



EnerFuture



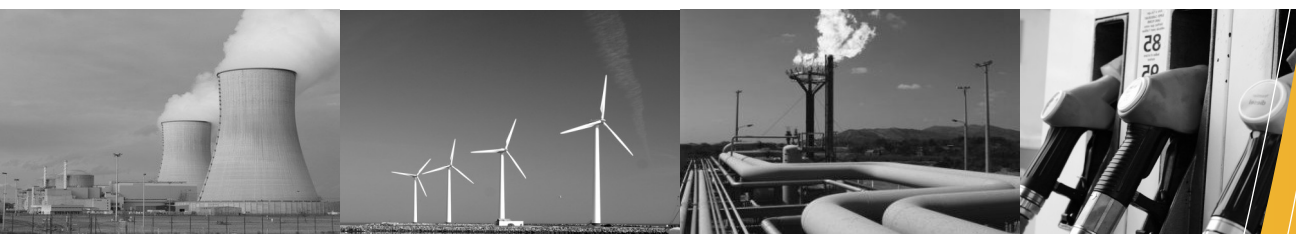
Powered by the
POLES Model
(Prospective Outlook on Long-term Energy Systems)

Global Energy and Emissions Projections

EnerFuture provides energy forecasting up to 2030 based on the POLES model. The service offers a unique insight into future energy demand, prices, and GHG emissions which can be viewed by world region or country, and by energy or sector. It aims at providing a consistent set of data reflecting the factors that will impact future business environments and company strategies.

The service's **key features** include:

- Detailed projections by world region, sub region and country
- Global forecast consistency, through regional balances
- Simulation of energy system interactions between world regions
- Annual energy demand, prices, and emissions forecasts until 2030
- Power Mix forecast including nuclear and renewable energies
- Multi-energy coverage: oil, gas, coal, and power
- Forecasts detailed by sector



Service Overview



Key Features

- Forecasts of the global energy market based on the world renowned POLES model
- Forecasts for 4 detailed scenarios, accounting for economic growth and carbon constraints
- Regular updates
- Multi-energy approach
- Energy demand forecasts by sector, by energy
- CO2 emissions forecasts by sector
- End-user price forecasts by customer segment, by energy
- 65 world regions, sub-regions, and countries
- Model reference year: 2010
- Annual forecasts until 2030
- Direct, personal contact with Enerdata experts for data support and assistance
- Explicit modelling methodology and scenario assumptions

Key Benefits

- Access to a complete and comprehensive in-house model and top-class energy actors worldwide
- Global coverage
- Generate Excel exports for direct use
- Latest historical data used as inputs
- Global consistency between forecasts
- Supply-demand equilibrium by market and world region
- Follow trends of oil, gas, coal, and power demand, by sector
- Assess the impact of carbon constraints on energy prices & demand

Demand & CO2 Forecasts

Energy demand forecasts are soaring in developing countries, while increasing regulations in developed countries result in the stabilisation or reduction of energy demand.

EnerFuture provides accurate forecasts by :

Energy & CO2	Demand	Sector
Oil, gas, coal, electricity, biomass, CO2 emissions	Total demand, demand by sector	Power sector, industry, transport, residential/services/agriculture

Demand forecasts
Prices forecasts
CO2 forecasts
Power mix forecasts

Countries	Energies	Sectors	Scenarios
<div style="border: 1px solid #ccc; padding: 2px;"> Europe Austria Belgium Bulgaria Croatia Czech Republic Denmark Finland France Germany Greece Hungary Ireland Italy Netherlands Norway </div>	<input checked="" type="checkbox"/> Select all <input checked="" type="checkbox"/> Total <input checked="" type="checkbox"/> Coal <input checked="" type="checkbox"/> Natural gas <input checked="" type="checkbox"/> Oil <input checked="" type="checkbox"/> Biomass <input checked="" type="checkbox"/> Electricity	<input checked="" type="checkbox"/> Select all <input checked="" type="checkbox"/> Primary supply <input checked="" type="checkbox"/> Power sector <input checked="" type="checkbox"/> Final consumption <input checked="" type="checkbox"/> Industry <input checked="" type="checkbox"/> Residential - Services <input checked="" type="checkbox"/> Transport	<input checked="" type="checkbox"/> Select all <input checked="" type="checkbox"/> S1 - Recovery <input checked="" type="checkbox"/> S2 - Depression <input checked="" type="checkbox"/> S3 - Renewal <input checked="" type="checkbox"/> S4 - Struggle

