



MARKET INSIGHTS

“Spain leads the European Union in ship collection and control by ETS”¹

The European Union (EU) country that will collect the most money and inspect the most ships under the EU Emissions Trading Scheme (ETS) for greenhouse gas emissions (GHG) in maritime transport, better known as the EU ETS, which came into force on January 1, will be Spain. Specifically, it will inspect 3,000 ships from third countries, which is about 50% of those calling in the EU, according to figures from the Dirección General de la Marina Mercante (Directorate General of the Merchant Navy). The fact is that Spain “is the EU country with the greatest workload in the management of greenhouse gas emissions” because it is, after the Netherlands, the second Member State with the most maritime traffic.

For its part, ETS revenues, allocated to national budgets, will support investments in renewable energies, energy efficiency improvements and low-carbon technologies, facilitating the transition to decarbonization, according to the European Commission.

Analysis of the Fundación Valenciaport

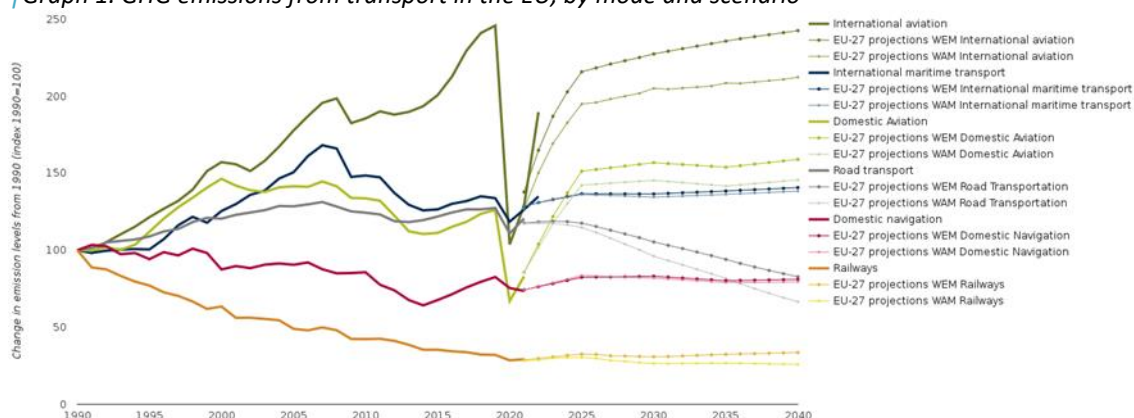
Currently, there is almost a general consensus that our model of energy production and consumption is causing **global climate disruption**. In this sense, **climate change** is one of the greatest challenges of the 21st century, so that efforts to adapt to new climatic conditions and mitigate GHG emissions will be decisive for future development.

The **transport sector** plays an indispensable role in the European economy, being a key driver of trade dynamism. However, it is also one of the sectors that contributes significantly to **GHG emissions**. This has generated priority attention from EU environmental policies. In this context, **Fit for 55** stands as a keystone in the EU's strategy, focusing its efforts on the decarbonization of transport.

According to the first European report on the **environmental impact of the logistics sector, maritime transport**, which is essential for international trade and accounts for nearly 90% of global transport by volume, is the third largest emitter of polluting gases, with 14%, behind only road and air transport (Graph 1). Furthermore, although shipping is a significant contributor to GHG emissions, accounting for 3-4% of the EU's total carbon footprint, this figure is considerably lower compared to other modes of transport, such as road transport, which accounts for 20.5%.

¹ Original news published by “El Mercantil” and available at: <https://elmercantil.com/2024/05/08/espana-lidera-la-recaudacion-y-el-control-de-buques-por-el-ets-en-la-union-europea/>

Graph 1. GHG emissions from transport in the EU, by mode and scenario



Source: European Environment Agency (2023)

Climate change strategies, policies and regulations

However, to address the challenge of climate change and mitigate its effects, institutions at all levels - global, European and national - have developed a **series of strategies, policies and regulations**. These measures not only reflect its commitment to this global issue, but also outline the steps needed to achieve the established objectives.

