
EUSKO JAURLARITZA
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WORLD
ECONOMIC
FORUM
Working together to achieve net-zero
Basque Net-Zero
Industrial SuperCluster

Content

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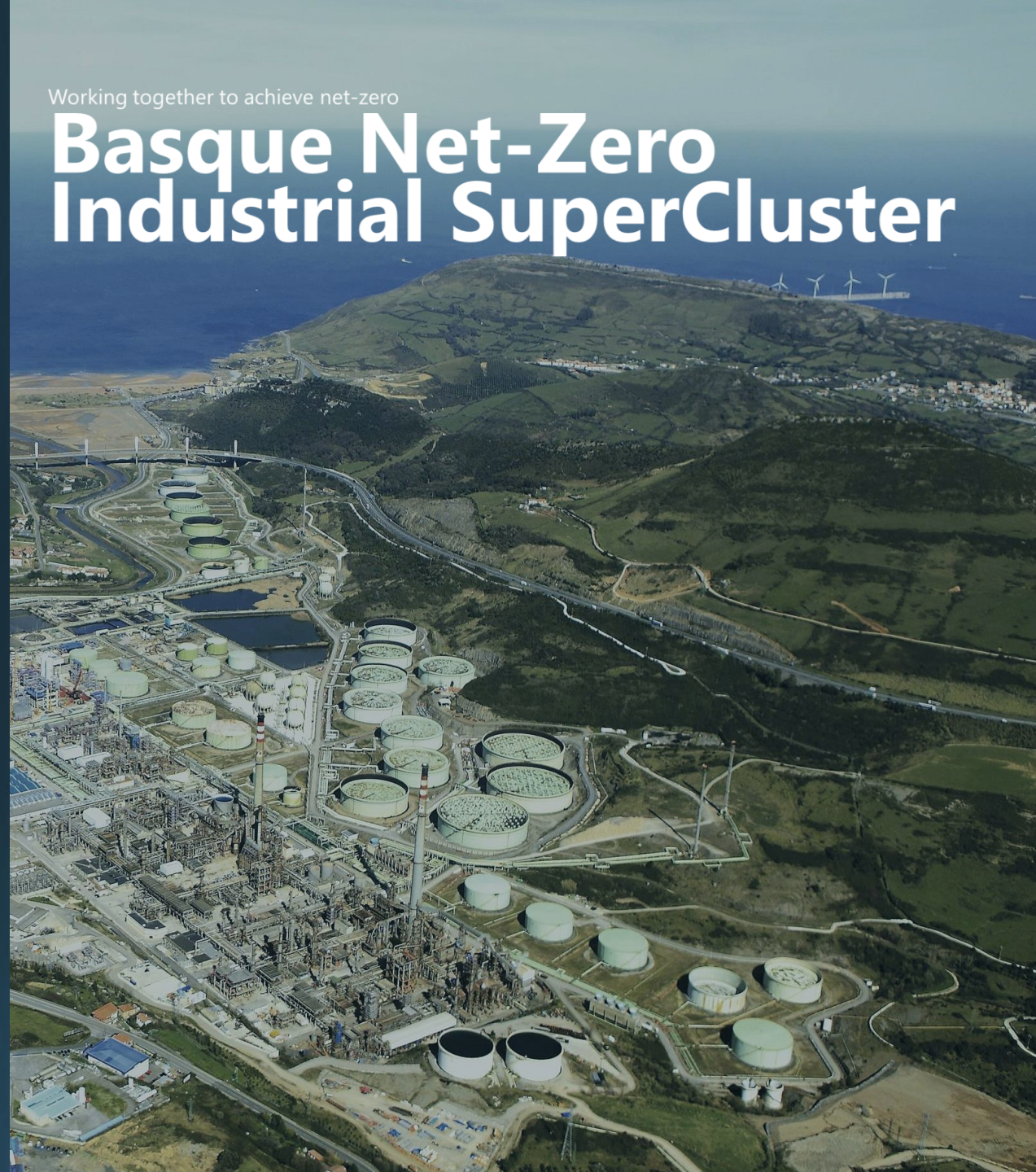
01
Introduction & Content



The Basque Country plays a relevant role in the journey to net zero, as it is considered an Economic Driver and a high Economical and Industrial potential region inside Europe

Euskadi, with **2,2 million people**, has a **GDP per capita of 34.142€**, being 29,2% over the GDP per capita in Spain and only 2.42% below Euro zone

Even though, since 1995, the GDP of the Basque Country **has increased by approximately 150%, compared to 81% in the EU**.

In addition, the Industrial activities of the Basque Country had always played a relevant role highly contributing to its GDP, which in 2019, accounts for the **24,3% of the total GDP of the region,** in comparison with the UE28 which is the 19,3%.

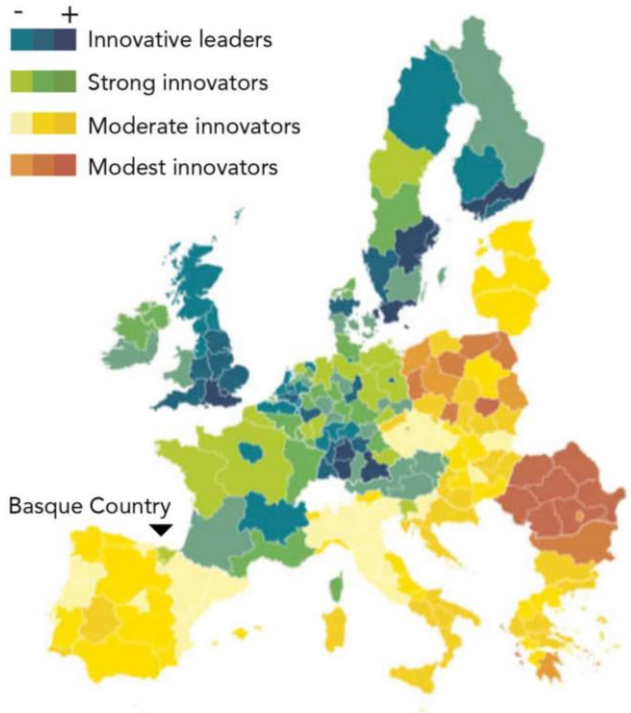
In 2019, Euskadi consumed **58,02 TWh** of Energy from which up to 35% of this energy came from Industrial Activities, more than the European leaders in industrial activity (Germany 29,4% or Netherlands with 32,8%)

The total GHG **emissions attributable to the socio-economic** activities of the Basque Country in 2019 was **18,6 MT of CO2** equivalent, which represents a decrease of 2% in comparison to the emissions produced in 2018. After discounting emissions compensated by LULUCF activities , net GHG emissions in 2019 were 15,6 MT. Total GHG emissions in the Basque Country due to industrial consumption is **7,2 MTof CO2** , **3% less than in 2018**, which places it in **12th place in the EU**.

Furthermore, the Basque region has some specific **industrial and energy infrastructures** with key elements such as: Bilbao and Pasaia Ports, a mature grid of Gas Pipelines with an import terminal of GNL and a mature electricity grid that provides service for more than 1,2M customers from which more than 3.500 are High Voltage.

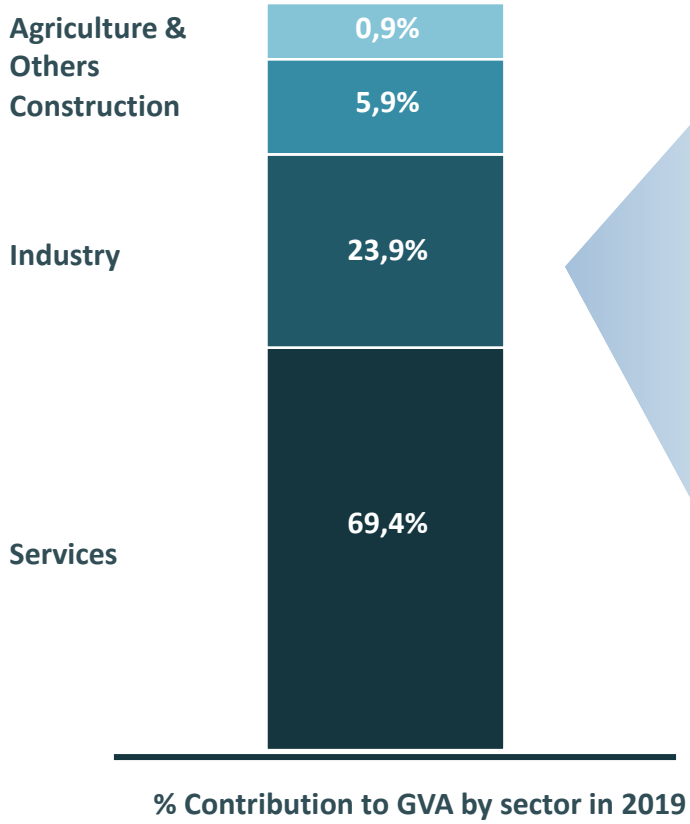
The Basque country has also and innovation ecosystem with multiple Science & Technological infrastructures

European Commission's Regional Innovation Scoreboard (RIS)

