EU Energy Law in Transition

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India–EU Energy Partnership under FTAs and BITs

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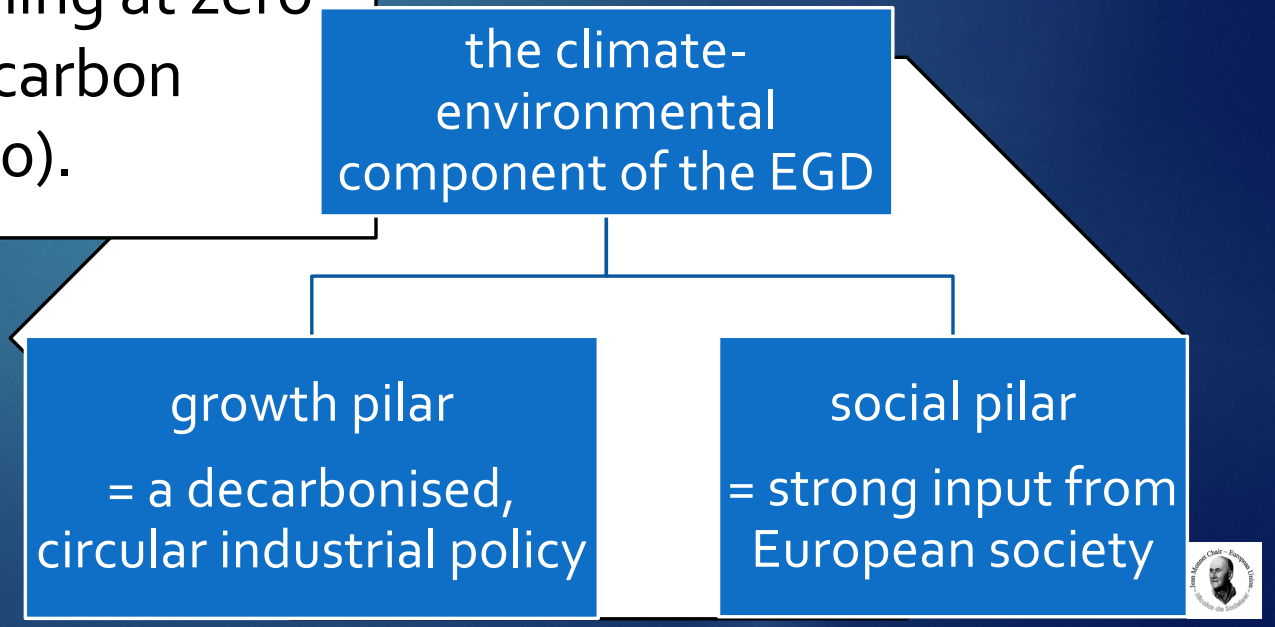
CLIMATE PACT AND CLIMATE LAW
INVESTING IN SMARTER, MORE SUSTAINABLE TRANSPORT
STRIVING FOR GREENER INDUSTRY
ELIMINATING POLLUTION
ENSURING A JUST TRANSITION FOR ALL
FINANCING GREEN PROJECTS
MAKING HOMES ENERGY EFFICIENT
LEADING THE GREEN CHANGE GLOBALLY
FROM FARM TO FORK
PROTECTING NATURE
PROMOTING CLEAN ENERGY
The European Green Deal

Briefly: What about EGD?

Adopted in December 2019, the EDG was intended to turn the EU into the first decarbonised and circular economy in the world aiming at zero pollution (achieving carbon neutrality by 2050).



Briefly: What about EGD?

- unprecedented in the history of public policy
- centre stage within the policies being pursued by the Union

Complemented in 2021 by the Fit-for-55 program that aimed to enable the EU to achieve the 55% GHG emission reduction goals by 2030

EGD a polycentric reform?

The transversality of the EGD can be explained by the fact that climate change is *only part* of a **larger megatrend of environmental degradation** linked to overexploitation of natural resources. Resolving such a crisis requires *more than* an **energy transition** and **climate adaptation measures**.

Paradigmatic shift

- the **sheer breath of the green transition** given that it ranges from the energy transition to the restoration of ecosystems,
- the **speed** with which the green transition is unfolding given that a reduction of 55 % of GHG emissions must be achieved by 2030,
- the **binding nature** of the legislative acts (directives and regulations) that flesh out the non-binding Commission's Strategies,
- the **complementarity** of the internal and external action in order to reduce the EU's footprint.

Key Approches

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2. Energy - 'Fit for 55'

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1. Climate change - 'Fit for 55'

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1. Climate Neutrality Challenge

Main narratives

- Economic growth decoupled from resource use
- Fair and inclusive transition
- Protecting, preserving and enhancing the natural heritage
- Protecting the health and well-being of citizens from environmental risks

European Climate Law (Regulation (EU) 2021/1119)

Net zero emissions

- sets out a binding objective of **climate neutrality** in the Union **by 2050** in pursuit of the long-term temperature goal set out in Article 2(1)(a) of the Paris Agreement,
- sets out a binding target of **-55%** net domestic reduction in GHG emissions for 2030, and **-90%** for 2040.
- provides a framework for achieving progress in pursuit of the global adaptation (Article 7 of the Paris Agreement).

European Climate Law (Regulation (EU) 2021/1119)

- Combination of emission reduction across a broad range of sectors (aviation, maritime sector, cars and trucks, etc.)
- Impressive array of legislative instruments regarding their scope, their level of ambition, etc.

=> Rapid and extensive changes to the economy in order to achieve net-zero within 30 years

CC component of the Fit for 55

Increases the EU's climate target for 2030 to up to 55% compared to 1990 levels and attain climate neutrality by 2050.

- Revision of the **Emissions Trading System** (ETS) Directive 2003/87
- Revision of the **Effort Sharing Regulation** (ESR)
- Revision of the Regulation on the inclusion of GHG emissions and removals from land use, land use change and forestry (LULUCF)
- Adoption of a Regulation on **Carbon Border Adjustment Mechanism** (CBAM)

1.1.1. Emissions Trading System (ETS 1)

- The EU ETS is currently the key instrument of EU climate policy, covering around **38% of EU GHG**.
- This mechanism operates on the basis of **the law of supply and demand**.
- Operators of fixed installations and aircrafts must surrender allowances on the market (auction sales) or can benefit from allowances allocated free of charge (carbon leakage).
- The introduction of a cap, and therefore a reduction in GHG allowandes, leads to scarcity of allowances and therefore an increase in their price.

1.1.1. ETS 1

Cap and Trade

Cap

Refers to the issuance of an overall number of GHG allowances which decreases year upon year.

2024: 1415 Mt CO_2eq

Trade

Emissions allowances can be bought on the market by companies subject to ETS1.

At the end of each accounting year companies surrender the number of allowances to cover their emissions.

