HOW CAN COMPANIES IN THE BASQUE INDUSTRIAL SECTOR MEET THE CHALLENGE OF DECARBONISATION? CHALLENGES, INITIATIVES AND OPPORTUNITIES

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In current policies, concepts such as climate neutrality, while resonant, are not new. Neither are the narratives that we repeatedly find in strategies, such as the '**Climate Change Strategy 2050 of the Basque Country - KLIMA 2050**', the '**Energy Transition and Climate Change Plan 2021-2024**' or the '**Industrial Development and Internationalisation Plan 2021-2024**', the **PCTI 2030** or **EnergiBasque**. All these plans and strategies highlight the need to transform the energy system as a condition for achieving a more sustainable socio-economic model. This change, which must take place in a comprehensive manner, implies the transformation of the economic model we know, which, in turn, requires a transformation and innovation in production processes, as well as in the way in which we consume goods and services.

From a company's perspective, these process adjustments or process innovation represent a significant commitment and even a strategic investment that requires planning. In this sense, is decarbonisation a necessary change to transform the energy model and thus the socio-economic model? According to **the Inventory of Greenhouse Gas Emissions in the Basque Country 2021**, **industry**, the energy sector and transport account for approximately 86% of emissions, and industry alone is **responsible for 30% of total emissions**, although **the trend is towards a reduction**, compared to 2005 and 1990 data, of between 36% and 55% respectively (link).)

In order to contribute to and follow this reduction trend, clear goals and objectives must be set, determining which are the main changes that the industrial model must undergo. Although the recently approved Energy Transition and Climate Change Act promotes this process through the energy transition, **it establishes reduction targets for all socio-economic sectors**, as the collaboration of all sectors is necessary to achieve its main objective, climate neutrality in the Basque Country by 2050 at the latest. **But what are the main challenges facing the industrial sector if it wants to achieve these targets?**

In general terms, the roadmap and the challenges defined for the industrial sector are based on **progressively replacing fossil energies** with **renewable energies**, through **electrification in the process** and specifically **in transport** and self-supply, reducing dependence on fossil energies and considering the commitment to **green hydrogen as key**.

In other words, the strong commitment to **technological innovation** will allow the Basque industrial sector to access opportunities, position itself and increase its competitiveness. To mention just a few challenges;

a) **Technological innovation as a driving force** to boost the competitiveness of the sector and reduce the energy consumption of the process: availability and production, and, in short, a commitment to promote "green" technology such as hydrogen in industrial processes is one of the great challenges. The deployment of cleaner technologies should make it possible to reduce energy consumption in the process.

b) **Implementing policies that are committed to the circular economy** in industrial processes and the efficient use of resources: Reintroducing materials into the chain that were not used until now allows for a reduction in the use of raw materials and a reduction in energy consumption. Innovation in this field will enable companies to reduce their environmental footprint, increasing utilisation and savings.

c) Promoting **policies that replace the energy model with an energy mix model** based on

renewable sources, with a commitment to energy self-sufficiency. This step could mean reducing energy dependence on the outside world, and taking control over the price, as it allows the direct costs of the electricity market to be decoupled.

d) Identifying the **segments with the highest consumption within the Basque business fabric**: with the greatest potential for reducing consumption and/or costs in order to favour greater energy efficiency. For example, energy storage in the value chain, to support the grid and renewable sources to provide more controllable generation.

e) **Developing a range of products and services through the electrification of transport**: thus making it possible to reduce emissions from transport, for example by using an electric fleet, and by developing equipment and infrastructure linked to the ultra-fast recharging of vehicles and the control and management of their integration into the network.

Picture. Energy. Source: jplenio, Pixabay

Looking at the current outlook, we find various initiatives promoted by the administration that aim to decarbonise the sector. Without going any further and within the framework of the **Energy Transition and Climate Change Plan 2021-2024**, annual subsidy programmes have been implemented, such as the recently opened **Industrial Decarbonisation 2024** programme (link), whose application period runs from 11 April to 20 June. These grants cover a wide range of **actions aimed at improving environmental protection**, especially focused on **financing investments in**

production facilities and initiatives that promote the reduction of greenhouse gas emissions in production processes. To qualify for support, **applicants must submit a spreadsheet** detailing information on avoided emissions, fuels, energy sources, raw materials, wastes and refrigerants used in the investment process, as well as cost efficiency directly related to the reduction of greenhouse gas (GHG) emissions.

In addition to the calculation sheet, companies must draw up a **technical report** detailing the production process involved in the subsidised investment, describing the process before and after it and justifying the consumption values for the calculation of emissions. This process **can be simple with technical advice**, and the administration should facilitate it by **providing tools to facilitate the process**.

In this regard, and as an example of support between companies and the administration, the **Net-Zero Basque Industrial Super Cluster** initiative stands out (link). This Super Cluster brings together 16 Basque industrial clusters to promote decarbonisation and energy efficiency, creating market opportunities based on innovation. Led by the Basque Government through Spri, it has the participation of large companies such as Iberdrola, Petronor and Repsol. Within this cluster, 50 R&D&I projects on industrial decarbonisation have been developed.

In parallel to the aforementioned initiatives and understanding the legislative context and the general objectives of decarbonisation, Ihobe has published its **Climate&Circularity Calculator** (link), a free tool that it makes available to entities and companies **to calculate their carbon footprint and environmental footprint.** This tool is key in the context of the creation of the **Basque Registry of Energy Transition and Climate Change Initiatives** (link) by article 55 of the Climate Change and Energy Transition Law. Although the law does not yet go into detail as to which activities are obliged to carry out this procedure, it is expected that the development of a regulation will determine this. Therefore, the creation of the Register, in addition to promoting transparency, responds strategically **to article 57 on the carbon footprint of products, services and supplies in public procurement**, as the public administration can require in administrative clauses and specific technical specifications of its contracts, **the obligation to have the carbon footprint** of products, services and supplies, so that accreditation of registration in the register can be considered attractive to companies.

In short, whether it is the Ihobe calculator or another, it is essential as a starting point to **improve operational efficiency** in decarbonisation and to **comply with regulations**. It can also open up **new market opportunities** and **promote transparency** by registering in the registry. To be successful in this process, **companies must develop a clear decarbonisation strategy and have the necessary resources**, such as technical assistance or expert advice, to **set achievable** short- and medium-term **targets**, **monitor progress and seek continuous improvement**.

Main picture: Puerto de Bilbao. Author: Txo