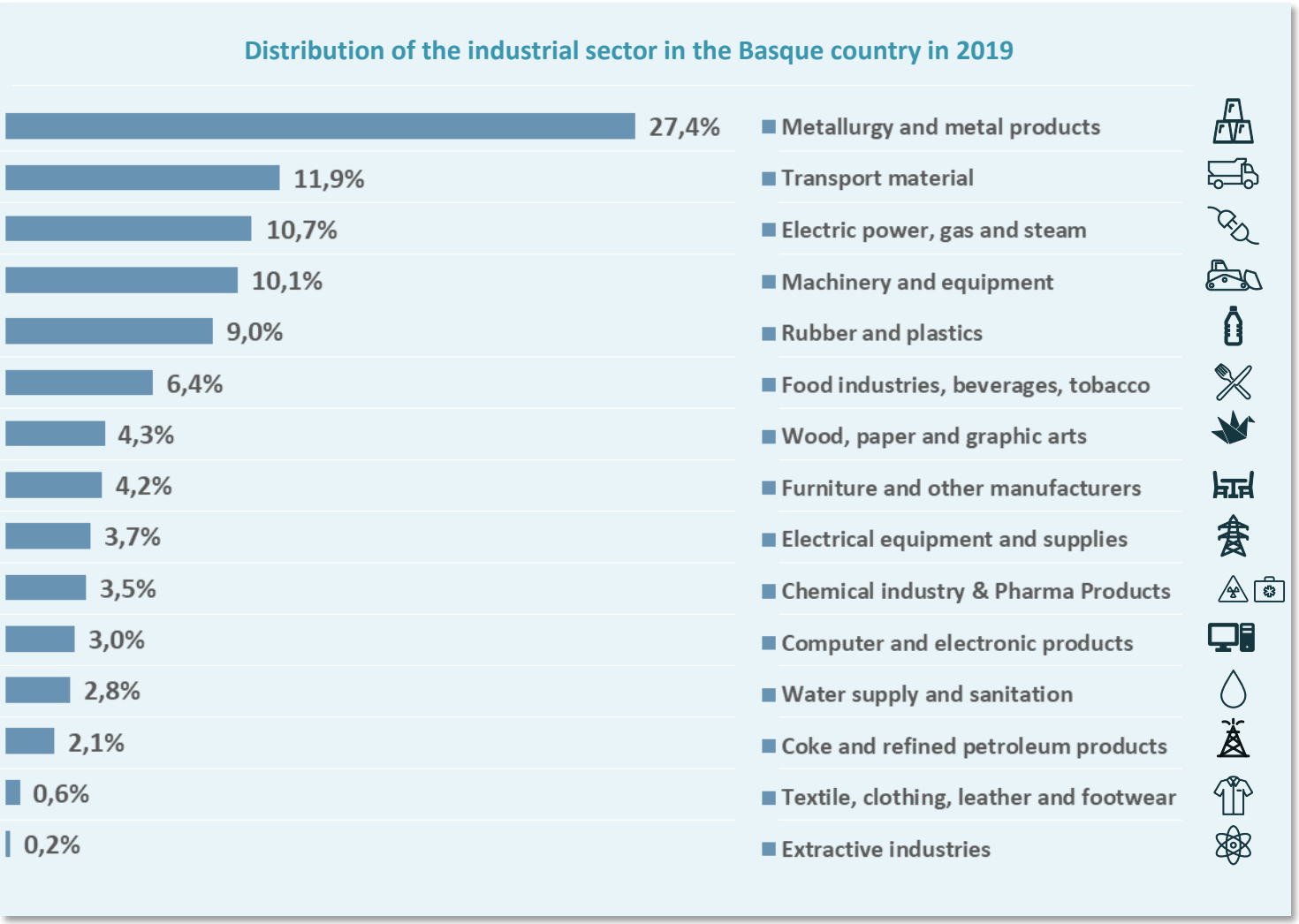


Euskadi, is considered as a strong innovator surrounded by moderate innovators which lifts the region to the category of pocket of regional excellence

The composition of the Basque Industry reflects the impact that the decarbonization and electrification will have for the internal economy



% Contribution to GVA by sector in 2019



In terms of GHG Emissions, key contributors are Oil Refining, Cement, Steel, Foundry and Pulp and Paper

GHG Emissions Heat Map by Sector and Source

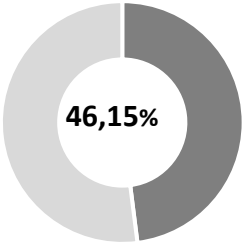
SECTOR	ENERGY PROCESSING	INDUSTRIAL PROCESSES	FUGITIVE EMISSIONS	AGRICULTURE GROUND MANAGEMENT AND WASTE DISPOSAL
INDUSTRIAL	5.330	1.341	578	
MOBILITY	6.392			
AGRICULTURE	120			-1.687
WASTE DISPOSAL				801
OTHER ACTIVITIES + RESIDENTIAL	2266			

GHG EMISSIONS SOURCE

GHG E. KTNCO2

Industrial Activities represent up to **46,15%**

(7,2 MTof CO2) of Emissions in Euskadi including their own emissions and the proportion of emissions of the power and heat generation

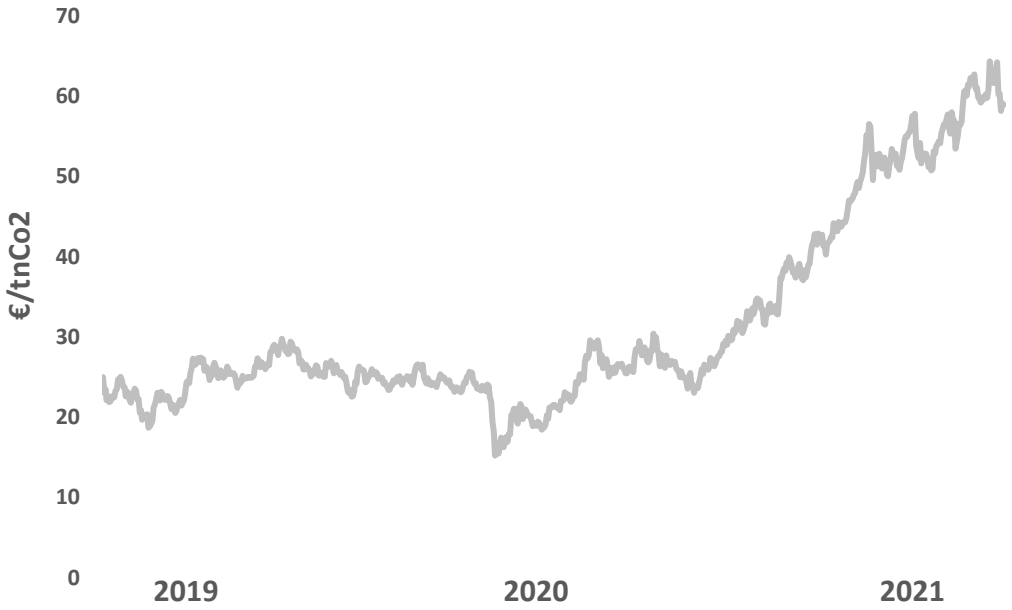


Divided by Industry nature, the ranking shows how 5 Industries emit almost **67,1 %** of al GHG of Euskadi Industrial Activity

RANK	INDUSTRY	GHG E. KTNCO2	ACUM. % OF EMISSIONS
1	OIL REFINING	1.875	25,8%
2	CEMENTS	1.211	42,6%
3	STEEL	660,5	51,7%
4	FOUNDRY	660,5	60,8%
5	PULP & PAPER	452,1	67,1%
6	MACHINES AND METAL PROCESSING	446	73,3%
7	GLASS	262	76,9%
8	QUIMICS	261	80,5%
9	NON-FERROUS METALLURGY	229	83,6%
10	OTHERS	977	100%

Energy sustainability is a key factor to maintain Industry Growth and competitiveness

CO2 EUROPEAN EMISSION ALLOWANCES



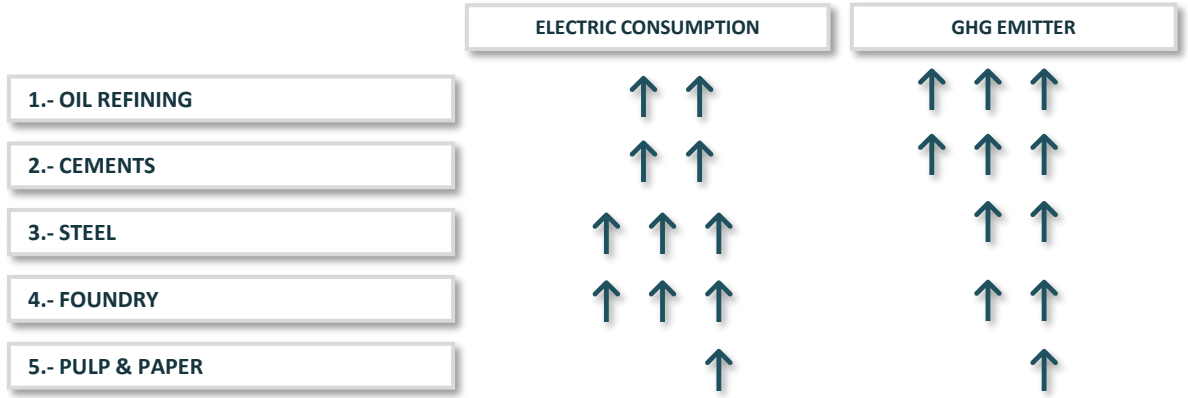
Source: Sendeco2

Co2 European Emission Allowances have increased from **15,23 €/tn** CO2 in March 2020 to **64,31 €/ton** In September 2021 showing a continuous uptrend that lasts more than a year

Forecast and future prices of CO2 shows that the trend of Allowances' price will continue to increase without any known hold.

