

Climate Economy

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Paris Agreement

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on 12 December 2015. It entered into force on 4 November 2016.

Its overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”

How does the Paris Agreement work?

Implementation of the Paris Agreement requires economic and social transformation, based on the best available science. Since 2020, countries have been submitting their national climate action plans, known as **Nationally Determined Contributions** (NDCs). In their NDCs, countries communicate actions they will take to reduce their greenhouse gas emissions in order to reach the goals of the Paris Agreement. Countries also communicate in their NDCs actions they will take to build resilience to adapt to the impacts of climate change.

<https://unfccc.int/process-and-meetings/the-paris-agreement>



Overview – Carbon Pricing

Carbon-pricing is a tool to help countries limit CO2 emissions and reach net-zero targets to help limit the increase in global mean temperature to two degrees Celsius above pre-industrial levels.

Carbon pricing is one option governments and business are using to help reduce pollution from fossil fuels and encourage investment in cleaner technology.

The idea behind it is that there are external costs of carbon emissions- costs that the public pays for in other ways, such as damage to crops and health care costs from heat waves and droughts or to property from flooding and sea level rise – and tie them to their sources through a price on carbon.

A price on carbon helps shift the burden for the damage back to those **who are responsible for it, and who can reduce it.**

Source- 1. [Explainer: Which countries have introduced a carbon tax? | World Economic Forum \(weforum.org\)](#)

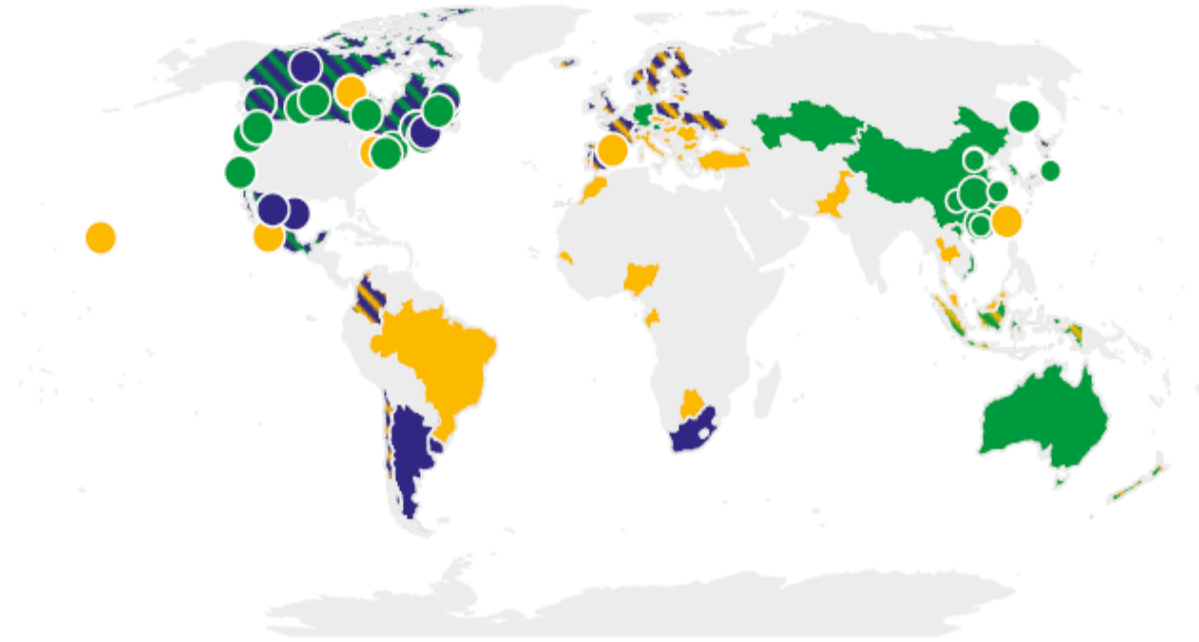
2. [Report: State and Trends of Carbon Pricing \(worldbank.org\)](#)

3. [Pricing Carbon \(worldbank.org\)](#)