1.1.1. ETS 1

Scope

Territorial Scope: 27 MSt, 3 EFTA States, Northern Ireland (electricity)

Sectors across the EU:

- electricity and heat generation
- industrial manufacturing
- aviation (since 2012) and maritime transport (since 2024)

GHG: Carbon dioxide (CO2), Nitrous Oxide (N2O), Methane (CH_4), Perfuocarbures (PFC)

1.1.1. ETS 1

The target is to achieve **a 62% reduction in GHG emissions** within the ETS system by 2030 relative to 2005 (instead of the previous 43% target).

To achieve this target, the conditions for the free allocation of emission allowances are tightened considerably.

1.1.1. ETS 1

Reduction factors of the Cap

The cap is reduced annually in line with the EU's climate target, with a yearly reduction factor determining the pace of reduction.

ETS 1 Cap by 2024: 1415 Mt CO_2eq (carbon dioxide equivalent)

Cap Reduction Factors

Until 2020: reduction factor of 1.74% per year

2021: reduction factor of -2,2% per year

2024-2027: reduction factor of -4,3% per year

2028-… : reduction factor of -4,4% per year

1.1.1. ETS 1 Allowances

- Within the cap, allowances are primarily auctioned by Member States. The price of allowances is determined by the market.
- Some are allocated for free to industry sectors with the aim of addressing the risk of carbon leakage.
- In 2023, ETS1 generated **43.6 billion euros**
- Half of revenues have to finance climate and energy policy : Innovation Fund, Modernisation Fund, Social Climate Fund

EU Carbon Permits decreased 18.29 EUR or 22.07% since the beginning of 2024, according to trading on a contract for difference (CFD) that tracks the benchmark market for this commodity. Historically, EU Carbon Permits reached an all time high of 105.73 in February of 2023.

1.1.1. ETS 1 Achievements

- **2023**: Reduction of GHG emissions by 15,5 % compared to 2005 levels.
- **2030**: Reduction of GHG emissions by 62 % compared to 2005 levels.
- **In 2023**, net GHG emissions were 37% below 1990 levels, while GDP grew by 68% over the same period. This trend shows the continued decoupling of GHG emissions and economic growth.

1.1.1. ETS 1

10,000 installations in the energy sector and manufacturing industry

1.1.1. ETS 1

Aviation

Carbon leakage: Operators of aircrafts can benefit from emission allowances allocated free of charge (without having to buy them at auction sales) in order to cover their CO2 emissions.

Directive (EU) 2023/958 of 10 May 2023 as regards aviation's contribution to the Union's economy-wide emission reduction target

Suppression of allowances allocated free of charge to airlines for intra-EU flights according to a set timetable

1.1.1. ETS 1

Phasing out of free allocation is accelerated for aviation

The phasing out of free allocation is accelerated for aviation and the linear reduction factor by which the emission ceilings decrease annually is increased.

Reduction factor 2024-2027: -4,3% per year.

1.1.1. ETS 1

Aviation

Intra-EEA flights

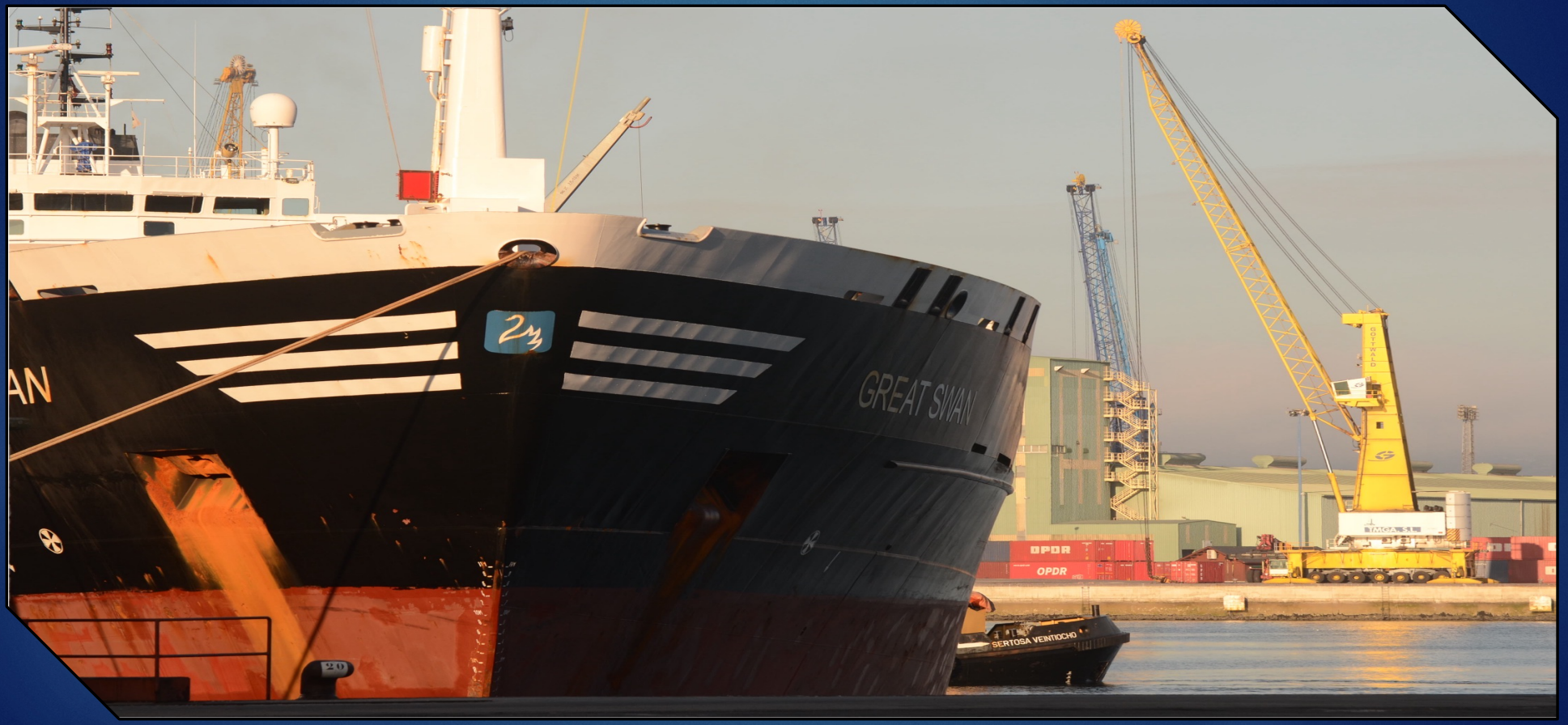
- Fully subject to **ETS**
- Cancelling free allocations for **aviation**
- linear reduction factor of aviation allowances in accordance to the ETS Directive

Extra-EEA flights

- **CORSIA** (*Carbon Offsetting and Reduction Scheme for International Aviation*)

Directive (EU) 2023/958 of 10 May 2023 as regards aviation's contribution to the EU ETS

1.1.1. ETS 1 Maritime Transport



1.1.1. ETS 1 Maritime Transport

- CO_2 emissions from maritime transport account for around 3 to 4 % of EU GHG emissions.
- The EU ETS should contribute significantly to reducing GHG emissions from maritime activities
- The extension of the scope of Directive 2003/87/EC to maritime transport will lead to changes in the cost of such transport.
  - **Directive (EU) 2023/959 of 10 May 2023**

1.1.1. ETS 1 Maritime Transport

- Extension of **ETS** to **maritime transport**
- Ships operating within the EU will have to buy allowances covering their GHG emissions.
- Ships departing from or arriving in a MSt (and therefore arriving from or departing from a country outside the EU) will have to pay half of their emissions.