The impact that CO2 and electric consumption have in the Basque Industry competitiveness, reflects the opportunity and the need of implementing decarbonization initiatives at scale

Industrial Sectors highly impacted by CO2 and energy prices



The Basque Government already has a strong commitment with the Net Zero path reflected in the 'Basque Green Deal'

Commitments

"Achieve net zero Emissions by 2050" by 3 partial objectives:

- **Reducing by 30% GHG Emissions for 2030**
- **Achieving a 20% mix of renewable energies**
- **Positioning Euskadi in the top 4 European Countries in Energy Efficiency**

The 30 Actions of the Basque Green Deal

6 — **Initiatives to fight against climate change**

Set of activities focused on increasing the use of renewable energies, accomplish the Net zero emissions and energy transition objectives.

6 — **Initiatives to promote Clean and Safe Energy**

Measures designed to increase power generation with clean technologies as photovoltaic, wind and biomass; carry out pilot projects for the District heating; and accomplish the Energy Transition actions defined.

6 — **Initiatives to increase sustainability and circularity**

Making 50% of the Basque region to have a circular economy strategy defined for their companies, transitioning to more productive models generating less industrial waste.

4 — **Initiatives related with sustainable and intelligent mobility**

Designing a mobility sustainable plan in order to achieve 100% of the public vehicles with alternative fuel and promote railway as the main way of transport.

3 — **Initiatives to promote a sustainable agriculture**

Creation of the "*Alianza de la Bioeconomía Circular Forestal*" in Euskadi, aiming to achieve 50% of food to be produced in the region and reduce on a 30% waste.

5 — **Initiatives for climate action and biodiversity**

Actions are focused on increasing the space of wooded landscape, decrease the surface and increase the quality of the water on their rivers.

The creation of a net zero Industrial Cluster is a great opportunity to accelerate the path achieving synergies, sharing risks and attracting investments

From

Industrial Companies seeking decarbonization initiatives on their own, **without** taking advantage of **synergies between industries and technologies**

IBERDROLA — Renewable PPA, Energy Efficiency and Demand Electrification

Petronor — *Basque Hydrogen Corridor*, Energy Efficiency, Low Carbon Products and Energy Consumption decarbonization

BASQUE CLUSTERS — Cluster associations that launch initiatives inside existing Industrial clusters

To

Industry associations boosting decarbonization initiatives in each Industry

IBERDROLA

Petronor

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02
Approach & Objectives

Basque Government joins WEF Net-zero Industrial Clusters initiative with the creation of the Basque Super Cluster to reinforce its commitment to reduce industrial emissions and achieve net-zero targets

Ambition: The Basque Net Zero Industrial Supercluster aims to accelerate the path to net zero emissions in the Basque Country, fostering energy supply decarbonization and energy efficiency in the industrial sectors and creating market opportunities based on the scale-up of the new technologies and innovative services.

BASQUE NET ZERO

- Super Cluster because will **integrate the Industrial Clusters** (Industrial associations) already operating in the Basque Country, enabling and facilitating **coordination and synergies within the key Industries**
- **Collaboration and commitment** between the Government and **the key Energy Companies** operating in the geographic area, to develop and implement roadmaps on an industry basis to reduce industrial emissions and achieve net-zero targets.
- With an initial focus to **target five Industries up to 67,1% of total GHG emissions** in the area: Refinery, Cement, Steel, Foundry and Pulp & Paper. Other industries where **decarbonization opportunities can be achievable in the short term** will also be considered (i.e. low temperature process heat)
- Align on **common goals** (e.g., scale net-zero technologies, create jobs, deploy digital services, etc.) and develop cluster-specific roadmaps to achieve net-zero targets by a target year.

Super Cluster construction will be implemented in different phases, engaging different partners, industries and stakeholders

The Basque Net-Zero Industrial Supercluster relies on **a multi-stakeholder collaboration approach** where the **Basque authorities would boost the collaboration between the different actors.**

The **Partners for the Phase 1** of the Supercluster set-up & launch are the **Basque Government and the Energy companies Iberdrola and Petronor** with the collaboration of the Industrial Cluster Associations. Their objective is to articulate initiatives in the key Sectors to decarbonize their industry, accompanied by the main Basque approach: **technical innovation and digitalization.**

Iberdrola and Petronor will have a key contribution in the Super Cluster set up with the development of low and free carbon energy projects.

Government

Basque Government

Setting policy frameworks, new business models and infrastructure for low-carbon technology.
Unlocking system value benefits such as job creation, improved air quality linked health benefits, GHG emissions reduction.

Energy Companies

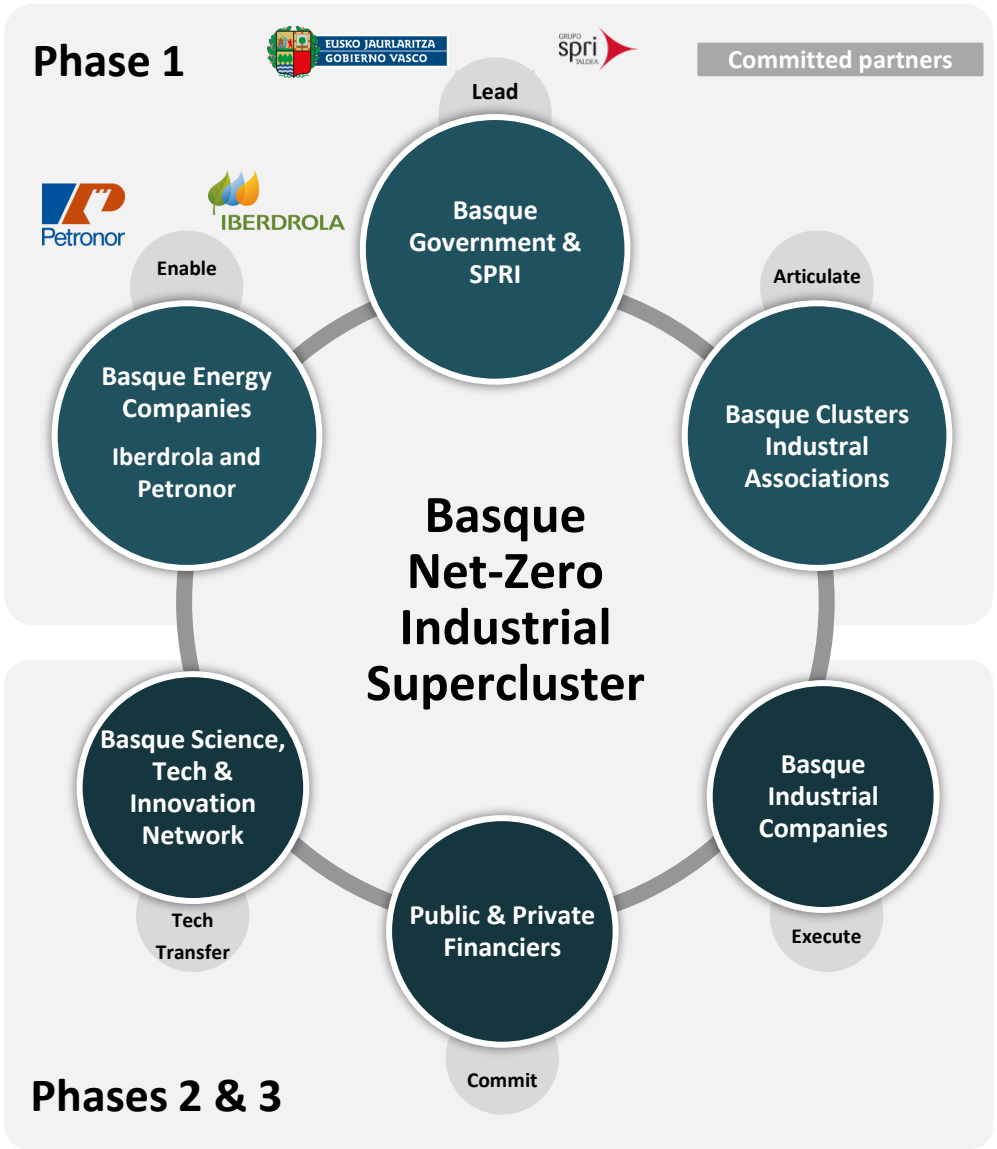
Iberdrola and Petronor

Actively collaborate with industrial demand centers to integrate low-carbon sources of energy into the overall system.
Commitment of capital and resources to develop new integrated energy systems at scale.