4. [Carbon taxes and emissions trading are cheapest ways of reducing CO2, OECD says - OECD](#)

Carbon Pricing Spread

Summary map of regional, national and subnational carbon pricing initiatives



- ETS implemented or scheduled for implementation
- ETS or carbon tax under consideration
- ● ETS and carbon tax implemented or scheduled
- ● ETS implemented or scheduled, ETS or carbon tax under con...
- ● Carbon tax implemented or scheduled, ETS under consi

KEY STATISTICS FOR 2023 ON INITIATIVE(S) IMPLEMENTED

73 Carbon pricing initiatives selected

39 National jurisdictions are covered by the initiatives selected

33 Subnational jurisdictions are covered by the initiatives selected

In 2023, these initiatives would cover **11.66 GtCO₂e**, representing **23%** of global GHG emissions



Source: [Carbon Pricing Dashboard | Up-to-date overview of carbon pricing initiatives \(worldbank.org\)](#)



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Carbon Pricing - How Does it Work?



ETS= Emissions Trading System

- sometimes referred to as a cap-and-trade system – caps the total level of greenhouse gas emissions and allows those industries with low emissions to sell their extra allowances to larger emitters
- By creating supply and demand for emissions allowances, an ETS establishes a market price for greenhouse gas emissions. The cap helps ensure that the required emission reductions will take place to keep the emitters (in aggregate) within their pre-allocated carbon budget.



Carbon Taxes

- A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuels. It is different from an ETS in that the emission reduction outcome of a carbon tax is not pre-defined but the carbon price is.
- A carbon tax is levied on the carbon emissions required to produce goods and services
- It generally only covers CO2 emissions, but can also apply to other greenhouse gases

Source: Pricing Carbon (worldbank.org)

Carbon markets in a glance

Compliance Carbon Markets

Compliance markets aim to establish a carbon price by laws or regulations which control the supply of permits that are then distributed by national, regional and global regimes.



There are now **36** 'compliance' carbon markets operating around the world, in which entities must purchase or trade allowances for the emissions they produce



Together, these markets reached a value of more than **\$909 billion** in 2022 and cover close to a **Quarter** of global greenhouse gas emissions.



China have the world's largest carbon market



The EU ETS is the largest multi-sector ETS in the world.

Source: [Carbon Pricing Dashboard | Up-to-date overview of carbon pricing initiatives \(worldbank.org\)](https://www.worldbank.org/carbon-pricing)

What are voluntary carbon markets?

A crediting mechanism designates the GHG emission reductions from project- or program-based activities, which can be sold either domestically or in other countries. Crediting Mechanisms issue carbon credits according to an accounting protocol and have their own registry.

Activities that demonstrate their capacity to remove CO2 from the atmosphere or prevent CO2 from being emitted are verified by an independent standard and issued as carbon credit certificates (representing one metric ton of carbon dioxide equivalent).

Carbon credit can be grouped into three large categories:

avoidance projects from emitting greenhouse gasses

Reduction greenhouse gasses

Removal greenhouse gasses directly from the atmosphere

Voluntary Carbon Markets

The VCM is a decentralized market where private actors voluntarily buy and sell carbon credits that represent certified removals or reductions of greenhouse gases (GHGs) in the atmosphere.

The voluntary carbon offset market is worth about \$2 billion in 2022 and will grow to \$50 billion by 2030.

Source: 1. <https://about.bnef.com/blog/the-untapped-power-of-carbon-markets-in-five-charts/>
2. <https://www.reuters.com/markets/carbon/voluntary-carbon-markets-set-become-least-five-times-bigger-by-2030-shell-2023-01-19/>



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Carbon Taxes in a glance

Carbon Tax

carbon tax is a tax levied on the carbon emissions required to produce goods and services