News

- 15/07/2011 - Electricity Market Reform White Paper published in the UK
- 07/07/2011 - Iran plans to double gas output in the coming years
- 23/06/2011 - China aims to reach 330 GW in hydropower capacities by 2020
- 22/06/2011 - Statoil issues its long term growth outlook (Norway)
- 17/06/2011 - Bangladesh intends to add 16 GW to the national grid by 2016
- 23/05/2011 - Saudi Aramco intends to double its power capacities by

Main Results

- Low economic and demography assumptions result in a potential drop in energy demand, up to 7% at the world scale by 2030.
- The economic downturn also implies a containment of CO2 emissions in the short-medium term.
- Consumption patterns do not change significantly in a depression scenario, resulting in higher CO2 emissions as soon as the economies restore.

More results

Prices Forecasts

Energy prices have become increasingly volatile, having a significant impact on end-users, while the prospect of new carbon constraints is also being felt on prices.

With **EnerFuture** you benefit from:

- End-user price forecasts by country, including taxes
- Annual prices trends from 2000 until 2030
- 2000-2008 historical prices compiled by Enerdata data specialists
- Constant prices (real prices) in US\$05
- Energy market prices are endogenous to the model

Energy	Sector	Unit
Oil	Industry	\$05/t
Oil	Residential - Services	\$05/kl
Gasoline	Transport	\$05/l
Natural gas	Industry	\$05c/kWh
Natural gas	Residential - Services	\$05c/kWh
Natural gas	Power sector	\$05c/kWh
Electricity	Industry	\$05c/kWh
Electricity	Residential - Services	\$05c/kWh
Coal	Industry	\$05/t
Coal	Residential - Services	\$05/t
Coal	Power sector	\$05/t

Power Mix Forecasts

A optional module on power generation is available. It includes the following categories of power generation:

- Nuclear
- Hydro
- Thermal (oil, gas, coal, and biomass)
- Other renewables (wind, solar)

Marginal Abatement Cost Curves (MACCs)

An additional optional service is available by request to provide CO2 Marginal Abatement Cost Curves: MACCs enable you to determine potential emission reductions accross economic sectors and the cost involved to reach this target. Please contact us for more information.

WHO NEEDS

EnerFuture?

ORGANISATIONS

- OIL & GAS COMPANIES
- UTILITIES COMPANIES
- INDUSTRY
- CONSULTING FIRMS
- UNIVERSITIES AND RESEARCH CENTERS
- GOVERNMENTAL BODIES
- ENERGY EQUIPMENT MANUFACTURERS

USERS

- STRATEGY
- MARKETING
- ECONOMIC STUDIES
- BUSINESS DEVELOPMENT/ PLANNING
- CONSULTANTS
- PROCUREMENT
- R&D

WHY SUBSCRIBE?