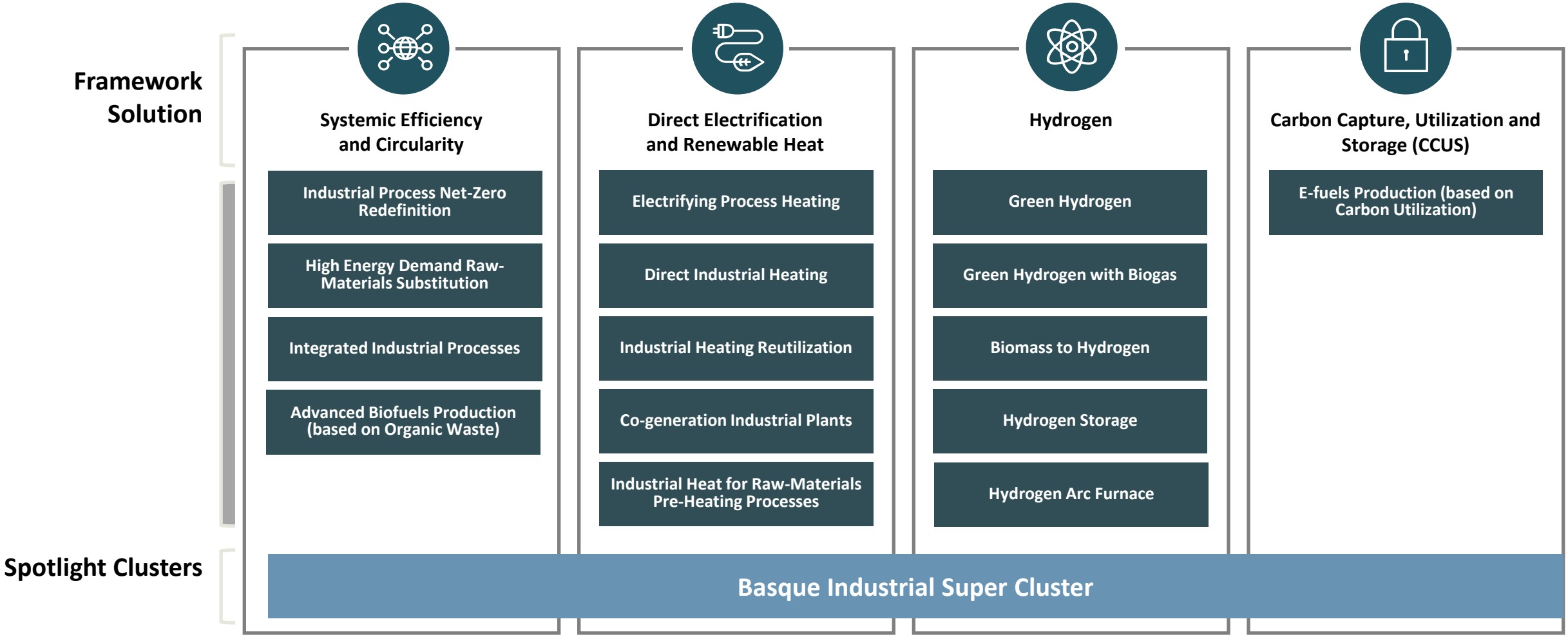
Industrial Companies

Basque Industrial Cluster Associations

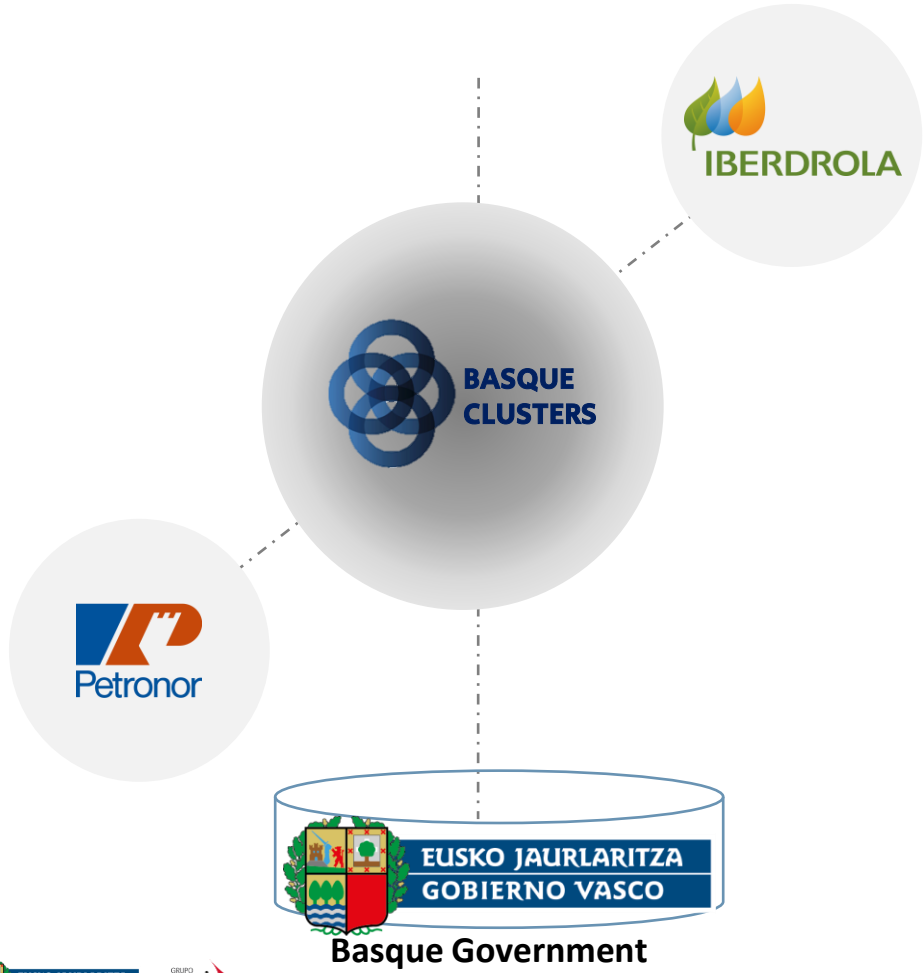
Broad-based collaboration within and across industries, as well as with the government and the energy Companies to maximize the impact of decarbonization initiatives



Basque Super Cluster will develop projects and initiatives in the four solution areas of Industrial Cluster WEF approach, taking advantage of the potential to reduce industrial GHG emissions footprint



To set up and speed up the Super Cluster, Basque Government will establish a partnership with Iberdrola and Petronor, both Energy companies with long history and strong commitment with business and social development in the Basque Country



- Iberdrola and Petronor take the **leadership to actively develop Projects** to integrate low-carbon sources of energy into the Industrial demand, enabling the **decarbonization of the energy supply**
- Iberdrola and Petronor will **allocate capital and resources** to develop new integrated energy systems at scale
- For the Super Cluster set up, Iberdrola and Repsol projects will focus on the **five Industries prioritized for phase 1**, and those industries where decarbonisation and electrification can be achievable in the short term (i.e. **low temperature process heat**)

Systemic Efficiency

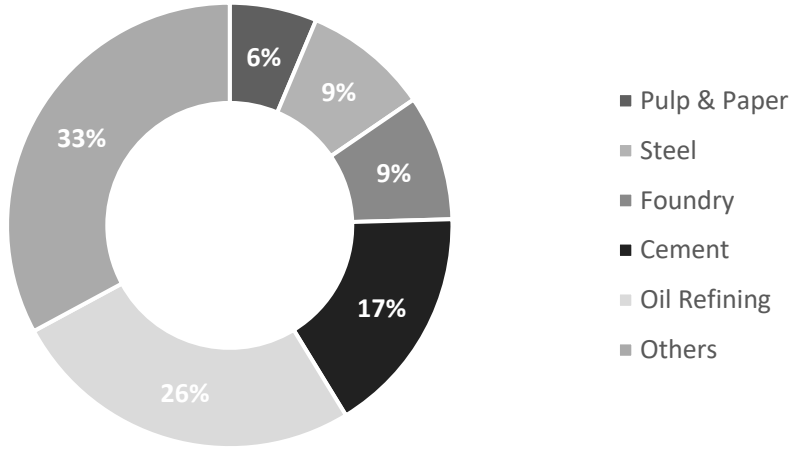
Direct Electrification and Renewable Heat

Hydrogen

Carbon Capture, Utilization and Storage (CCUS)

Five key Industrial Sectors are included in the initial phase through their Industrial Cluster Associations (1)

GHG Emissions Distribution By Industry Type

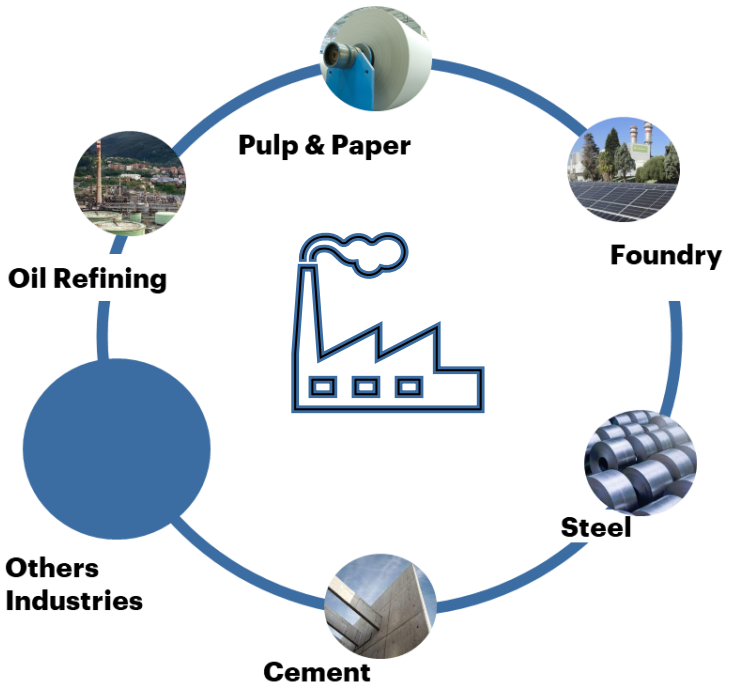


- The Basque Industrial Clusters Associations would play a key role to drive the development of decarbonization projects, ensuring coordination and maximizing synergies among their Partners
- Industrial Sectors will face huge challenge to transform their productive processes and the Super Cluster will be an opportunity to share risk, attract investments and develop technology

(1)Other industries where decarbonization opportunities can be achievable in the short term will also be considered (i.e. low temperature process heat)

The Super Cluster will **create** market opportunities based on the scale-up of new technologies and innovative services