There are now **39** countries which implemented Carbon Taxes



Carbon Tax covers approx. 5.69% of the global GHG Emissions

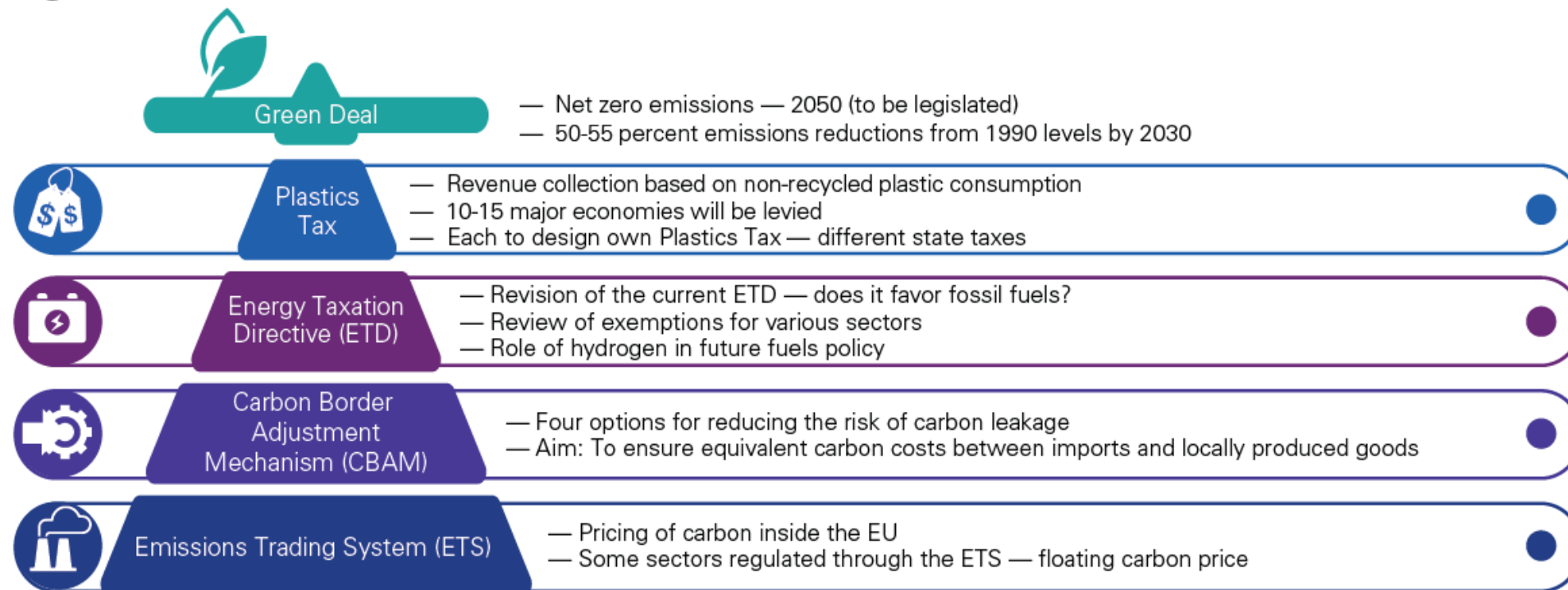


Revenues from carbon taxes and Emissions Trading Systems (ETS) have reached a record high, about \$95 billion

Source: [Carbon Pricing Dashboard | Up-to-date overview of carbon pricing initiatives \(worldbank.org\)](https://www.worldbank.org/carbon-pricing)

European Green Deal: Fit for 55

Figure 1: Tax measures in EU Green Deal



¹ https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en

² https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1599

³ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588580774040&uri=CELEX%3A52019DC0640>

⁴ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12660-Updating-the-EU-Emissions-Trading-System_en

⁵ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-Carbon-Border-Adjustment-Mechanism/public-consultation_en

⁶ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12227-EU-Green-Deal-Revision-of-the-Energy-Taxation-Directive_en

⁷ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2020.424.01.0001.01.ENG

Carbon Border Adjustment Mechanism (“CBAM”)

Affected products

The new rules will initially affect goods imported from non-EU countries that are particularly carbon-intensive, namely specified goods within the cement, electricity, fertilisers, aluminium, iron, steel and hydrogen sectors, as well as some upstream and downstream products (mainly iron, steel and aluminium).

