

The logo for Enerdata, featuring the word "Enerdata" in white text inside an orange circle.

Enerdata



**EXPERT DATA  
& SCENARIOS:**

**THE BACKBONE  
OF SUSTAINABLE  
FINANCE**

ENERGY

CLIMATE

## CONTEXT

- The pressing need for climate action is prompting an increasing number of financial institutions, regulators, and stakeholders to establish **net-zero greenhouse gas emissions targets by 2050**, or even sooner.
- Methods and tools are rapidly developing to enhance the **assessment of risks** and opportunities in energy-climate Scenarios.

### YOUR NEEDS

#### Interpret Energy-Climate Scenarios

Analyse and integrate future energy and climate scenarios to establish actionable plans with specific milestones and clear, measurable objectives for sustainable finance strategies.

#### Identify and Mitigate Risks

Assess and develop comprehensive strategies to mitigate both physical and transition risks associated with energy, ensuring resilience and compliance with evolving regulations.

#### Analyse Multi-Sector and Multi-Region Portfolios

Conduct thorough evaluations of energy-related risks and opportunities across various sectors and regions to form a cohesive, informed strategy.

#### Meet Reporting Obligations & Enhance CSR Strategy

Ensure compliance with all financial and sustainability reporting requirements while strengthening and aligning the Corporate Social Responsibility strategy with core business goals.

## OUR FIELDS OF EXPERTISE

- Enerdata's broad range of solutions empower Sustainable Finance through expert insights and projections

### CONVENTIONAL ENERGIES

- Trends in consumption, production, prices & Market dynamics for Oil, Coal, Gas, Natural Gas. Includes analysis, geopolitical influences and regulatory impacts on conventional energy markets.

### MARKET DRIVERS

- Factors influencing energy markets such as economic growth, population trends, technological innovation, and regulatory changes.
- Analysis of market drivers specific to both conventional and renewable energy sectors.
- Forecasting future trends based on market drivers and scenario planning.

### POWER MIX

- Data on the share of renewable energy sources, fossil fuels, nuclear power, and other sources in the power sector.
- Trends in energy transition towards cleaner power generation technologies and implications for grid stability.

### GLOBAL COVERAGE

- Comprehensive data covering energy markets across various regions and 186 countries.
- Extensive analysis of energy policies, market structures, and regulatory frameworks globally.
- Insights into regional differences in energy consumption patterns, renewable energy adoption, and energy security issues.

### SUPPLY & DEMAND

- Information on energy supply dynamics including production capacities, imports/exports, and infrastructure developments.
- Demand analysis covering consumption statistics, industrial usage, residential consumption, and energy sector demands.
- Balance between supply and demand, energy security implications, and potential supply disruptions.

### RENEWABLE ENERGY SOURCES & CLEAN TECHNOLOGIES

- Information centred on advancements in wind, solar, and hydro technologies, alongside policy developments in the clean energy sector.

### Enerdata's expertise in practice offer:

- ⇒ Tailored **Energy-Climate scenarios** that provide actionable pathways for optimising strategies across all sectors and regions.
- ⇒ Granular data down to the **country sector and end-use level**.



# SUPPORTING SUSTAINABLE FINANCE WITH A ROBUST DATA INFRASTRUCTURE

## REFERENCE DATA AT YOUR FINGERTIPS

- Financing sustainably is the priority for financial institutions, regulators and stakeholders, as setting net-zero GHG emissions targets by 2050 remains the main objective.
- At the heart of effective energy climate scenarios lies robust data, pivotal for understanding and navigating the complex landscape of energy transitions. Our approach to delivering robust data is based on the following three key principles: standardisation, forward-looking, disaggregation.

### Standardised

Experience a unified methodology with international coverage, offering a consistent framework for energy-climate analysis. This standardisation ensures reliable comparisons and informed decision-making across borders.

## ROBUST DATA

### Forward-Looking

Embrace a long-term vision that acknowledges the inertia of industrial and energy systems. Our forward-looking approach guides your strategic planning and policy development to effectively address future challenges.