Among the **main global agreements** on climate change stands the **Kyoto Protocol**, adopted in 1997, which committed industrialized countries to reduce GHG emissions according to individual targets, binding 36 nations and the EU. A very notable milestone was the **Paris Agreement**, adopted in 2015, which seeks to limit the global temperature increase to 2°C, with efforts not to exceed 1.5°C, by reducing emissions. Similarly, the **2030 Agenda for Sustainable Development**, also adopted in 2015, consists of **17 Sustainable Development Goals (SDGs)** aimed at addressing the most pressing global challenges, including climate change. SDG 13 focuses specifically on taking urgent action to combat climate change and its impacts.

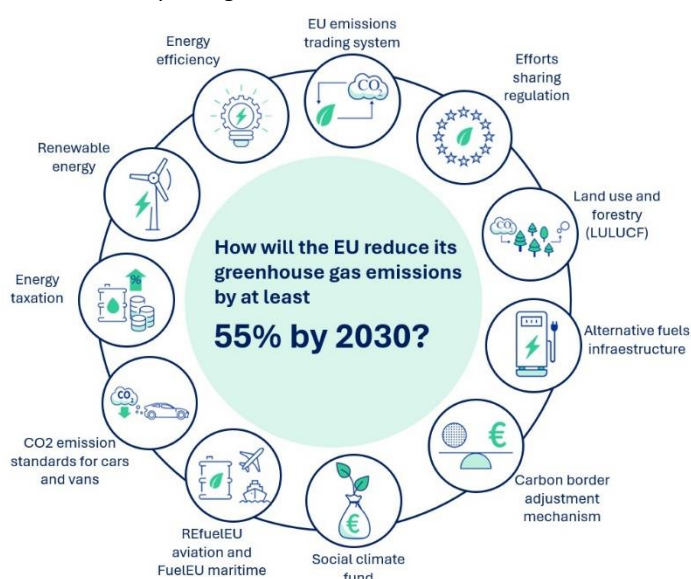
In this same global context, the **EU** has led the response to the climate crisis since **1990**, promoting a constant evolution of its legal framework. In **2008**, the **Energy and Climate Change Package 2013-2020** was approved, with targets for renewable energy, energy efficiency and emission reductions until 2030. Subsequently, this package was extended to 2030, accompanied by the presentation of a **Roadmap towards a low-carbon economy by 2050**. In **2019**, the EU launched the **European Green Pact**, followed in **2020** by the **Sustainable and Smart Mobility Strategy**, based on promoting sustainability in all modes of transport, implementing sustainable alternatives and setting incentives for a transition to sustainability.

In order to convert the **political commitment to carbon neutrality** into a **legal obligation** providing certainty to all sectors, the **European Climate Law** was adopted on June 30, 2021. This law adopts the European Green Pact's goal of making the European economy and society carbon neutral by 2050 and specifies that achieving this will require a 90% reduction in emissions from the transport sector. It also sets an

intermediate target of reducing net GHG emissions by at least **55% by 2030** compared to 1990 levels, a more ambitious target than the one set in 2014.

To achieve these objectives, the **European Commission** launched the **Fit for 55 package** in **2021**, aimed at reviewing and updating legislation to bring it in line with agreed climate targets. This package covers a wide range of sectors and issues, setting ambitious emission reduction targets for industry, transport, construction, and agriculture (Infographic 1). It includes measures such as phasing out fossil fuels, promoting renewable energies, improving energy efficiency, as well as achieving 40% of energy consumption from renewable sources by 2030, boosting investments and facilitating cooperation between countries to develop smart grids.

| Infographic 1. Fit for 55 measures package



Source: Own elaboration based on information from the Council of the EU and the European Council.

Implemented measures for the decarbonization of the maritime sector

As for the maritime transport sector, the **Fit for 55 package** includes several **specific measures** that have a direct impact on the decarbonization of the sector:

- Emissions Trading System (EU ETS)
- Alternative Fuel Infrastructure Regulation (AFIR)
- FuelEU Maritime
- Energy Taxation Directive (ETD)
- Renewable Energy Directive (RED)

Alternative Fuel Infrastructure Regulation (AFIR) European Union Emissions Trading System (EU ETS)

The EU ETS was launched in **2005** with a three-year **pilot phase** to reduce GHG emissions in sectors such as power generation and **energy-intensive industries**. Thereafter, a **second phase** was implemented in **2008**, coinciding with the commitments of the Kyoto

Protocol, which introduced significant changes, including a reduction in emission allowances and the inclusion of three new countries in the mechanism. The **third phase**, which began in **2012**, expanded the coverage of the EU ETS to include CO2 emissions from aviation transport and established a single EU-wide emissions limit. As a result, emissions covered by this system decreased by 41% by 2020 compared to 2005, exceeding the initial target of 21%.