CBAM covers imports of covered goods from non-EU countries, except those participating in, or which are linked to, the EU ETS (currently Iceland, Norway, Liechtenstein, Switzerland and five other minor territories).

After implementation of the CBAM, the EU Commission plans to extend the scope of application to all sectors subject to EU emissions trading by 2030.

Products initially covered by CBAM

The regulation applies to goods listed in Annex I to the Regulation.



Fertilizers



Energy



Hydrogen



Cement



Iron & steel



Aluminum



Products with the highest carbon footprint



45% of EU ETS sectors



High convergence of EU ETS and CBAM

CBAM Example

Importer in the EU



A carbon price of EUR
90 per toneo



The importer would need
to surrender CBAM
certificates at a price of
almost



Imports 100 tones
of section steel



16,650 EUR
(90X185)

Manufacturer in
Israel



The embedded carbon
emissions are **1.85** per
tone



$1.85 \times 100 =$ **185 Tone**
Embedded carbon in total

The Importance of Transfer Pricing For Carbon Trading

The rapid acceleration of corporate net-zero commitments has led many multinational corporations (MNCs) to invest in significant amounts to meet sustainability goals. This includes the adaptation of business model transformation which may involve investment or development of carbon-credit related projects, reduction of their current emissions, or the purchase of carbon credits.

To effectively execute this strategy and meet the targets on a company-by-company level, MNCs look to transfer their carbon credits between related entities. This activity is also known as carbon trading (CT) and such transactions are governed by transfer pricing principles. The pricing principle calls for the amount charged between related companies to be the same as if the parties were not related. With the industry practice still in its nascent stage of development, there might be opposing views on how this principle may be applied to carbon trading within MNCs.

credit-related products in Singapore, the analysis has to rely on existing industry practice as well as the local transfer pricing guidelines. For example the Transfer Pricing Guideline (Sixth Edition)³, Commodity Marketing and Trading Activities Guidelines and Centralised Activities in Multinational Enterprise Groups Guidelines⁴.

Increasingly, many MNCs are setting up their internal carbon pricing policies (ICP). This practise involves assigning a precise monetary value to carbon generated in its business operations to manage carbon footprint exposure and promote the MNC's ESG targets. At some MNCs, the ICP is designed taking into account the arm's length principles, but more often the principles behind ICPs are mostly operationally driven and not precise, or the reference prices are not regularly updated. Hence, while ideally transfer pricing of CT operations and ICP should be aligned, careful consideration is required when such a comparison is made as the systems may follow different principles and objectives.

How it is useful for you?

01

Understand the needs and the regulatory environment of your business and your clients

02

Measure how much carbon your technology can save

03

Integrate the extra benefit into your business model/ evaluate the potential **IMPACT on your business**

Horizon Europe 2021- 2027

Horizon

The largest and most competitive EU Research and Innovation Program



Israel includes in the list of entitled countries



€95 billion direct cash funding for the program



35% of the Horizon Europe budget will support climate objectives



The grant is not subject to royalties and not to the Israeli R&D law

Horizon - Main Programs

- In general, the Horizon platform includes three main programs:
 - EIC Accelerator – for start-ups and tech companies – grants for R&D expenses.
 - ERC – for research institutions and universities.
 - **Consortiums**

- General conditions for **Consortium**:
 - At least ≥ 3 partners from 3 different European countries (or associated).
 - Program period is for 2-5 years.
 - The Consortiums program Calls are divided by objectives and deadlines published in advanced.
 - Two types of consortiums:
 - Innovation Action (IA) – projects in advanced R&D stage, with higher TRLs and prototype, oriented towards designing a product. 70% grant+ 25% overhead.
 - Research Innovation Action (RIA) – projects with research phase, TRL 2 - 5, meaning the expected project outcome is a functional prototype. 100% grant+ 25% overhead