### Disaggregated

Gain insights with detailed sectoral and regional data. Understanding the unique impacts on different sectors is essential, as the transition to a sustainable energy future will affect some more than others.



➔ CO<sub>2</sub> Marginal Abatement Cost Curves: emission mitigation potential across sub-sectors.

MACCs is a powerful tool for investment decisions and impact measurement in carbon pricing. It helps you navigate emission abatement across sectors and analyse asset portfolios, ensuring alignment with CO<sub>2</sub> mitigation goals and enhancing your investment strategies.

### CO<sub>2</sub> MACCs

#### 360° Global and Sectoral Insights

Gain a comprehensive 360° view of greenhouse gas abatement potentials at both global and sectoral levels. Our top-down perspective offers essential insights into emission reduction strategies.

#### Empowered Decision-Making

Utilise a powerful solution that enhances investment decision-making and facilitates the quantification of impacts for a tailored carbon pricing mechanism. Make informed choices that drive sustainable outcomes.

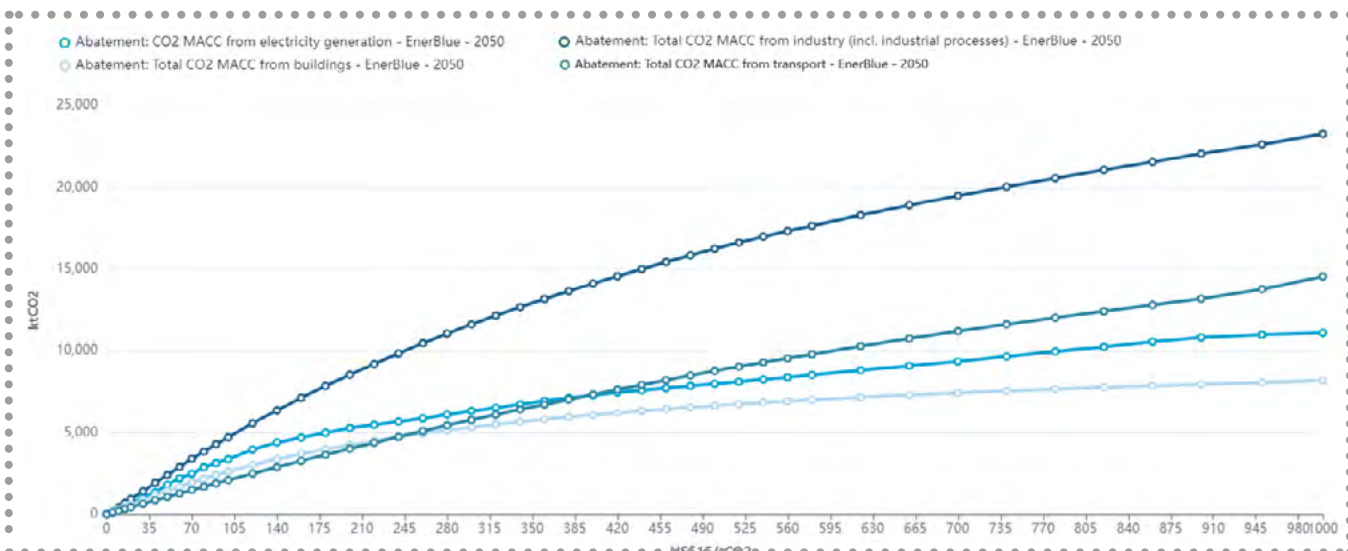
#### Sector-Specific Emission Analysis

Explore emission abatement potentials across various sectors. Analyse asset portfolios to ensure they align with predefined CO<sub>2</sub> mitigation objectives, supporting your commitment to sustainability.

#### Extensive Data Coverage

Access 62 data series for each country/region, covering both CO<sub>2</sub> and non-CO<sub>2</sub> greenhouse gases (CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, HFCs, and PFCs) across several economic sectors as well as data on the share of renewable energy sources, fossil fuels, nuclear power, and other sources in the power sector. This extensive coverage provides the critical data needed for effective climate action.