By 2025, 40% of the freight will be covered, rising to 70% by 2026, with the aim of making all ships subject to the ETS by 2027.

1.1.1. ETS 1 Maritime Transport

- Adjustments resulting from the submission of the maritime sector into the ETS1
- The cap was increased by 78.4 million allowances. This increase was based on the maritime sector's average emissions reported for 2018 and 2019.

1.1.1. ETS 1 Maritime Transport

EU ETS Extension to Maritime Transport
Introduction Timeline

	2023	2024	2025	2026	2027	2028 +
Ship sizes and types		MRV review		ETS review		
Cargo / passenger ships* (5000 + GT)			First surrendering year on 2024 emissions			
Offshore ships (5000 + GT)	—	—				First surrendering year on 2027 emissions
Offshore and general cargo ships (400 - 5000 GT)	—	—			Inclusion in the EU ETS to be considered as part of the ETS review	
Greenhouse Gases						
Carbon dioxide (CO_2)						
Methane (CH_4) and Nitrous Oxide (N_2O)	—					
Phase-in						
% of emissions to be surrendered as per the EU ETS Directive	—	40%	70%	100%	100%	100%

*Ships already covered today by the EU MRV regulation

Under MRV scope

Under MRV and EU ETS scope

1.1.1. ETS 1 Aviation & Maritime Transport

Aviation

- From 2024 to 2026, the proportion of allowances granted free of charge is gradually reduced from 25% in 2024 to 50% in 2025.
- On 1 January 2026, all the allowances that should have beengranted for free will be auctioned.

Maritime Transport

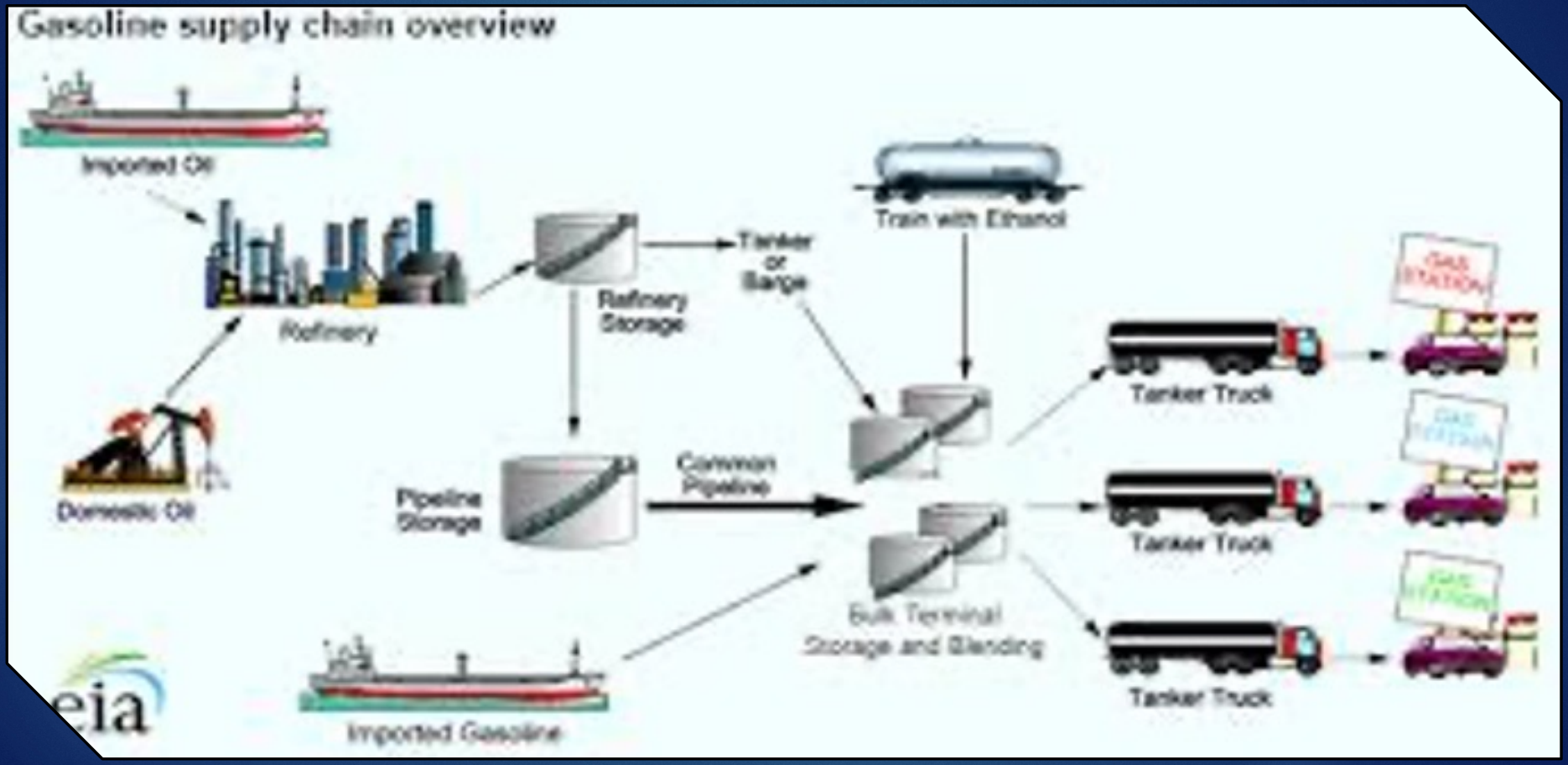
No free allowances given the minimal risk of carbon leakage

1.1.2. Emissions Trading System (ETS 2)

Extending the carbon market to heating and cars

- Fuel, gas and heating oil suppliers will be obliged to buy allowances (auction sales) to cover their GHG emissions.
- They will pass on these additional costs to households.