Current EU Funding opportunities related to Climate economy

Code	Title	Objectives	Deadline	Budget
HORIZON-CL6-2024-CircBio-01-4	Systemic circular solutions for a sustainable tourism	Food, Bioeconomy Natural Resources, Agriculture and Environment	Feb 22, 2024	10M EUR
HORIZON-CL6-2024-FARM2FORK-02-7-two-stage	Minimizing climate impact on aquaculture: mitigation and adaptation solutions for future climate regimes	Food, Bioeconomy Natural Resources, Agriculture and Environment	Feb 22, 2024, Sep 17, 2024	9M EUR
HORIZON-CL6-2024-ZEROPOLLUTION-02-1-two-stage	Holistic approaches for effective monitoring of water quality in urban areas	Food, Bioeconomy Natural Resources, Agriculture and Environment	Feb 21, 2024, Sep 17, 2024	10M EUR
HORIZON-CL5-2024-D5-01-14	Demonstrating efficient fully DC electric grids within waterborne transport for large ship applications (ZEWT Partnership)	Climate, Energy and Mobility	Apr 18, 2024	15M EUR
HORIZON-CL6-2024-FARM2FORK-02-6-two-stage	Minimising climate impact on fisheries: mitigation and adaptation solutions for future climate regimes	Food, Bioeconomy Natural Resources, Agriculture and Environment	Feb 22, 2024, Sep 17, 2024	9M EUR

BIRD Energy

BIRD Foundation

supports R&D cooperation between Israeli and U.S. companies.



R&D or Pilot programs with significant commercial potential



BIRD Energy supports innovation in all areas of renewable energy, and energy efficiency, advanced vehicle technologies, alternative fuels, water energy, advanced manufacturing, AI for energy management, etc

Innovation that scale up carbon free technologies and reduce carbon emissions.



50% Grant from the approved budget and up to USD 1.5M (for both companies)



Call for proposals will be published in **March 2024**, Deadline submission date – **June 2024**.

Israeli Innovation Authority

Open Call

International Climate-Tech Program



cooperation between Israeli start-ups and Multinational corporations in R&D or Pilot programs



Among the participate multinational corporates:

Enel, Bayer, A2A, Hyundai, Shizen energy, Renew, Snam etc.



20%-50% Grant from the approved budget for a two years period.



**Preliminary application date – 15/02/2024
Deadline for Submission – 15/4/2024**

Additional relevant Grants related to Climate economy

- **Israel Innovation Authority - Joint Government Support for Pilot Programs**
 - Pilot programs with relevant government offices.
 - Program period – 2 years.
 - 20%-50% funding

- **Ministry of industry and Economy**
 - Grants for reducing emissions, energy efficiency and for reducing electricity consumption.
 - 20%-25% funding and Up to NIS 3.5M approved budget.

- **Ministry of Energy and Ministry of the Environment** - Grant programs are published from time to time.

- **Local grants and Incentives around the Globes.**

Inflation Reduction Act (“IRA”)



Renewable energy and energy efficiency

§ 45 Production tax credit and § 48 Investment tax credit (wind, solar, geothermal, etc.)
 § 45Y and 48E Technology neutral clean electricity production and investment tax credits
 § 179D Energy efficient commercial buildings deduction
 § 45U Zero-emission nuclear power production credit



Advanced manufacturing

§ 48C Credit for manufacturing advanced energy property (EV components, fuel cells, electric grids, etc.)
 § 45X Advanced manufacturing production credit for solar and wind components, batteries, and critical minerals
 § 45V Clean hydrogen production credit



Transportation

§ 30C Credit for EV charging stations
 § 45W Qualified commercial clean vehicles
 § 30D Clean vehicle credit
 § 25E Previously owned clean vehicle credit



Alternative fuels

§ 40 Second-generation biofuel credit
 § 40A and § 6426 Biodiesel and renewable diesel; biodiesel mixture credit; alternative fuel credit
 § 45Z Clean fuel production tax credit
 § 40B Sustainable aviation fuel



Carbon capture

§ 45Q Credit for carbon oxide sequestration

Generally, investment tax credits are available to property owners. Production tax credits are available to producers or manufacturers.



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