#### ABATEMENT: CO<sub>2</sub> MACC FROM POWER GEN, INDUSTRY, BUILDINGS, TRANSPORT - GERMANY - 2050, ENERBLUE



➔ Get access to retail and industrial annual power and gas price projections up to 2050 with freshly updated database.

Harness the power of our comprehensive electricity and gas price data to enhance investment strategies, manage risks, and optimise portfolios. Gain a competitive edge with continuously updated data, powered by our scientific approach utilising the industry-leading POLES model, as well as global country-level granular data.

### DATA, INSIGHTS & MORE...

- Data on energy commodity prices including crude oil, natural gas, coal, and electricity.
- Historical price trends, volatility analysis, and factors affecting price movements.
- Insights into price forecasts and risk management strategies related to energy price fluctuations.

#### Prices offered

- Historical Trends
- Annual Price Trends
- Market Prices
- Key Drivers
- Historical Price Projections
- Wholesale Price Projections
- End-User Price Projections

### 3 robust scenarios



BAU

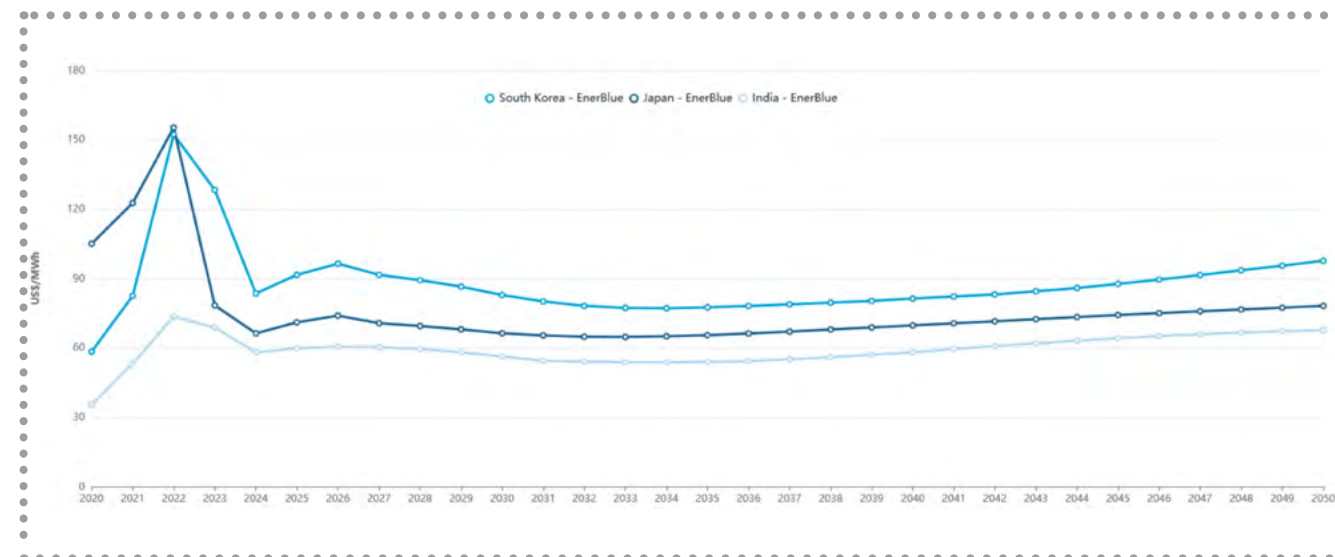


NDCs



<2°C

#### WHOLESALE ELECTRICITY PRICE SOUTH KOREA, JAPAN, INDIA - ENERBLUE

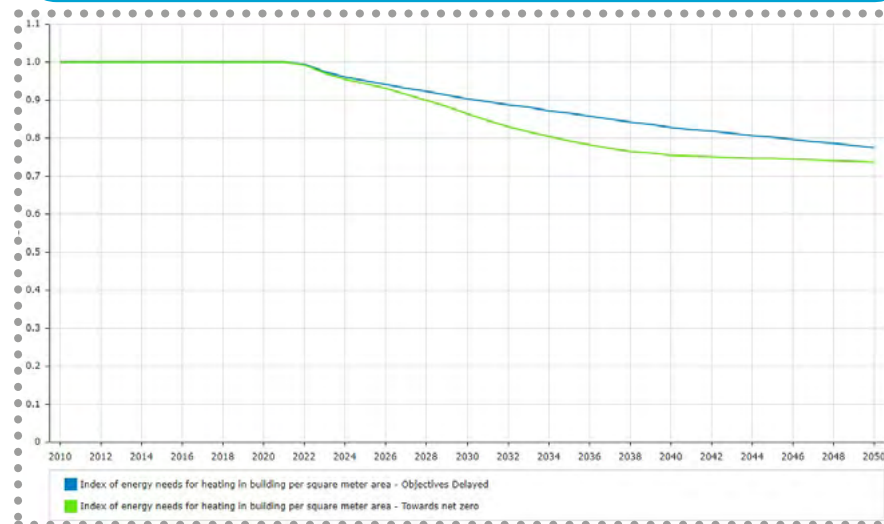


- Our comprehensive data solutions provide Financial Institutions with identified energy efficiency indicators, enabling smarter, more sustainable lending decisions.
- You can delve into data on technologies across various sectors to analyse country energy efficiency policies, technological market trends, and adoption rates.

Our identified energy efficiency indicators will provide you with smarter:

- Risk Management
- Sustainable Investment
- Regulatory Compliance
- Economic Incentives
- Market Differentiation
- Long-Term Value Creation

RESIDENTIAL INDICATORS - INDEX OF ENERGY NEEDS FOR HEATING IN BUILDING PER SQUARE METER AREA - GERMANY