1.1.2. ETS 2


Gasoline supply chain overview
Imported Oil
Refinery
Domestic Oil
Refinery Storage
Tanker or Barge
Train with Ethanol
Pipeline Storage
Common Pipeline
Bulk Terminal Storage and Blending
Imported Gasoline
Tanker Truck
Tanker Truck
Tanker Truck
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1.1.2. ETS 2

Extending the carbon market to heating and cars

- ETS2 will apply to fuels supplied to the built environment, road transport and some other sectors, such as small industries.
- The system will be introduced gradually over the next few years.
- EU ETS2 has a GHG reduction goal of 42% by 2030 compared to 2005.

A *parallele* carbon market?

ESR & ETS2

Undertakings marketing fuels supplied to the built environment, road transport and some other sectors, such as small industries, still covered by the Effort Sharing Regulation (ESR), will operate on **a *parallel* carbon market** (ETS2) based on the 'cap-and-trade' principle.

- Not the end-consumers (building users, vehicle drivers) who are the ultimate GHG emitters BUT the **suppliers** of fuels have an obligation to surrender allowances.
- So, the end-consumers will be confronted with an increase in the price of hydrocarbons from 2027 within the ambit of the ETS2.

1.1.2. ETS 2

Extending the carbon market to heating and cars

- Within the EU ETS2 system, not the ultimate emitters (building users, vehicle drivers) but the suppliers of fuels have an obligation to buy emission allowances.
- The suppliers will pass on the price to their customers, so that the actual emitters do end up paying for their emissions.
- There are no free allowances; allowances can be bought at auctions.

1.2. CBAM

Carbon leakage

- Tighter emission standards in the EU is likely to trigger a rise in importation of cheaper carbon-intensive products from non-EU States.
- Risk of climate dumping.
- **EU carbon leakage scheme:** Operators of fixed installations and aircrafts can benefit from emission allowances allocated free of charge (without having to buy them at auction sales) in order to cover their CO_2 emissions.

1.2. CBAM

Carbon border adjustment mechanism for selected sectors (cement, aluminium, electricity, fertiliser, hydrogen, iron and steel sectors), to reduce the risk of **carbon leakage**

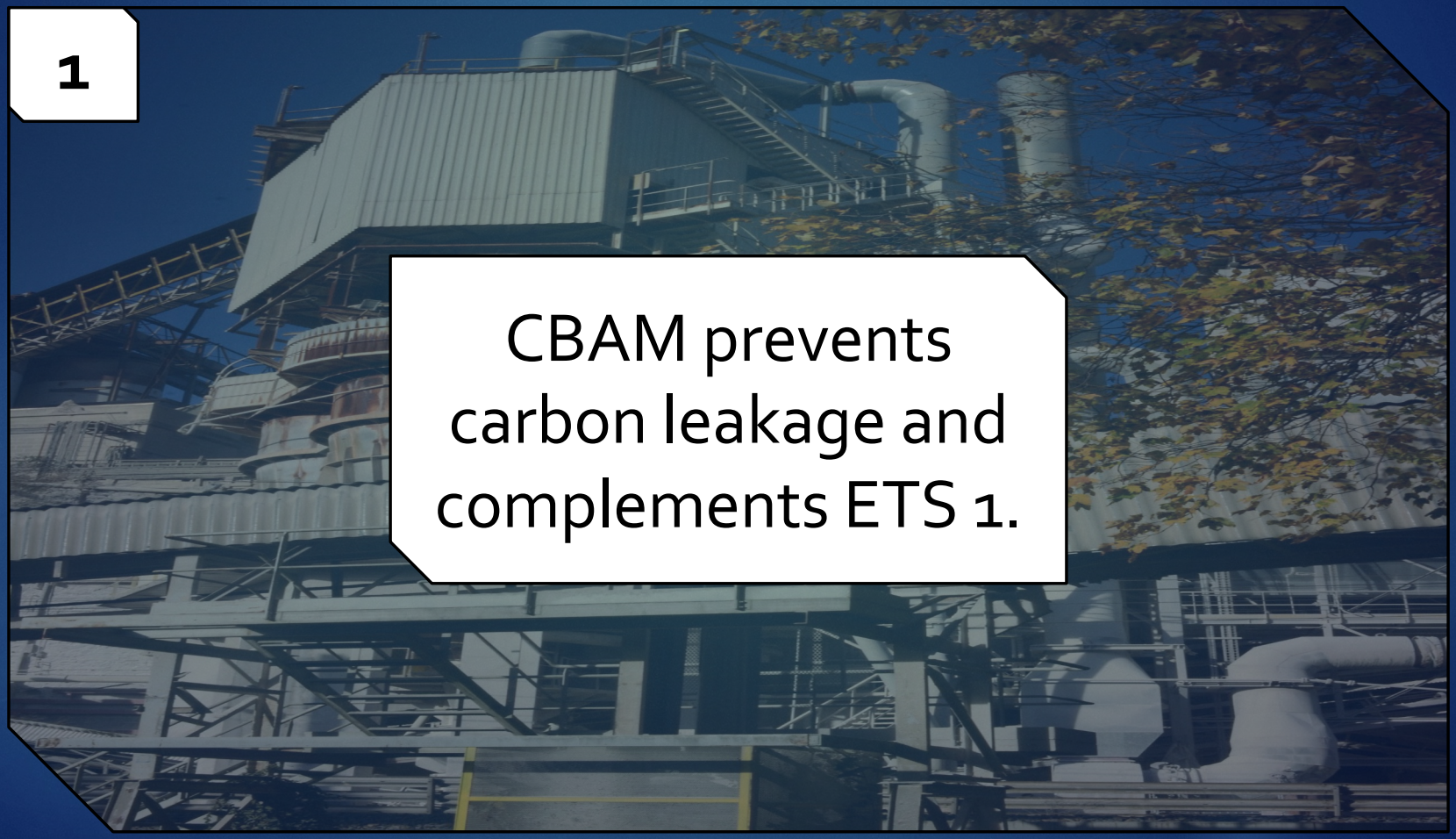
→ Regulation (EU) 2023/956 of 10 May 2023 establishing a carbon border adjustment mechanism