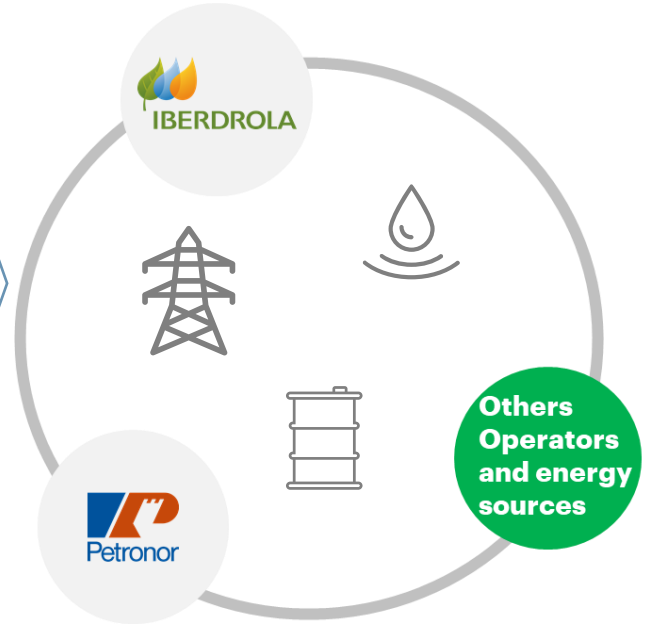
MANUFACTURING INDUSTRIES



TECHNOLOGIES AND INNOVATIVE SERVICES DELIVERED BY COMPANIES IN THE VALUE CHAIN

- Energy efficiency
- Process decarbonization
- Digitalization: Energy consumption monitoring and management systems
- Renewable energy sources (for self-consumption facilities)
- Green Hydrogen production and consumption equipment
- Heat pumps for low-temperature processes
- Waste heat recovery and use technologies

ENERGY COMPANIES



Basque Science, Technology and Innovation Ecosystem

Super Cluster key objectives go beyond the net-zero emission commitments

- Set the Basque Country as a **global pioneer in the decarbonization of a highly industrialized geographic area, leveraged on technology and digitalization**
- **Boost and scale-up technology, innovation and business development** in the Basque Country thanks to the industrial decarbonization agenda
- **Positively impact the creation and maintenance of qualified jobs** in the Basque Country, thanks to the development of new products and services based on technological and innovative solutions
- **Gain competitiveness** in terms of carbon-foot-print labels in the finished and semi-finished products of the involved companies
- **Improve air & water quality** for the regions where the industrial companies are located
- **Attract public & private investment** for decarbonizing industrial projects and technical developments

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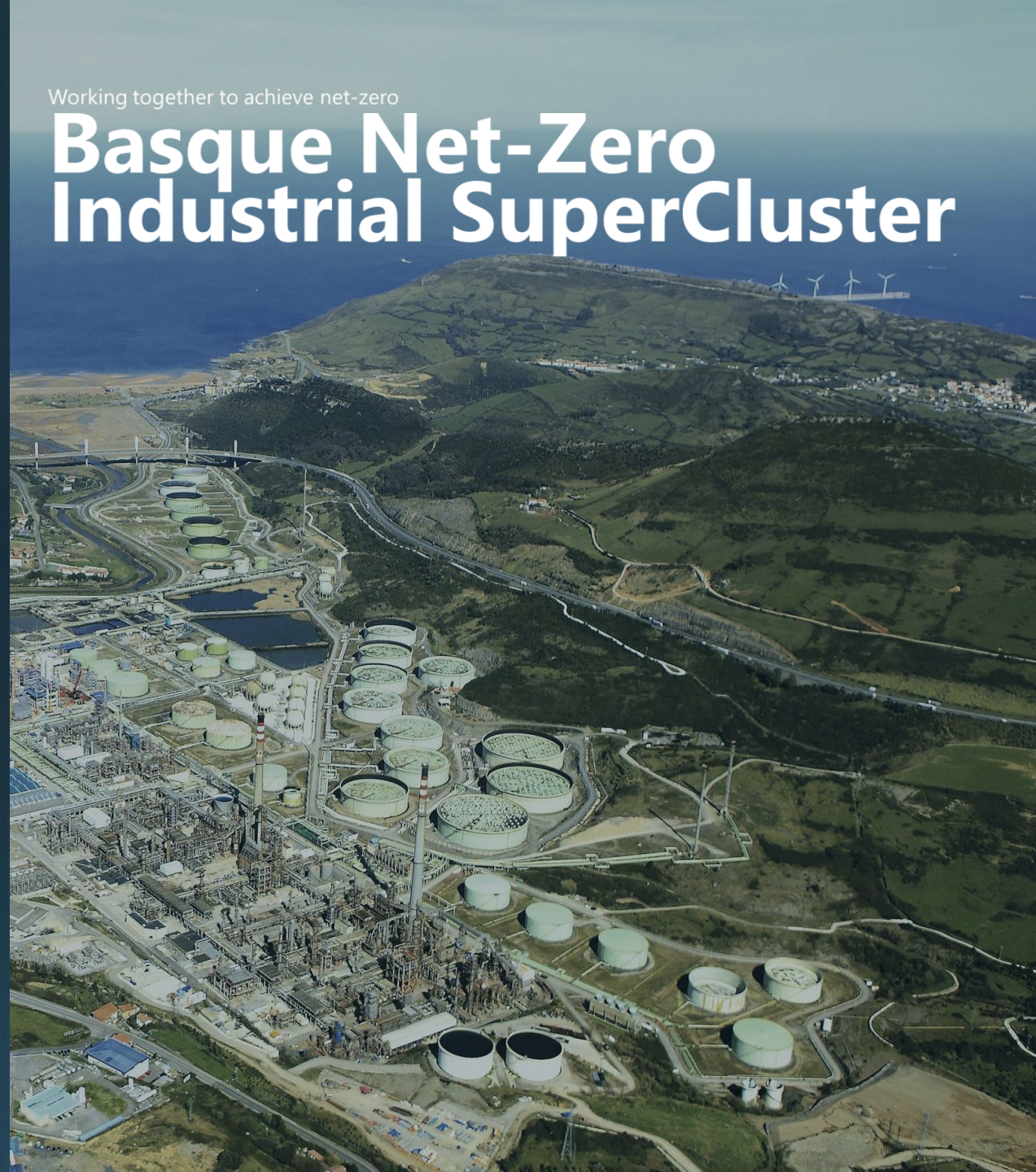
03
Action Lines & Projects



Iberdrola and Petronor, both committed with the development of decarbonization projects in the most relevant industries by GHG Emissions

RANK	INDUSTRY	GHG E. KTNCO2	ACUM. % OF EMISSIONS
1	OIL REFINING	1.875	25,8%
2	CEMENTS	1.211	42,6%
3	STEEL	660,5	51,7%
4	FOUNDRY	660,5	60,8%
5	PULP & PAPER	452,1	67,1%
6	MACHINES AND METAL PROCESSING	446	73,3%
7	GLASS	262	76,9%
8	QUIMICS	261	80,5%
9	NON-FERROUS METALLURGY	229	83,6%
10	OTHERS	977	100%

Target

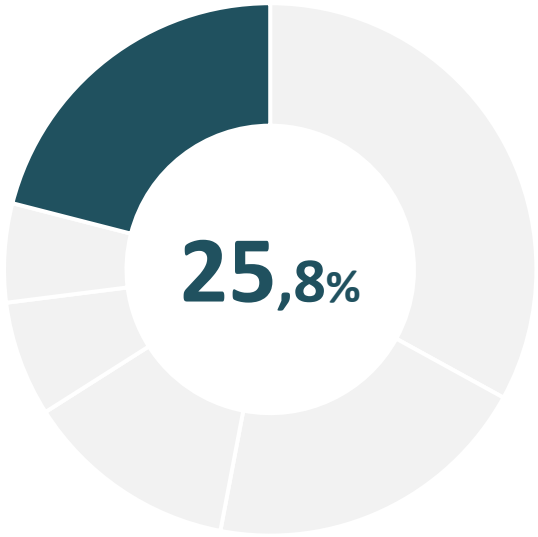
67,1 % Of GHG Emissions

58,2 % Of Industrial Electric Consumption

41 % Of Contribution to Industrial GDP

Sub-Industrial Sector: Oil Refining

Sector Overview



Oil Refining industrial sector **produces up to 25,8% of GHG Emissions** from the Industrial Activity in the Basque Country

Energy Efficiency | Direct Electrification | CO2 CCUs | Hydrogen

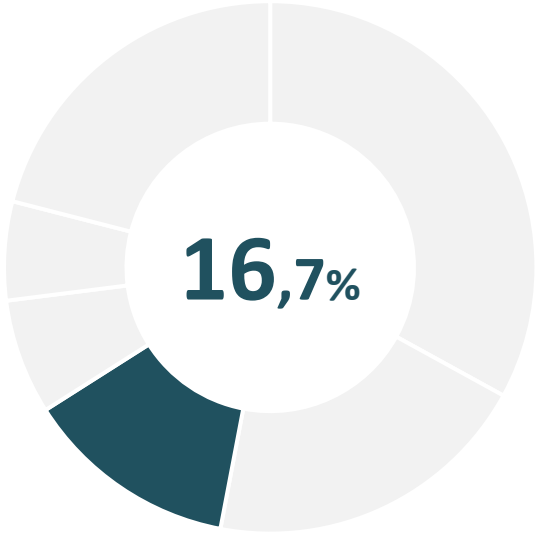
Action Lines and Projects

Initiative Nature	Action Line	Initiative	Project Sponsor
	Energy Efficiency and decarbonization of refining process	Decarbonization of the industry by **Energy Efficiency**, **applying best available technologies and optimizing industrial processes**, products and services, and work tools to increase the global efficiency of the company.	Petronor
	Green hydrogen production by electrolysis	**Installation of a 100MW electrolyzer**, which would mean around 2 t / h of green hydrogen. The main use will be **its consumption in the Bilbao refinery** as a raw material to replace part of the conventional hydrogen currently generated.	Petronor
	Green hydrogen Production- Biogas	Installation of a **biogas production plant** from different types of waste, **using best (pyrolysis and gasification) technologies.** The application in refining is the one that occurs in the short term (2021-2030), **contributing to the decarbonization of hydrogen production** in the process.	Petronor
	Switch from grey to green hydrogen	Green hydrogen production with co-location **of renewables onsite and offsite** to replace grey hydrogen to be used at refining processes as feedstock	IBERDROLA