BRANCHES	END-USES	DRIVERS ANALYSIS
<b>INDUSTRY</b> 	primary materials non-metallic materials paper & printing food & beverages machinery & fabricated metals	energy consumption by branch production indexed by branch value added by branch physical production of intensive products
<b>RESIDENTIAL</b> 	space heating water heating cooking electrical appliances	stock of dwellings new dwellings floor area of dwellings stock and new appliances
<b>TRANSPORT</b> 	modes: road, rail, water, air types: car, bus, trucks and light vehicles, heavy vehicles, two wheels	energy consumption by fuel and mode stock of vehicles by fuel traffic by mode annual distance travelled by type of vehicle
<b>SERVICES</b> 	hotels, restaurants, health, education, administration, wholesale & retail trade, private offices, agriculture	added value floor area employment energy consumption

OUR SERVICES

INTERNATIONAL EXPERTS

EXCLUSIVE DATA

IN-HOUSE MODELLING CAPACITIES

DETAILED SECTORAL DEMAND FORECASTING

- Continuously **updated information** on WW power generation assets development
- Benchmark power mix evolution, including RES penetration, with five-year forecasts
- Analysis of dynamics for power generation capacity and investment by country, by company and by technology

Power Plant Tracker is the most up-to-date power generation database offering a robust tool for investment strategies. It helps you map the sustainable project through companies or countries, as well as renewable energy policies throughout Europe.

**MODULES**

- Power CAPEX and Renewables LCOE  
Weigh investment decisions leveraging thousands of data points and meaningful averages
- Renewable Energies Auctions Monitor  
The most in-depth RES auctions database with worldwide coverage

**TOPICS**

- All energy plants characteristics
- Renewable energies
- Power mix
- Project planning, status and financing
- Energy storage
- CO<sub>2</sub> emissions