1.2. CBAM

3 steps

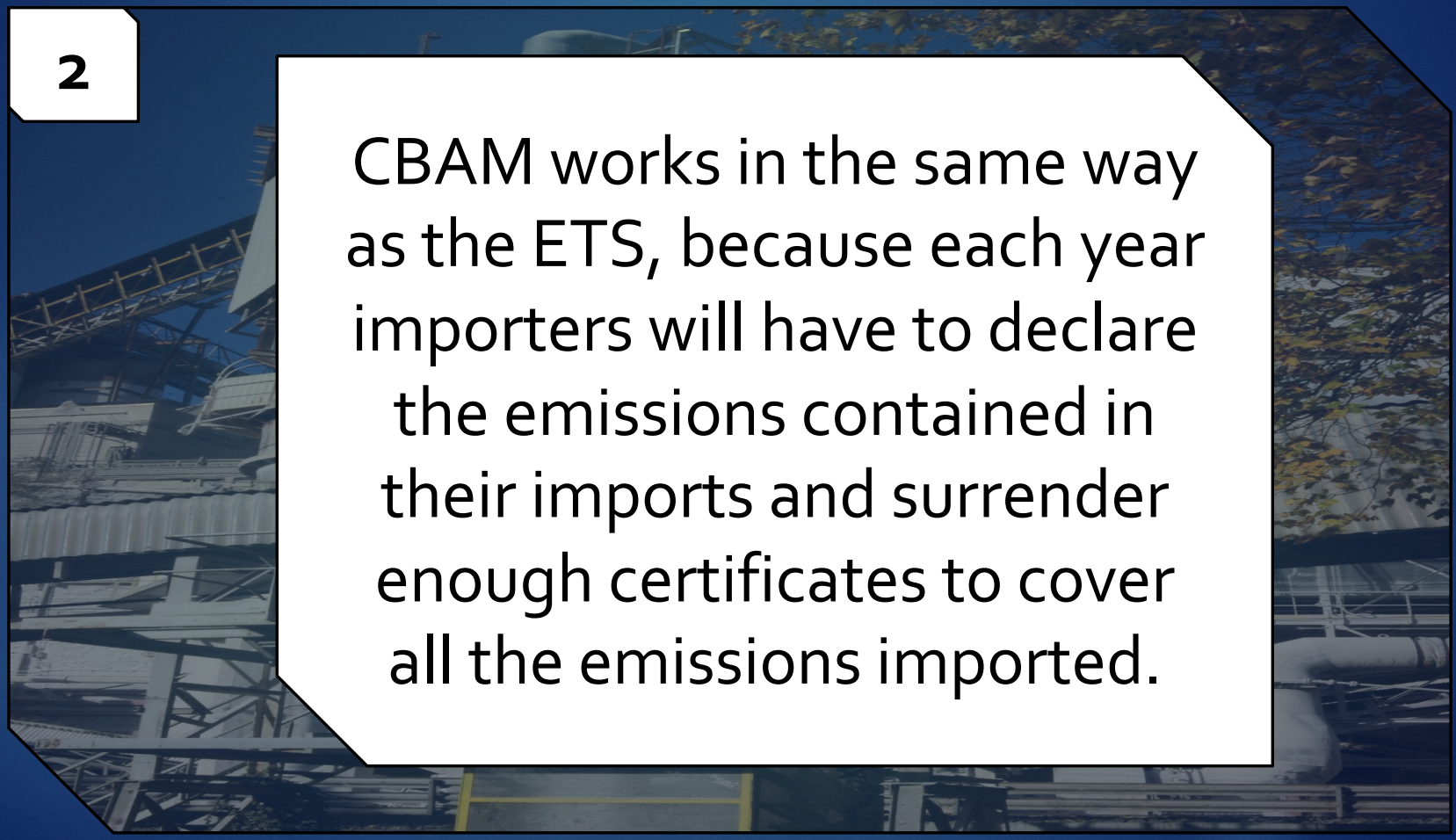
1.2. CBAM

1



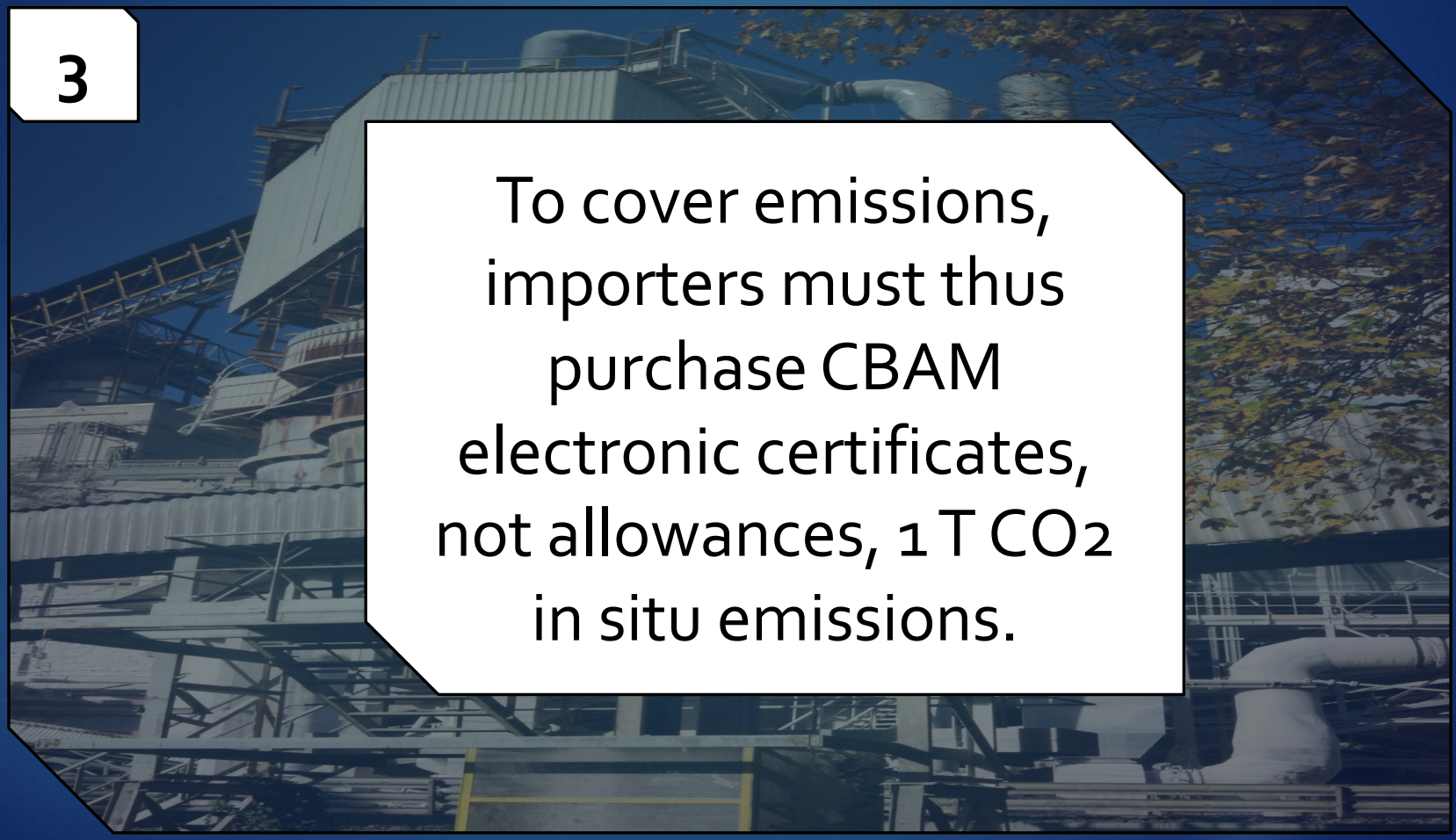
1.2. CBAM

2



CBAM works in the same way as the ETS, because each year importers will have to declare the emissions contained in their imports and surrender enough certificates to cover all the emissions imported.

