Simulate your carbon policy: assess future GHG reduction potentials and costs across economic sectors

A unique service for GHG Marginal Abatement Cost Curves

Enerdata uses its 30 years of forecasting expertise and globally recognised POLES Model to create a unique online service offering instant access to long-term Marginal Abatement Cost Curves (MACCs).

MACCs reflect the different levels of emission reductions that can be reached at various carbon price levels at a given year, by country and by sector. All MACCs are derived from comprehensive baseline scenarios, which can be chosen among contrasted variants. Enerdata MACCs are being used around the world by major governmental bodies, energy companies and industries for international climate negotiations.

Why Subscribe?

• Unique insight and comprehensive data from recognised MACCs experts worldwide
• Based on the time-tested and reputable POLES Model
• 24/7 online access
• Unlimited Excel export
• Regular updates
Service Overview

• **Long-term Marginal Abatement Cost Curves (MACCs)** produced for **four base years** (2025, 2030, 2035, 2040)
• MACCs generated by the **globally recognised POLES Model**
• **69 countries/regions** covered
• **GHG emissions** by sector aggregates: power, industry, transport, residential & services and total overview
• **15 sub-sectors** covered: energy, steel, chemistry, industry processes, households, tertiary, etc.
• Output data: projected CO$_2$/non-CO$_2$ reductions according to carbon prices
• Baseline Scenarios relying on selected EnerFuture reference scenarios
• Modelling methodology included

Who Needs MACCs?

MACCs is a very powerful tool used by policy makers, researchers and business analysts to assess climate policies, evaluate their costs and efficiency as well as to simulate carbon markets such as the EU ETS.

Government Agencies
To shape CO$_2$ mitigation policies and set targets

Energy Companies
To evaluate future revenues versus carbon constraints

Industry
To formulate strategies for carbon trading & emission reductions

Energy Traders
To evaluate CO$_2$ emission credits, prices and volumes

Online Interface

Enerdata - EnerFuture MACCs
Enerdata's EnerFuture service generates MACCs using the POLES-Enerdata Model, they are available for four time periods (2025, 2030, 2035 and 2040), 69 countries/regions, 15 sectors and two contrasted baseline scenarios.

**Option 1: AGGREGATED Sectors (CO₂)**
- Energy
- Industry combustion
- Industry processes
- Residential and services
- Transport

**Option 2: DETAILED Sub-Sectors (CO₂)**
- Power generation, other energy Transformation
- Steel, non-metallic minerals, chemistry, other industry
- Households, tertiary, agriculture
- Road, air, other transport

The additional data series for each country/region covers non-CO₂ GHGs: CH₄, N₂O, SF₆, HFCs and PFCs

**Methodology**

On a MAC Curve, the X-axis represents the emissions reduction, the Y-axis the associated carbon value; the area under the curve is the resulting total abatement cost.

**Need Further Insight? Enerdata GHG Mitigation Toolbox**

If you need a more integrated view of future markets, Enerdata offers the GHG Mitigation Toolbox as a consulting service. Using a variety of tools, Enerdata is able to employ its MACCs in order to generate market outlooks for the advanced stages of your organisation’s carbon reduction strategy and implementation process. For more information please contact: consulting@enerdata.net.

**EVALUATE model - Economic Valuation for Trading Emissions:** Analytical tools allowing simulating countries’ pledges for emission reductions. User enters pledges and the tool provides powerful indicators (e.g. reductions, emission intensity, total costs, marginal costs, global emissions, gap to IPCC scenarios, ...)

**CMT model: Carbon Market Tool:** Detailed analysis (by country and by sector) of existing and fictive carbon markets worldwide. Provides multiple design options for carbon market configurations and produces the resulting carbon price in each market up to 2050.

**AERO model: Abatement Effort, Reduction Options:** Help identifying technological options that will develop under a carbon price (or emissions cap). Used by private companies to highlight market opportunities and by governments to analyse NAMAs and INDCs.
About Enerdata

Enerdata is an energy intelligence and consulting company. Our experts help you to tackle key energy and climate issues and make sound strategic and business decisions. We provide research, solutions, consulting and training to key energy actors worldwide.

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Enerdata Information Services

Global Energy & CO₂ Data: Regularly updated global energy market database providing supply, demand & prices for all energy sources by sector and GHG emissions covering 186 countries from 1970 onwards.

Global Energy Research: More than 110 country reports. Daily news feed included.

EnerMonthly: Monthly update with detailed information regarding production, imports, exports and consumption for over 40 OECD and non OECD countries.

EnerFuture: Annual forecasts until 2040 for energy demand & prices for all energy sources & CO₂ emissions by sector. Power generation forecasts by fuel source are also included. Energy forecasts are based on the globally recognised POLES model.

EnerFuture MACCs: Assess climate policies, evaluate cost and efficiency, and simulate carbon markets with our CO₂ Marginal Abatement Cost Curves tool.

Odyssee: Unique database on energy consumption by end-use for 28+ EU members. Exclusive energy efficiency indicators.

Country Energy Demand Forecasts: Energy demand forecasts of oil, gas, coal and power consumption by country, by sector and by usages up to 2030.

Power Plant Tracker: Screen, monitor and analyse the development of power generation assets. Includes powerful embedded analytics.Provides exclusive insight on levelized costs of electricity and capital expenditure through the optional module: CAPEX & LCOE.

World Refinery Database: New and existing refineries monitoring.

World LNG Database: All key information and data about world LNG markets.