Sub-Industrial Sector: Cement

BASQUE NET ZERO

Sector Overview



Cement industrial sector **produces up to 16,7% of GHG Emissions** from the Industrial Activity in the Basque Country

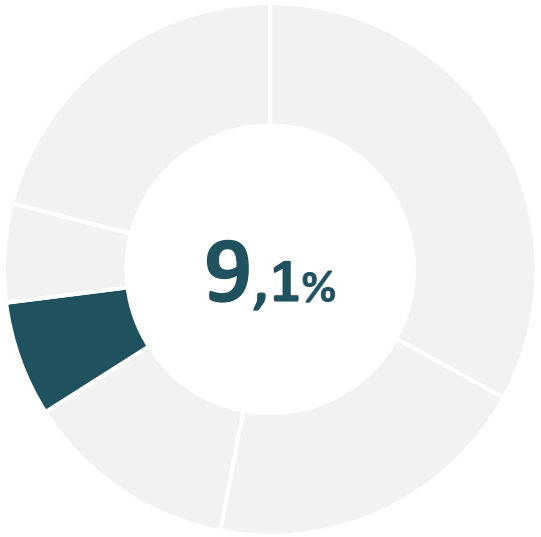
Energy Efficiency | Direct Electrification | CO2 CCUs | Hydrogen

Action Lines and Projects

Initiative Nature	Action Line	Initiative	Project Sponsor
	Green hydrogen production	Supply of **green hydrogen as fuel in the furnaces**	Petronor
	Direct emissions capture and use - CCU	**Process decarbonization** and **CO2 CCU application**	Petronor
	Green hydrogen production by electrolysis and CCU	**Raw Material Transport** using **efuels** and **advanced biofuels** Raw Material Transport using **renewable hydrogen**	Petronor
	Synthetic Fuels Plant, Biogas, Biofuels and CCU	**Replacement** of fossil fuels by net zero emission fuels with no investment for the user (use of **efficient technologies in furnaces**)	Petronor
	Direct Electrification and Energy Efficiency	**Fuel switch** electrifying the industrial processes **through the replacement**, where possible, **of fossil fueled furnaces to energy efficient electric furnaces** that will help to partially reduce CO2 emissions. A renewable PPA can be included to supply the energy required to this furnace	IBERDROLA
	Direct Electrification and Renewable Generation	Installation of **renewables onsite and/or renewable PPAs** to help reduce the carbon footprint and further electrify industrial processes of the cement industry	IBERDROLA
	Green Hydrogen	Supply of **green hydrogen as fuel in the furnaces**	IBERDROLA

Sub-Industrial Sector: Steel

Sector Overview



Steel sector produces **up to 9,1% of GHG Emissions** from the Industrial Activity in the Basque Country

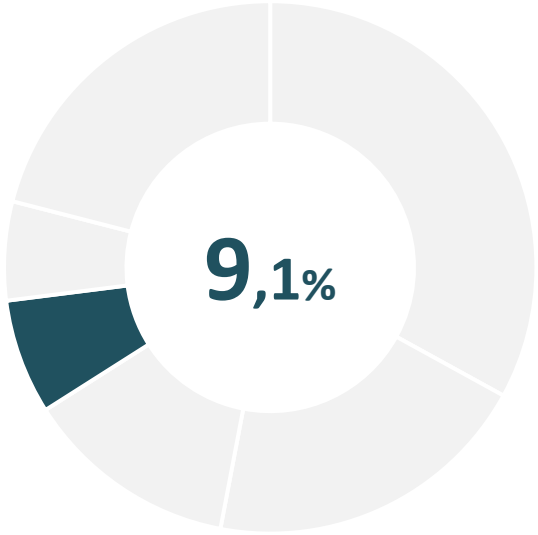
Energy Efficiency | Direct Electrification | CO2 CCUs | Hydrogen

Action Lines and Projects

Initiative Nature	Action Line	Initiative	Project Sponsor
	Synthetic Fuels Plant, Biogas, Biofuels and CCU	**Replacement** of fossil fuels by net zero emission fuels with no investment for the user (use of **efficient technologies in furnaces**)	Petronor
	Green hydrogen production by electrolysis	**Fuel switch to replace the gas required at DRI-EAF furnaces**, indirectly electrifying steel production with green hydrogen	Petronor
	Energy efficiency through the increase of recycling scrap steel	Increase **steel recycling that can be processed directly through electric arc furnaces** resulting in a further electrification of the industry. A renewable PPA can be included to supply the energy required to this furnace	IBERDROLA
	Green hydrogen production by electrolysis	**Fuel switch to replace the gas required at DRI-EAF furnaces**, indirectly electrifying steel production with green hydrogen	IBERDROLA
	Direct Electrification through Fuel switch	**Direct Electrification through the direct electrolysis of iron ore** for making steel by converting this iron ore into liquid metal and oxygen.	IBERDROLA
	Electrification H2	Study **electrification or the use of H2** in all metallurgical processes applied to steel products once they are manufactured	IBERDROLA

Sub-Industrial Sector: Foundry

Sector Overview



Foundry sector produces **up to 9,1% of GHG Emissions** from the Industrial Activity in the Basque Country

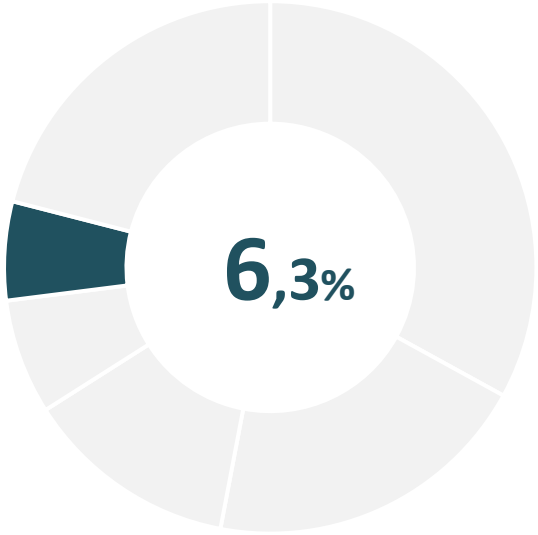
Energy Efficiency | Direct Electrification | CO2 CCUs | Hydrogen

Action Lines and Projects

Initiative Nature	Action Line	Initiative	Project Sponsor
	Green hydrogen production	Fuel substitution **from gas to renewable hyd**rogen and process decarbonization	Petronor
	Synthetic Fuels Plant, Biogas, Biofuels and CCU	**Replacement** of fossil fuels by net zero emission fuels with no investment for the user (use of **efficient technologies in furnaces**)	Petronor
	Direct Electrification through Fuel switch	**Fuel switch electrifying** the industrial processes through the **replacement**, where possible, **of fossil fueled furnaces to energy efficient electric furnaces** that will help to remove CO2 emissions. A renewable PPA can be included to supply the energy required to this furnace	IBERDROLA
	Green hydrogen production by electrolysis	**Fuel switch from gas to green H2** in those processes where electrification with electric furnaces is not possible and a hybrid furnace (electricity+H2) is required. A renewable PPA can be included to supply the energy required to this furnace	IBERDROLA
	Electrification H2	Study **electrification or the use of H2** in all metallurgical processes applied to steel products once they are manufactured	IBERDROLA

Sub-Industrial Sector: Pulp & Paper

Sector Overview



Pulp and paper industrial sector produces **up to 6,3% of GHG Emissions** from the Industrial Activity in the Basque Country

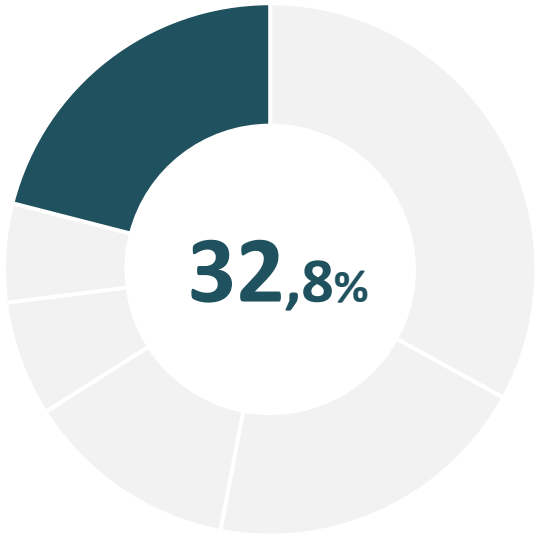
Action Lines and Projects

Initiative Nature	Action Line	Initiative	Project Sponsor
	Green hydrogen production	Fuel substitution from **gas to green hydrogen** and process decarbonization	Petronor
	Systemic Efficiency and Circularity	**Recycle** of **side products of pulp&paper sector** to valorize their use as materials or energy carriers.	Petronor
	Energy Efficiency and Direct Electrification	**Integration of efficient high temperature heat pumps to replace gas** in the drying process of the pulp and paper industries. A renewable PPA can be included to supply the energy required by the heat pump	IBERDROLA
	Direct Electrification and Renewable Generation	**Installation of renewables onsite and/or renewable PPAs** to help reduce the carbon footprint and further electrify processes of the pulp and paper industry	IBERDROLA

