitments of Bilbao are tangible: deep renovation of public stock, roll-out of heat pumps, and creation of districts heating and cooling networks. The city was so far depending



on liquefied petroleum gas (LPG) for residential heating. But the combination of large-scale heat pumps and the development of a low-temperature district heating and cooling pilot project in the Zorozaurre island are game-changing.

In this nearly-fully electrified system, heat savings through building renovations, behavior changes, local energy communities, and flexibility of the overall system will be an important factor to succeed.



The mobilization of all for a successful transition

In Bilbao, the transition is mobilizing all stakeholders and instruments. Firstly, energy spatial planning is a primary element because the knowledge and collection of data from electricity and gas distribution companies is essential. The transition also involves founding a new energy agency “BioArtigas” through a new public partnership constituted by the City Council and the Basque Energy Agency. This agency is going to work cross-silo and implement the environmental strategy for the city, including the energy strategy. The creation of this agency was motivated by the need to give greater relevance to energy efficiency. For instance, it aims to increase the use of renewable energy in public buildings and define energy consumption reduction targets. Moreover, workers are also part of the transition through training sessions, just like any other citizens who are encouraged to participate through capacity-building sessions, awareness-raising campaigns, and incentive measures like subsidies.

A change in regulations to develop renewable and low carbon heating systems

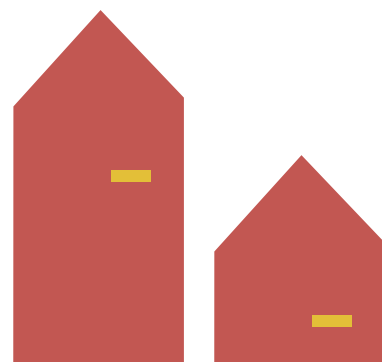
Bilbao is convinced of one thing: it is by changing regulations that they will overcome the limits of urban planning. For instance, local regulations on heritage protection currently hamper the implementation of heat pumps in the center of the city. Through the project Decarb City Pipes 2050, the city realizes that pushing for the

revision of national building regulations and regional framework is the next step to counter gas infrastructure expansion and foster the use of renewable alternatives. The national and regional levels could also help Spanish cities like Bilbao build district heating systems, which is a technology not yet well developed in the country.

Having new regulations will also allow the private sector to adapt to the new demands, as Bilbao feels the need for more convenient business models and subsidies to phase out fossil-based heating systems.

Getting better knowledge of the building stock: a pre-requisite for an ambitious action plan

The project’s main benefit was for Bilbao city council to better understand the current energy situation of its building stocks (both private and public). Detailed energy planning, especially regarding heating, is not common for Spanish municipalities. This EU-funded project helped to collect and treat data, which required substantive work, as access to energy data is not facilitated for local authorities. Empowered by energy mapping, the city can now engage in further steps to make its roadmap a reality. Many benefits for citizens will derive from the transition: more competitive electricity prices, lower emissions, and a higher security of supply, among others.

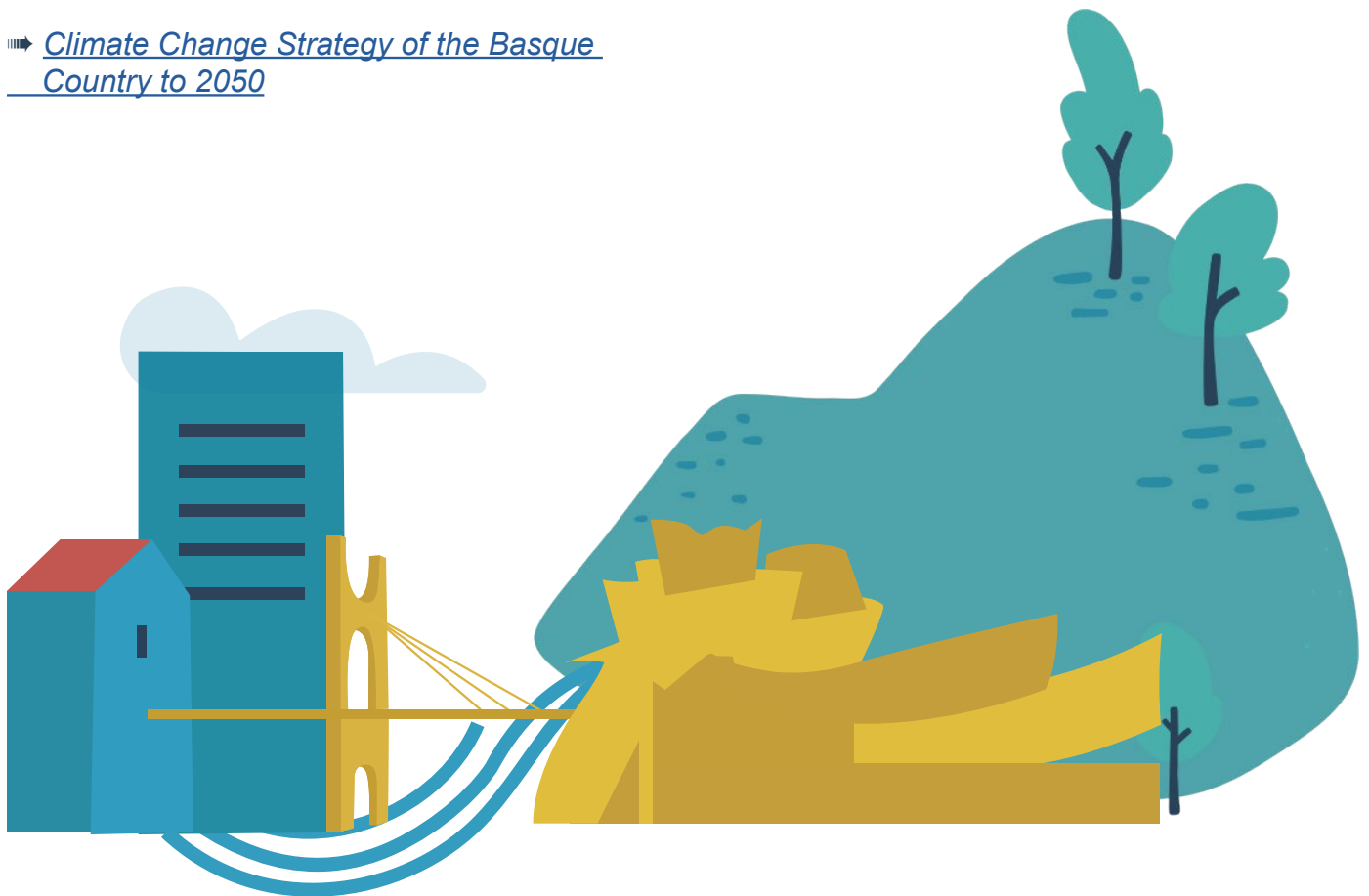


So, start now!

This is the first advice Bilbao will give to other cities for their transition. The priority is to map the system to understand it and to be able to think in the long term. Starting the planning as soon as possible is the key to success as so many changes must be made, with new facilities to be built. Another piece of advice is to get inspiration from other cities' transitions, and for that Decarb City Pipes 2050 was useful. For instance, Bilbao is learning from Dublin's experience of creating its very first district heating.

Want to know more about Bilbao?

- ➡ [Bilbao Transition Roadmap](#)
- ➡ [Climate Change Strategy of the Basque Country to 2050](#)



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