The current phase of the EU ETS, in force since 2021 until 2030, has expanded the coverage of gases and sectors, setting a target of 40% reduction of GHG emissions by 2030 compared to 1990. However, the *Fit for 55* package legislative proposal seeks to align this target with a 55% reduction by 2030. In this regard, on **May 16th, 2023**, a revision of the EU ETS directive was published, which **includes emissions from maritime transport**. Since the revision of the EU ETS, it was established that, as of **January 2024**, this system would be gradually **extended** to maritime transport. It will be implemented as a **"cap and trade"** mechanism, which means that each registered emitter will be required to purchase the allowances corresponding to its emissions through an auction system. In addition, prices per ton of emissions are expected to generate revenues to partially finance the decarbonization of shipping.

Alternative Fuel Infrastructure Regulation (AFIR)

AFIR seeks to **establish a complete network of alternative fuels infrastructure** throughout the **EU**. Its key provisions include an obligation for ports to install **onshore power supply** systems (OPS) for container ships and passenger vessels by 2030. In addition, the AFIR regulates the supply of **Liquefied Natural Gas (LNG)** and **other alternative fuels**, requiring Trans-European Transport Network (TEN-T) ports to have LNG refueling points as of January 2025, and establishing specific requirements for ports operating as multimodal *hubs*.

The Regulation reached a **general approach** by the Transport Council on June 2nd, **2022**, and a **provisional agreement** was reached with the European Parliament on **March 28th, 2023**. It became **effective** on **October 12th, 2023**. In addition, it is important to note that **December 31st, 2024**, is the deadline for **Member States** to submit **drafts** of national policy frameworks, while between **December 31st, 2024**, and **December 31st, 2029**, are the deadlines for the **mandatory provision of OPS in TEN-T ports** for inland and seaports.

Fuel EU Maritime

FuelEU Maritime is a key initiative to **reduce carbon emissions** in the maritime sector as it is focused on **promoting** the use of **renewable and low-carbon fuels**. This strategy focuses on regulating the **maximum intensity of GHG emissions** in maritime transport, with a gradual planning range from a **2% reduction by 2025 to 80% by 2050**.

It focuses on two key areas: the **navigation of vessels** and their **stay in port**. Regarding the latter, as of 2030, **container** and **passenger vessels** docking in AFIR-affected ports must meet their electrical needs by **connecting to the OPS**. This measure ensures the provision of the required infrastructure as specified by AFIR. Member states have the option to extend this requirement to other ports beyond the scope of AFIR.

The FuelEU Maritime Regulation 2023/1805 was **published** in the **EU Official Journal** on **September 22nd, 2023**, and became **effective** on **October 12th, 2023**. However, its **application** will start on **January 1st, 2025**. As a regulation, FuelEU applies directly, without the need for national transposition.

Energy Taxation Directive (ETD)

The ETD establishes the **regulatory framework** for **taxing energy products in the EU**, with the aim of **discouraging** the **use of fossil fuels** and promoting cleaner energy. **Adopted in 2003**, it is **currently under revision** to meet the EU's new climate and energy objectives. The revision proposes higher taxes on the most polluting fuels and will apply to all fuel supplies within the EU, excluding international maritime transport.

In addition, a **system of minimum rates** will be introduced **based** on the **energy content of fuels**, classifying them into three categories with different tax rates: fossil, low-carbon and renewable fuels. The proposal is under discussion in both the EU Parliament and the Council of the EU and requires unanimous confirmation by the Member States before formal adoption.

In the maritime sector, the ETD will impact all *bunker* fuel used in the intra-EU shipping, seeking to encourage more sustainable practices aligned with the objectives of decarbonization and transition to a greener economy.