DATABASE SAMPLE

Country	Plant name	Unit name	Status	Operator	Category	Energy	Sub Energy	Technology	Sub Technology	Net capacity (MW)
Brazil	A HPP	A HPP	Authorized		Renewables	Hydro		Dam		10.00
Chile	Abasol	Abasol	Authorized	Abasol	Renewables	Solar		PV		61.50
Ecuador	Abitagua	Abitagua	Bidding process		Renewables	Hydro				165.00
Paraguay	Acaray	Acaray-3	Announced	Ande	Renewables	Hydro		Dam		65.00
Paraguay	Acaray	Acaray-4	Announced	Ande	Renewables	Hydro		Dam		75.00
Brazil	Acauá 1	Acauá 1	Authorized		Renewables	Solar		PV		30.00
Chile	Achibueno	Achibueno	Authorized	Hidroeléctrica Centinela	Renewables	Hydro		Dam		135.00
Panama	Acla II	Acla II	Bidding process	Porto Power Inc.	Renewables	Hydro		Run-of-river		5.00
Mexico	Acquaerento	Acquaerento, S. A. de C. V.	Authorized	Acquaerento, S. A. de C. V.	Renewables	Hydro				30.00
Brazil	Acucena	Acucena 1	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 2	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 3	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 4	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 5	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 6	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 7	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena	Acucena 8	Authorized		Renewables	Solar		PV		49.50
Brazil	Acucena Solar	Acucena Solar	Announced	Ser Sistemas de Energia R.	Renewables	Solar		PV		396.00
Brazil	Açungui 2E	Açungui 2E	Authorized		Renewables	Hydro		Dam		5.90
Brazil	Açungui 2F	Açungui 2F	Authorized		Renewables	Hydro		Dam		9.90
Chile	Adobera	Adobera-1	Bidding process	Transmark Renewables	Renewables	Geothermal				3.00
Chile	Adobera	Adobera-2	Authorized	Transmark Renewables	Renewables	Geothermal				9.00
Argentina	Adolfo Gonzales Chaves w...	Adolfo Gonzales Chaves w...	Announced	Tenaris	Renewables	Wind		On-shore		100.80
Uruguay	Agroland (La Quebrada)	Agroland (La Quebrada)	Authorized	Agroland	Renewables	Wind		On-shore		4.70
Panama	Agua Clara	Agua Clara	Bidding process	Aguas Puras de Mantial	Renewables	Hydro		Run-of-river		1.50
Chile	Agua Viva	Agua Viva	Bidding process	Hidroeléctrica Agua Viva	Renewables	Hydro		Run-of-river		31.00
Peru	Agua Calientes	Agua Calientes	Announced		Renewables	Geothermal				50.00
Bolivia	Agua Calientes II	Agua Calientes II	Announced	Empresa Nacional de Elect.	Renewables	Hydro				94.00
Brazil	Agua Clara offshore	Agua Clara offshore	Authorized	EPE	Renewables	Wind		Off-shore		3,000.00
Peru	Ahobamba Hydro	Ahobamba Hydro	Announced	Inland Energy	Renewables	Hydro				2.30



FEW EXAMPLES OF OUR CLIENTS

DATABASES

CO<sub>2</sub> MACCs



BNP PARIBAS



SOCIETE GENERALE

SECTOR INDICATORS

RAIFFEISEN

POWER GENERATION DATABASE



CUSTOM STUDIES



In their net-zero approach, they relied on Enerdata to support them in the definition of the decarbonisation strategy of its car insurance portfolio.

Enerdata delivered long-term transportation trajectories selected regions.

ENERGY-CLIMATE SCENARIOS RETAINER

SCENARIOS BENCHMARK DATABASE

TRAINING

EXPERT SUPPORT



## Energy-Climate Scenarios Benchmarks

- ➔ Gain knowledge about which scenarios are best suited for various uses and discuss the results based on:
  - E-C scenarios: the 10 most important global scenarios + 2 chosen by you from our vast list
  - Data and indicators covering the details of each scenario to 2050
  - E-C scenario benchmark through graphics & tables