Energy Efficiency | Direct Electrification | CO2 CCUs | Hydrogen

Sub-Industrial Sector: Other Industries

Sector Overview



Other Industries produces up to 32,8 % of GHG Emissions from the Industrial Activity in the Basque Country

Energy Efficiency | Direct Electrification | CO2 CCUs | Hydrogen

Action Lines and Projects

Initiative Nature	Action Line	Initiative	Project Sponsor
	Synthetic Fuels Plant, Biogas, Biofuels and CCU	**Replacement** of fossil fuels by net zero emission fuels with no investment for the user (use of **efficient technologies in furnaces**)	Petronor
	Renewable H2 production	Fuel substitution from **gas to renewable hydrogen** and process decarbonization	Petronor
	Systemic Efficiency and Circularity	Recycle of side products of each sector to valorize their use as materials or energy carriers.	Petronor
	Energy Efficiency and Direct Electrification of low temperature process heat	**Integration of efficient high temperature heat pumps to replace fossil fuels** of low temperature processes (below 200ºC). A renewable PPA can be included to supply the energy required by the heat pump	IBERDROLA
	Direct Electrification and Renewable Generation	**Installation of renewables onsite and/or renewable PPAs** to help reduce the carbon footprint and further electrify processes of these industries	IBERDROLA

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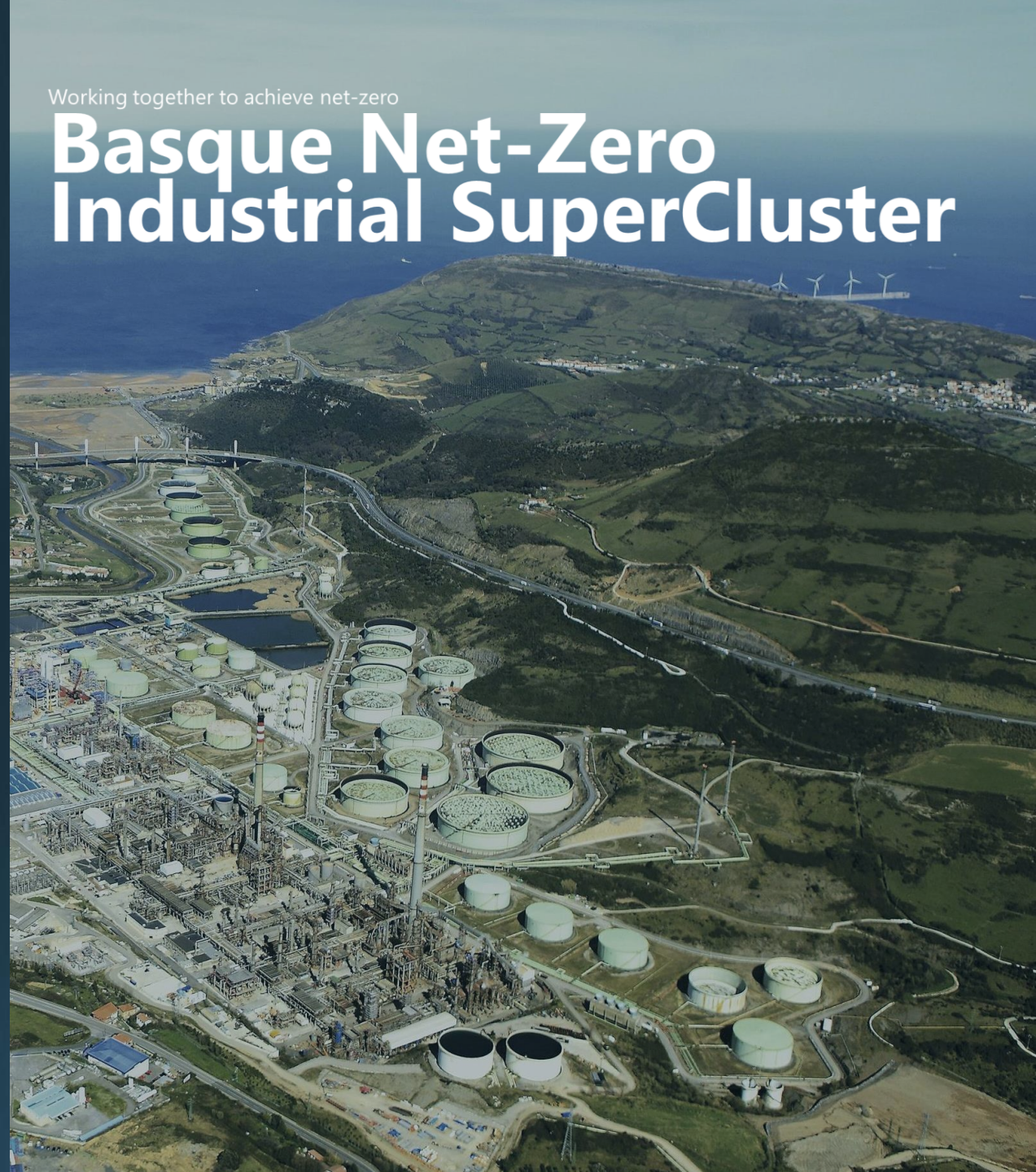
04

Operating Model & Development



Governance and Operating Model will be implemented to manage and coordinate initiatives

The **pre-liminary conceptual model** for the governance framework will involve **different agents with different roles & responsibilities.** The Governance Model will be driven by the **Basque Government** and its partners **Iberdrola, Petronor and the Industrial Associations** with the strategic guidance of the **WEF**.

BASQUE NET ZERO

Strategic layer

Define the vision and the objectives and guide the different initiatives

Basque Authorities
Governments
Lead and set the strategic vision and the economic and social objectives

Iberdrola/Petronor
Key Industrial Partners
Develop technology to decarbonize power generation and energy consumption

(WEF) World Economic Forum
Visibilize the initiatives and support in the funding search

Operational layer

Enable coordination, monitoring and digital platforms to support Project execution and Super Cluster operations

Tech & Innovation Companies
Assist in the Super Cluster operations and develop digital and technical enablers

Tactical layer

Execute common zero-emissions projects and leverage synergies

Oil Refining
Industrial Companies

Cement
Industrial Companies

Steel
Industrial Companies

Foundry
Industrial Companies

Pulp and Paper
Industrial Companies

Others*
Industrial Companies

Financiers
Commit capital to cross-sector low-carbon projects

Basque Science & Innovation Network
Develop science & innovation I enablers

**The Basque Net-Zero SuperCluster would initially focus on the 5 selected sub-industries but it is an initiative which has the ambition to cover all the different sub-industrial areas in their jounrey to decarbonization*

The Basque Government is committed to support the development of required enablers

Enablers

Legal and policy Framework

- New Basque Climate & Energy Transition Law (LTCCE) to enforce and support public and private initiatives to achieve Climate neutrality by 2050:
  - Energy savings and production efficiency
  - Renewable energy production and consumption in the Basque Country
  - Substitution of fossil fuels for carbon neutral energy sources
  - Use of hydrogen
- Technological Development Strategy in Energy – Energibasque
- Basque Hydrogen Strategy EVH2
- Industrial Development Plan

Technology

- Capacity building in Basque Science, Technology and Innovation Ecosystem. Cross-sector funding of R&D facilities to unlock new technical and digital capabilities
- Funding mechanisms for the development of Key Enabling Technologies as well as specific low-carbon technologies: renewables, electrolyzers, industrial process efficiency techniques, heat pumps, . .
- Support to digitalization of industrial processes and the incorporation of digital technologies for energy efficiency, energy consumption monitoring and management systems

Support mechanisms

- Subsidy programs to support Energy Efficiency measures and investments in industry
- Subsidy programs to support private investments in self-consumption facilities: renewable generation power plants, storage devices
- Privat-public co-investment in renewable energy generation power plants (windfarms and solar PV plants)
- Private-public co-investment for the generation and injection of biomethane in natural gas networks
- Support to associations for joint power purchasing

Tools & Assets

- Ad-hoc roadmaps for the decarbonization of industry trough Industrial Cluster Association: characterization reports, analysis of sectoral risks and opportunities, methodology definition to approach decarbonization plans, selection of priority sectors and measures
- Simulation system that provides the impacts of decarbonization measures and technologies on energy consumption, economy (GDP, employment), environment and society. It will consist of an Integrated modelling system leveraged by IA algorithms and will generate results segmented by sector, Industry or even geographical area.