- GLOBALLY RECOGNIZED IN-HOUSE FORECASTING MODEL
- GLOBAL COVERAGE
- EXPORTABLE DATA FOR DIRECT USE
- 24/7 ONLINE ACCESS

POLES Model

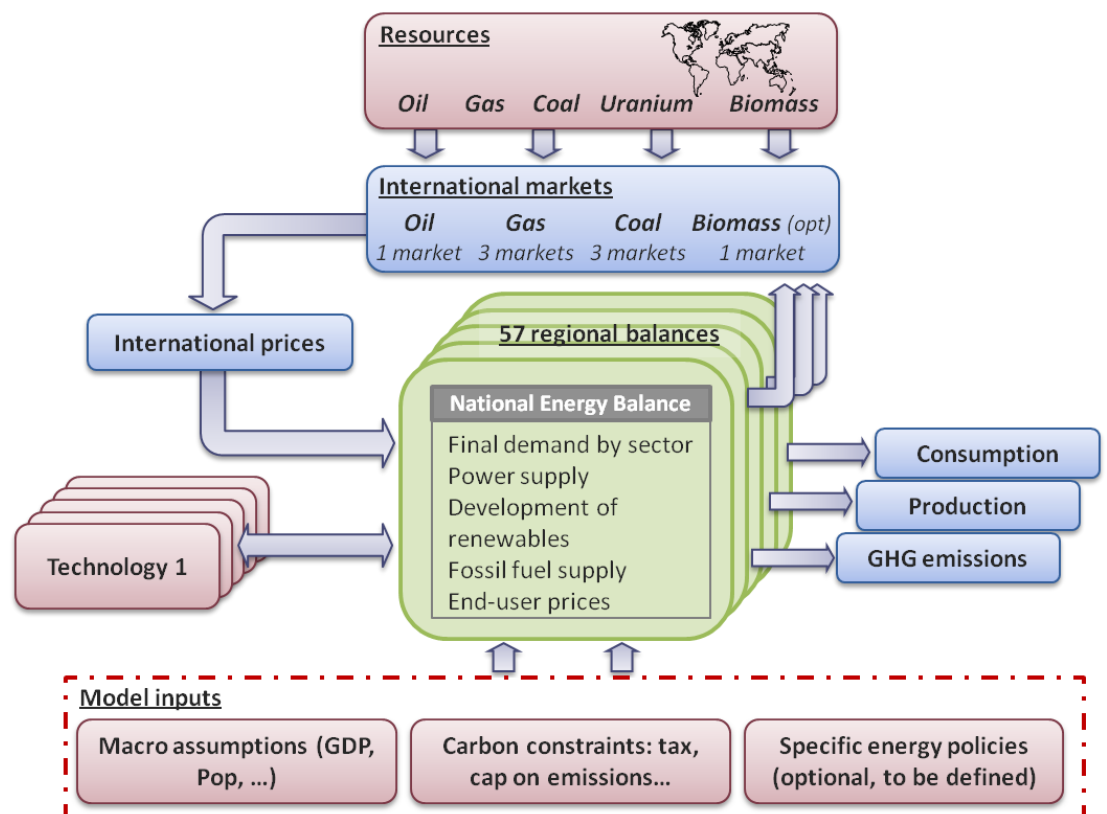
The POLES model is a detailed, global energy sector model producing year-by-year simulations. World economic and population projections, and possible carbon constraint levels are the main scenario controls, with the model providing endogenous results for numerous variables.

Main Features:

- World energy model
- Year-by-year simulation up to 2050
- Simulation of energy balances for 65 countries & regions
- Disaggregation into 15 energy demand sectors
- 40 energy generation technologies accounted for: 30 power generation technologies (including renewables) and 10 hydrogen production technologies
- Regional Markets for technologies - conventional, new and renewable power generation
- Simulation of oil and gas: discoveries and reserves for main producers
- International energy prices and markets are endogenous
- Energy supply - identification of the key market suppliers for oil and gas
- International Trade - flows of energy products for oil and natural gas
- CO2 emissions and Abatement Costs - on a region, country, and sector basis

Contributors to the POLES Model

- Model jointly developed by EPE LEPii-CNRS, IPTS, and Enerdata
- Databases produced and updated by Enerdata



Forecasting Scenarios

The POLES model has been used by Enerdata experts in various assignments for international and national organisations (The European Commission, WEC, French Ministries), as well as major private actors in the energy sector.

Numerous simulations have been carried out to assess the impacts of economic growth, energy and climate change policy implementation, and new technologies on the global energy system.

Set of scenarios

Building on these simulations, the EnerFuture service provides a range of 4 exclusive scenarios to assist analysts in assessing the key drivers that impact the energy industry in the mid-term.

2 sets of controls are presented, accounting for different economic growth assumptions. Each scenario is declined along 2 alternative carbon emissions mitigation policies.

EnerFuture Scenarios

RECOVERY

Economic recovery by 2011 with no consensus emerging from climate change negotiations. Business as usual behavior returns.