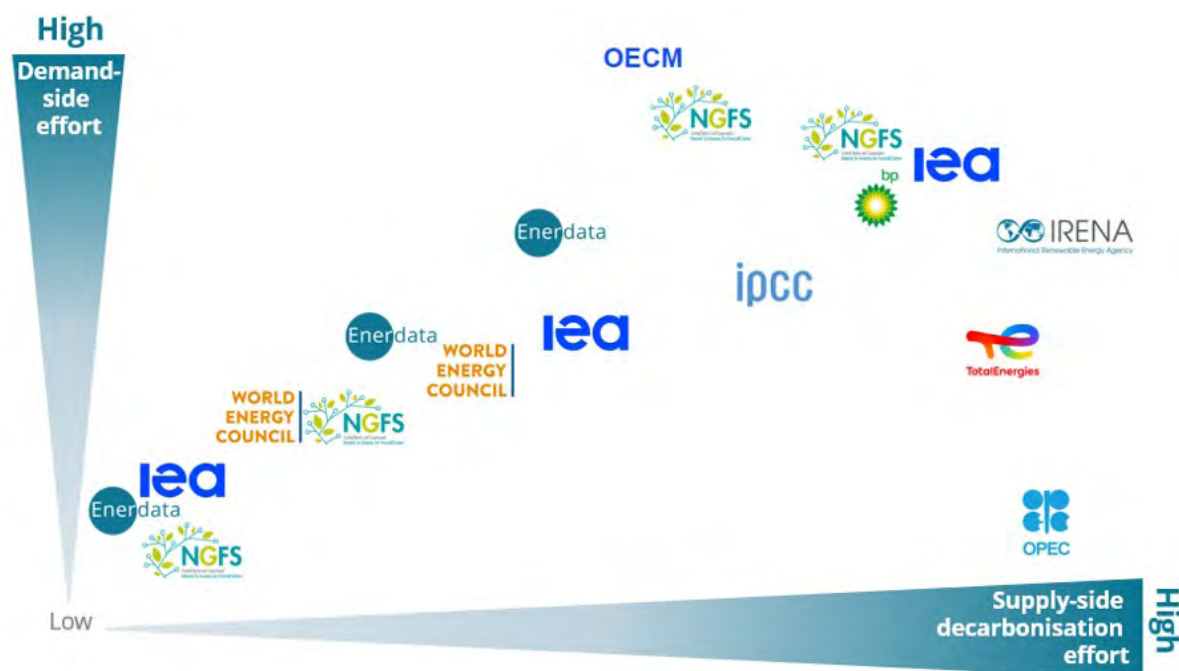
### E-C SCENARIOS:

- IEA - 3
- Irena - 1
- IPCC - 1
- WEC - 2
- Enerdata - 3
- and more from our vast list of global renowned scenarios

### SCENARIO DATA: 10 STANDARD INDICATORS

- Temperature targets
- GDP
- Population
- Final Energy demand per capita
- CCS
- Negative emissions
- H2 demand
- Level of effort on the supply side, the demand side, and new technologies
- On-demand additional indicators

### SCENARIO BENCHMARKING EXAMPLE



## TRAINING

- ➔ Make your teams quickly operational on energy-climate scenarios thanks to the most efficient training presented by our highly qualified energy economists, modelling experts, and data scientists:
  - Navigate through benchmarks and databases
  - Design and interpret energy forecasts
  - A possibility to build on demand training sessions to meet your specific objectives and requirements

## PROGRAMME

- Part 1: Nature and objectives of E-C scenarios
  - ⇒ Introduction on scenarios
  - ⇒ Diving into E-C scenarios
  - ⇒ Main E-C scenario results
- Part 2: Analysing and benchmarking E-C scenarios
  - ⇒ Case-study: analysis of a selected scenario
  - ⇒ Multi-scenario benchmarking and mapping

## EXPERT SUPPORT

- ➔ As a scenario specialist, our experts are at your service to help your concerns and answer your specific needs. We offer dedicated support from our experts through 2 days of on-demand consulting, this includes:
  - Detailed presentation of the specificities of the scenarios through additional training
  - Question & answer sessions
  - The latest topics such as energy technologies, indicators & detailed demand forecasts
  - Assistance on the use of the E-C Scenarios







# HELPING YOU SHAPE THE ENERGY TRANSITION

**For more information**

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[www.enerdata.net](http://www.enerdata.net)

Enerdata is an independent research company that specialises in the analysis and forecasting of energy and climate issues, at a variety of different geographic and business / sector levels. The company is headquartered in Grenoble, France, where it was founded in 1991, and has a subsidiary in Singapore. Leveraging its globally recognised databases, business intelligence processes, and prospective models, Enerdata assists clients – which include companies, investors, and public authorities around the world – in designing their policies, strategies, and business plans.