1.2. CBAM



3

To cover emissions, importers must thus purchase CBAM electronic certificates, not allowances, 1 T CO_2 in situ emissions.

	Legal Act	Scope	Targets for 2030
ETS1	Dir. 2003/87/EC modified by Dir. 2023/958	Major industries, aviation, maritime transport	- 62% GHG emissions compared to 2005 levels
ETS2	Dir. 2003/87/EC modified by Dir. 2023/958	Fuel combustion in buildings, road transport and additional sectors (SMEs) not covered by the ETS 1	- 42% GHG emissions compared to 2005 levels
CBAM	Reg. (EU) 2023/956	Cement, aluminium, electricity, fertiliser, hydrogen, iron and steel	None

1.2. CBAM major differences with EU ETS

ETS1

- **Allowance**= 1 T CO_2 emitted from the plant, by the airplane, etc.
- Allowances are traded
- There is a cap

CBAM

- **CBAM Certificate**= 1 T CO_2 emissions embedded in the imported carbon-intensive product (eg nickel, steel, etc.)
- The certificates cannot be traded by economic agents
- There is no cap.

1.3. Effort Sharing Regulation (ESR)

ESR establishes binding annual GHG emission targets for Member States for the periods 2013-2020 and 2021-2030.

The ESR currently covers all GHG emissions which are covered

- neither by the EU Emissions Trading System (**ETS**)
- nor by the Regulation on Land-Use, Land-Use Change and Forestry (**LULUCF**).

1.3. ESR

Scope of ESR

- **transport** (except aviation and non-domestic shipping),
- **buildings**,
- **agriculture**,
- **industrial installations** and gases not covered by the EU ETS
- **waste** as well as non-combustion related emissions from energy and product use.

1.3. ESR

ESR legislation was adopted in 2018 to deliver a 30% reduction in GHG emissions covered by 2030 compared to 2005.

Insufficient contribution to an overall target of at least -55% compared to 1990 (European Climate Law).

1.3. ESR

Targets

ESR establishes for the EU and for each Member State a target for the reduction of GHG emission by 2030

- At **EU level**, in the Effort Sharing sectors, of of **40%** compared to 2005 levels.
- The **national targets** range from **10 to 50%**

1.3. ESR

Member States emission reduction targets compared to 2005 levels

Belgium-47 %	Estonia-24 %	Italy-43,7 %
Bulgaria-10 %	Ireland-42 %	Finland-50 %
Czechia-26 %	Spain-37,7 %	Sweden-50 %
Denmark-50 %	France-47,5 %	Greece-22,7 %
Germany-50 %	Croatia-16,7 %	

1.3. ESR

How to achieve the ESR national targets?

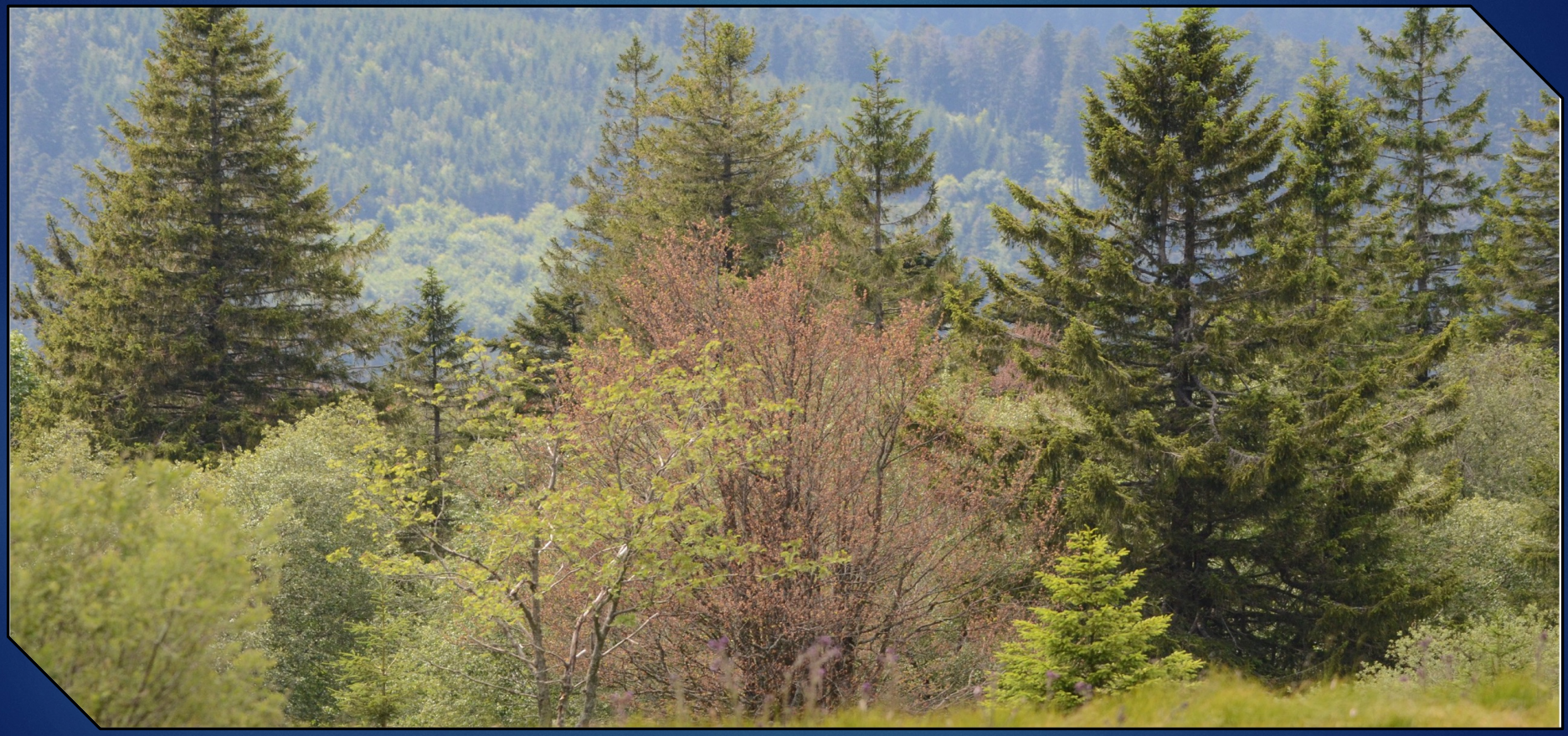
In virtue of the **principle of subsidiarity**, the MSt decide the level of efforts for each ESR sector and choose the relevant instruments:

- Increasing excise duties on fuels,
- Taxation of waste treatments installations,
- Reduction of speed limits,
- Subsidies to hosehold to insulate their buildings.