RENEWAL

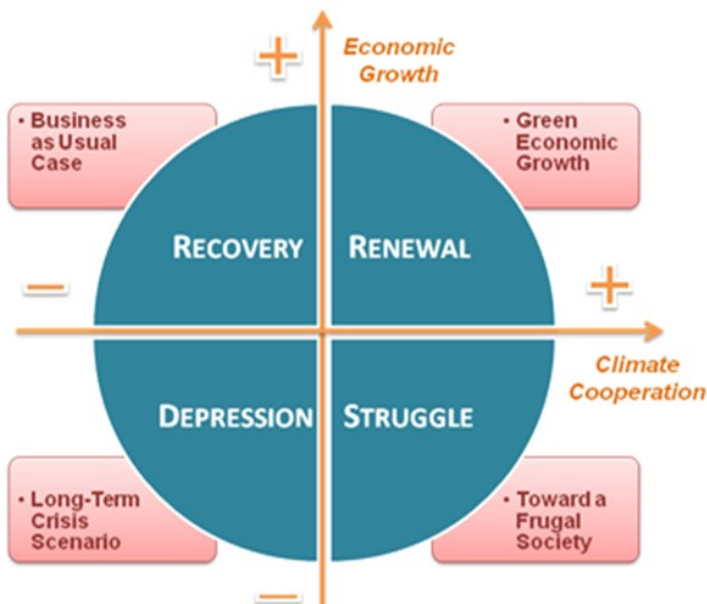
International climate change negotiations successful and economic growth positive. Global implementation of CO2 reduction measures, aiming to return world emissions to 1990s level by 2030.

DEPRESSION

Long-term global energy system crisis. Economic downturn to last until 2015 while demography remains weak.

STRUGGLE

Same CO2 emissions reduction targets, yet prolonged economic downturn retards energy system innovation, toward sobriety.



COUNTRIES and REGIONS COVERED

EUROPE

Austria
Belgium
Bulgaria
Croatia
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Ireland
Italy
The Netherlands
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
United Kingdom
Baltic States

EU 15*
EU 25*
EU 27*

ASIA

India
China
Indonesia
Japan
South Korea

Other South Asia*
Other South East*
Asia*
Australasia*
OECD Pacific*

NORTH AMERICA

Canada
United States

CENTRAL AMERICA and CARIBBEAN

Mexico
Others*

SOUTH AMERICA

Brazil
Others*

AFRICA

Algeria*
Egypt*
Libya*
Morocco*
Tunisia*
South Africa

North Africa*
Other Sub Saharan*
Africa*

MIDDLE EAST

Gulf Countries*
Others*

CIS

Russia
Ukraine*
Other CIS*

*Note:
Price Forecast unavailable

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knowledge@enerdata.net

About Enerdata

Enerdata is an independent information and consulting company specialising in the energy sector. Enerdata experts and analysts have incomparable experience in the analysis of energy markets and issues of the energy industry at a global level. Enerdata has been developing and maintaining powerful data & research services for more than 25 years.

Other information services available:

Global Energy Data

Supply, demand & prices for all energies by sector and GHG emissions in 184 countries since 1970

Global Energy Research

110 country reports providing a comprehensive view of the local energy landscape

EnerFuture MACCs

CO2 Marginal Abatement Cost Curves

European Utilities Watch

A competitive benchmark of all major European utilities

Odyssee

Detailed energy consumption by end-use and energy efficiency indicators by branch

Power Plant Tracker

Accurate and continuously updated overview of the power capacity in each country, by technology and by company.

Energy Prices Monitor

Daily closing price and historical time series for oil, gas, coal, power, carbon, alternative energies and metals, from all major exchanges around the world.

Enerdata Global Offices

UK

20 Hanover Square
London, W1S 1JY
United Kingdom
Tel: +44 207 183 4475
Fax: +44 207 183 8445

FRANCE

47 av. Alsace Lorraine
38000 Grenoble
France
Tel: +33 4 76 42 25 46
Fax: +33 4 76 51 61 45

USA

3711 Market Street
8F, Philadelphia, PA
19104
Tel: +1 215 966 6146
Fax: +1 215 386 3970

SINGAPORE

116 Middle Road, ICB
Enterprise House #08-
03/04, Singapore 188972
Tel: +65 818 334 07
Fax: +65 633 355 74

JAPAN

C/O Erai Japan Dai 2 Izumi Shoji Bldg. 4 F
2-6 Kojimachi 4-Chome Chiyoda-Ku 〒
102-0083 Tokyo, Japan
Tel: +81 03 6821 1850
Fax: +81 03 3222 2045