Renewable Energy Directive (RED)

This is legislation designed to promote the use of renewable energy sources and reduce dependence on fossil fuels. Member states will have a choice between:

- A **binding target** of a **14.5% reduction** in transportation **GHG intensity** from renewable energy use by **2030**, or
- A **binding share** of **at least 29%** of **renewable energies** in final energy consumption in the transport sector by 2030

In addition to these general targets, a **specific sub-target** has been set for the **use of advanced biofuels** and **non-biological renewable fuels** in the **transport sector**. This comprises a **combined target of 5.5% by 2030**, with a **minimum requirement of 1%** for **renewable fuels of non-biological origin**.

The **revision** of RED III, **approved** by the **Council** on **October 9th, 2023**, is a crucial step in the implementation of these policies. This directive, which became **effective** on **November 20th, 2023**, marks an important milestone on the road to greater energy sustainability in the EU. **Member States** have a **deadline** of **18 months** from the entry into force of RED III to **incorporated it** into their **national legislation**.

Other initiatives aligned with the decarbonization of the shipping industry

Having analyzed the main *Fit for 55* measures related to the maritime sector, it is important to note that, in the field of maritime transport, there are also other

intergovernmental bodies that are implementing **initiatives** and **establishing objectives** and **regulations** to combat climate change.

In 2018, the **International Maritime Organization (IMO)** adopted a **strategy** to **reduce GHGs**. In **2023**, the IMO **revised** this **strategy**, setting net-zero emissions targets for 2050 and promoting low-emission alternative fuels by 2030. It seeks to reduce GHG emissions by at least 20% by 2030 and 70% by 2040 compared to 2008. Although carbon intensity was reduced by 29% between 2008 and 2018, it will be necessary to use low-carbon fuels to achieve the targets. In addition, IMO has implemented tools such as the **Ship Energy Efficiency Management Plan (SEEMP)** and the **Energy Efficiency Design Index (EEDI)** to improve efficiency and reduce carbon emissions.

It is important to highlight the support being given to the decarbonization of the transport sector at a **European level** through various **economic instruments**. Among these are the **European Funds 2021-2027**, which prioritize a greener, carbon-free Europe. There is also the **Next Generation EU**, a temporary recovery fund agreed in July 2020 to address the consequences of the pandemic. In May 2022, the **REPowerEU Plan** was launched with the aim of reducing dependence on Russian fossil fuels and accelerating the transition to clean energy. Another relevant instrument is the **Connecting Europe Facility (CEF)**, which supports investment in digital, transport and energy infrastructure, thus contributing to the **Sustainable and Smart Mobility Strategy**. In addition, the **Horizon Europe** program funds research and innovation, with a focus on technologies that address societal challenges and strengthen industrial capabilities, especially in the fields of climate, energy and mobility. These actions are designed to achieve the objectives stipulated in international climate agreements and EU environmental policies.

At a **national level**, Spain has been actively involved in various **initiatives** to **align** with European and international climate **targets**. This includes the **reduction of GHG emissions** and the **improvement of energy efficiency** in its **port infrastructures**. To this end, the **Plan Nacional Integrado de Energía y Clima (PNIEC)** has been developed, setting targets in line with international commitments such as the Paris Agreement. In addition, Spain has promoted the **circular economy** to reduce waste and encourage recycling and reuse. It has also developed **specific climate change adaptation plans** to increase the resilience of its port infrastructures to extreme weather events and rising sea levels. Moreover, **investments** have been made in **port infrastructure modernization projects** with a focus on sustainability and emissions reduction, including the implementation of cleaner technologies and the use of renewable energies.

In this context, there is no doubt that the **Ports within the Spanish Port System** are **aligned** with **global decarbonization strategies**. The **Plan Estratégico de Puertos del Estado**, specifically **strategic line 11 (Puertos Eco-Proactivos)**, emerges as a **fundamental initiative** to transform national ports into eco-proactive players. This strategic line has several main **objectives**: promoting the implementation of renewable energies in port facilities, improving energy efficiency through advanced technologies, encouraging the use of alternative fuels and clean technologies, and optimizing the management of waste and water resources. In addition, digitalization and automation

are also being promoted to reduce energy consumption and improve overall sustainability.

All in all, there is no doubt that **ports** are **crucial** for **decarbonization**, as they act as **strategic nodes** in the **global supply chain** and their transformation can significantly reduce GHG emissions from the maritime sector.