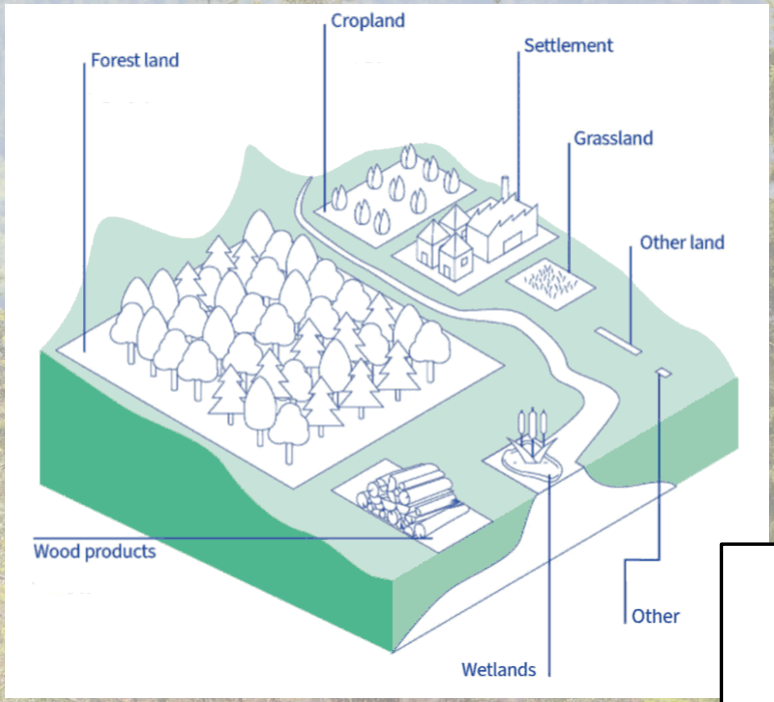
1.1. ETS & 1.3. ESR Complementary approach

	ETS Directive	ESR Regulation
Material Scope	Industrial plants, aviation, ernergy	Buildings, listed installations (not included in ETS), transport, agriculture, waste management
Personal Scope	Economic operators	Member States
Type of Emissions	Localised emissions	Diffuse emissions

1.4. LULUCF Regulation



1.4. LULUCF



Carbon sinks and sources

1.4. LULUCF

The most readily available way to increase carbon sequestration is to protect and restore forests, peatlands, and other natural ecosystems.

"No debit" rule: EU Member States have to ensure that accounted GHG emissions (debits) from land use, land use change or forestry are **balanced** by at least an equivalent accounted removal of CO_2 from the atmosphere (credits) in the period 2021 to 2030.

1.4. LULUCF

Regulation (EU) 2023/839 of 19 April 2023 setting out the targets of the Member States for 2030

2026 to 2030: EU-wide target of -310 Mt CO_2 equivalent of net removals by 2030.

Increase of about 15% in the EU's net removals compared to current levels and reverses the declining trend in net removals seen in recent years.

1.4. NEW LULUCF

The **scope is extended** from only forests today to **<u>all land uses</u>** (including wetlands by 2026).

Effort Sharing	**Regulation (EU) 2018/842 amended by Regulation (EU) 2023/857**	**Domestic transport (excluding aviation but including domestic navigation), buildings, agriculture, small industry and waste**	**– 40 % in 2030 compared to 2005 level. Binding national targets for each Member State.**
RED III	Directive (EU) 2023/2413	Renewable energy	Share of renewable energy in the EU's overall energy consumption up to 42.5%
LULUCF	Regulation (EU) 2018/841	Land use, land use change and forestry	310 million tonnes of CO_2 equivalent net removals. Binding national targets for each Member State.

‘This is the most ambitious, extensive and cohesive package of climate change legislation anywhere on the globe.’

D Chalmers et al., *European Union Law* (CUP, 2024) 1006.

2. Energy component of the Fit for 55' legislative package

Energy Transition: The aim is to achieve negative emissions after 2050.

Exernal factors :

- solidarity among the MS due to the Covid-19 pandemic ;
- the enabling the Union to borrow on the international markets in 2021 ,
- the post-Covid recovery plan (*NextGenerationEU*) ;
- the budget allocated (*REPowerEU plan*) adopted following the invasion of Ukraine ;
- the adoption of the RED III Directive in an attempt to free itself from its dependence on Russian hydrocarbons ;

have made possible to square this circle: carbon neutrality, energy transition, strategic autonomy and circular economy.

The rise of a renewable energy-based economy

In order to achieve climate neutrality by 2050, the green transition requires:

- a renewable and decarbonised energy-based economy entailing the **electrification of entire parts of the economy**,
- a **sharp increase of electricity** produced from renewables (biomass, solar, wind, hydro),
- the **adaptation of the energy infrastructure** in order to accommodate low-carbon energy sources through the expansion of grids and energy storage.

The rise of a renewable energy-based economy

- The revised Renewable Energy Directive (RED III)
- The amended Energy Efficiency Directive
- The Energy Performance of Buildings Directive

set targets for renewables in consumption, energy efficiency that includes building renovations.

- **Energy Taxation** Directive (postponed)
- **Renewable Energy** Directive (REDIII) (2018/2001/EU): from 32% to **40%** of renewables by 2030
- **Energy Efficiency** Directive (2023/1721/EU)

2.1. Recast of the EED

Directive (EU) 2023/1791 of 13 September 2023 on energy efficiency

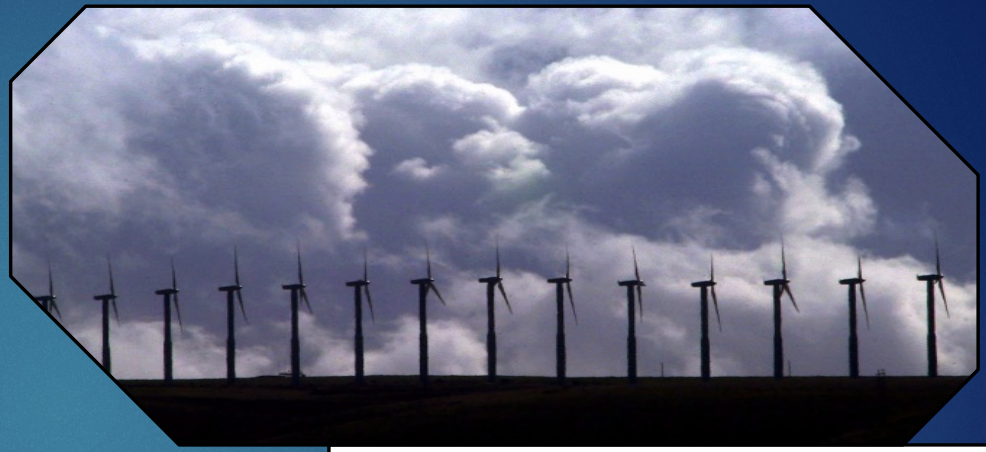
A swath of activities (drilling natural gas, electric appliances, etc.) sets forth the target of reducing EU final energy consumption by 11.7% by 2030 compared to the projected energy use for 2030