The Basque SuperCluster roadmap & following development phases

BASQUE NET ZERO

Phase 1 – Set-Up

Objectives

- **Define** the Basque Net-Zero Supercluster, its **objectives and strategic initiatives**
- **Commit** the Industrial Clusters Associations, Iberdrola and Repsol/Petronor as the key actors of the Supercluster
- Sign the **WEF Letter of Ambition** and present the initiative at COP26 Glasgow
- **Analyse and contextualize** the Basque industrial sector and its emissions
- **Align Iberdrola and Petronor** decarbonization initiatives with the Basque Government initiatives

Committed Partners

- Basque Industrial Clusters
- Iberdrola
- Petronor

COP26

Further Phases

Public Biding

- After COP26, the initial action would be to release the **Public Biding Offer** to select the **Business & Technical Partner to help the Basque Government** to develop the **detailed SuperCluster design and the partners mobilization**

Objectives

- **Design** the Basque Net-Zero Industrial Supercluster and its **operating model**
- **Commit** the rest of the strategic stakeholders (Basque Science, Tech & Innovation Network and Financiers)
- **Seize and analyze** the value and the socio-economic impact of the initiatives

Partners to identify*

- Basque Industrial Companies
- Basque Science, Tech & Innovation Network
- Public & Private Financiers

During the Further Phases of the initiative the rest of the stake-holders would be committed

Committed partners | Partners to identify

EUSKO JAURLARITZA GOBIERNO VASCO | GRUPO spri TALDEA

EUSKO JAURLARITZA
GOBIERNO VASCO

GRUPO spri

05 Executive Summary

Basque Country

2,2M
Population

And 302 Habitants per Km2

204.000

Jobs in industry in the Basque region

7,2

MT CO2 per year

Emissions caused by Industry

Basque Industry

Industries addressed 1st phase

- Oil Refining
- Cement
- Steel
- Foundry
- Pulp & Paper

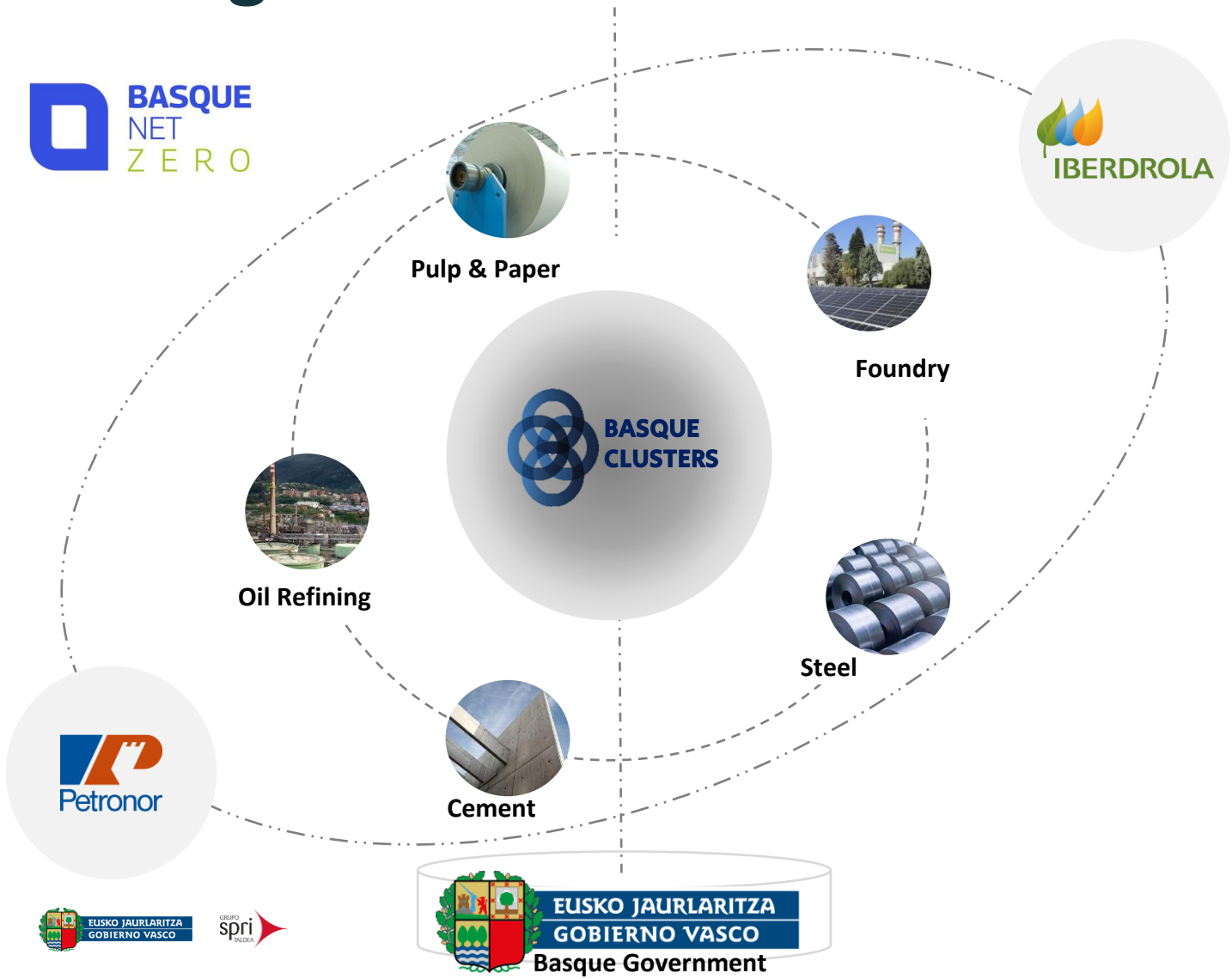
23,9 %

Industry Contribution to GVA in 2019

46,15%

Of GHG Emissions are emitted by Industries

Five key Industrial Sectors are included in the initial phase through their Industrial Cluster Associations



The Basque Net-Zero Industrial Supercluster relies on a **multi-stakeholder collaboration** approach where the Basque authorities would boost the collaboration between the different actors.

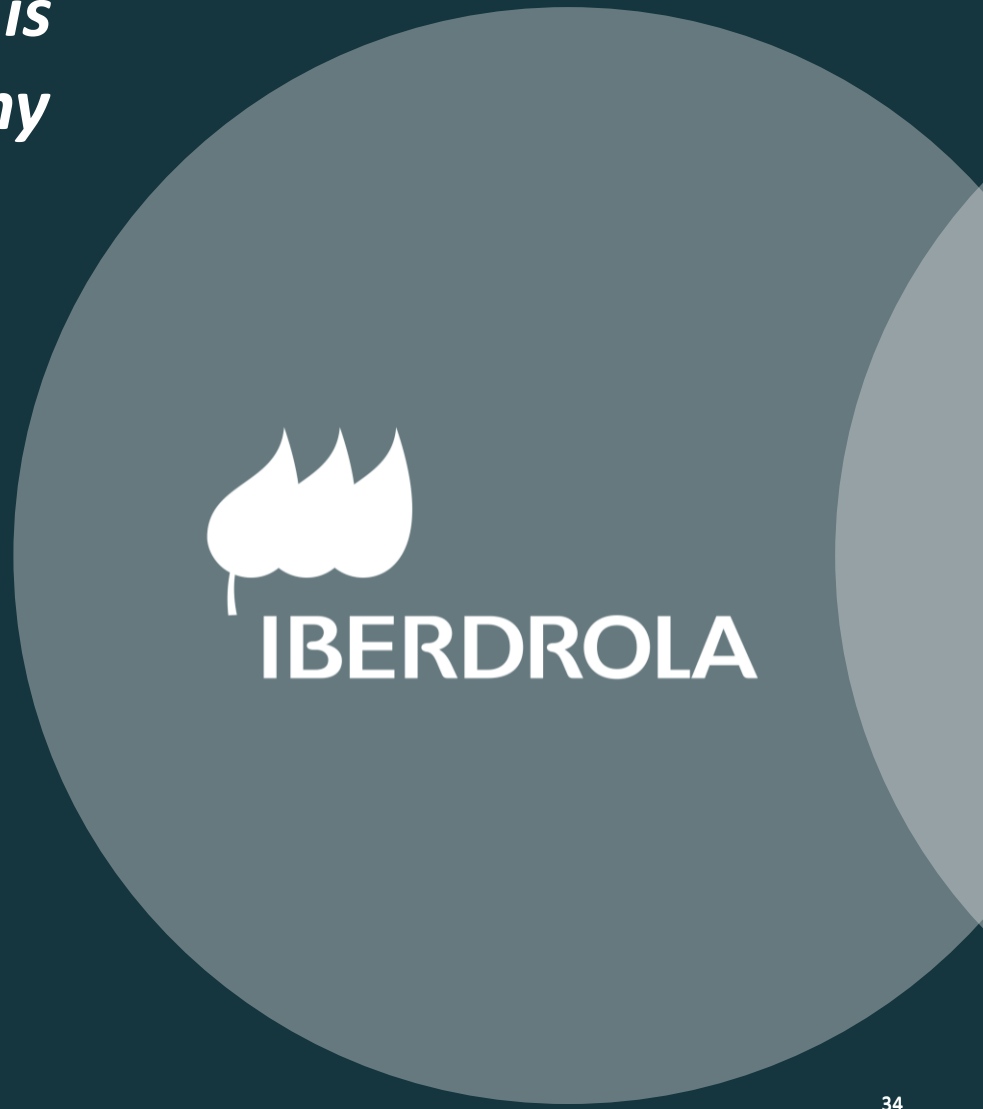
The Partners for the Phase 1 of the Supercluster set-up & launch are the **Basque Government and the Basque Energy Companies Iberdrola and Petronor** with the collaboration of the Industrial Cluster Associations . Their objective is to **articulate initiatives in the key Sectors** to decarbonize their industry, accompanied by the main Basque approach: technical innovation and digitalization.

Iberdrola and Petronor will have a **key contribution** in the Super Cluster set up with the development of low and **free carbon energy projects.**

1. Acciones previas para la preparación de la sesión con las ODCs:

2. Acciones previas para la preparación de la sesión con las ODCs:

“Iberdrola, as one of the key industrial partners, is committed to the decarbonisation of the economy through greater electrification and the use of decarbonized fuels, such as green hydrogen, where electrification is not possible or uncompetitive.”



Petronor, as one of the key industrial partners, is committed to the decarbonisation of the economy through its own processes and products (commitment to be net zero to 2050), with the production and use of decarbonised fuels, such as synthetic fuels, advanced biofuels and renewable hydrogen and electricity, boosting circular economy and based on technological neutrality and competitiveness."


EUSKO JAURLARITZA
GOBIERNO VASCO
GRUPO
spri
WORLD
ECONOMIC
FORUM
Working together to achieve net-zero
Basque Net-Zero
Industrial SuperCluster