MSt are required to achieve cumulative end-use energy savings for the entire obligation period (running from 2021 to 2030), equivalent to new annual savings of

- at least 0,8% of final energy consumption in 2021-2023,
- at least 1.3% in 2024-2025,
- 1.5 % in 2026-2027
- 1.9 % in 2028-2030.

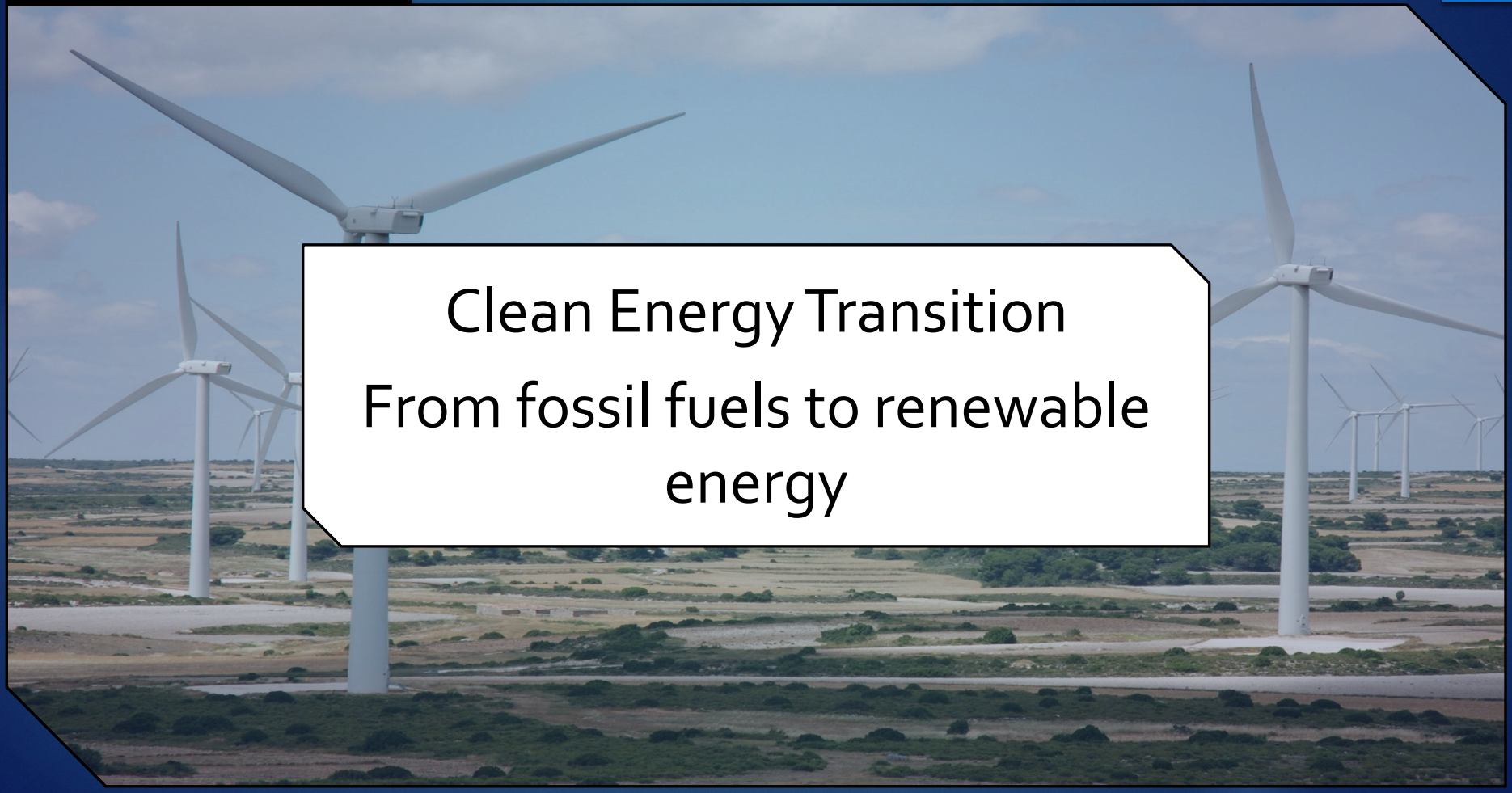
2.2. Renewable energy sources (REDIII)

RED II = At least 32 % of the EU's energy consumption must come from renewable energy sources (RES) by 2030.



New RED III = new EU target of a minimum 40 % share of RES in final energy consumption by 2030.

2.2. REDIII



Clean Energy Transition

From fossil fuels to renewable energy

2.3. Energy and resource-efficient buildings (Directive (EU) 2023/1275)

40% of energy consumed: legislation related to the energy performance of buildings

Co2 emissions from buildings subject to binding annual GHG targets for each MSt

	Legal Act	Scope	Targets for 2030
Energy efficiency	Directive (EU) 2023/1791	Combustible fuels, heat, renewable energy, electricity, or any other form of energy	Binding Union target of at least 42,5 % for the overall share of energy from renewable sources in the Union's gross final consumption of energy
Promotion of energy from renewable sources	Directive (EU) 2023/2413	Energy produced from renewable sources	At least 42.5% of the energy mix
Energy performance of buildings	Directive (EU) 2023/1275	Public and private buildings	National building renovation plan, minimum energy performance requirements

2.4. Governance Regulation 2018/1999

National Integrated Climate and Energy Plan covering a 10 years period (2021-30)

- Energy efficiency, decarbonization,
- Planning the implementation of RED Directive 2018/2021; Energy Efficiency Directive

>> Binding national measures that are likely to boost investment in production of new fuels, renewables but could also jeopardize investors' rights.

Vidéos

ETS2: buildings, road transport and additional sectors

https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/ets2-buildings-road-transport-and-additional-sectors_en

Fit for 55: Delivering on the proposals

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal/fit-55-delivering-proposals_en