

DOING BUSINESS WITH ENERGY SECTOR

LEVERAGE ON SKYMINDER SOLUTIONS

NOVEMBER 2024 SKYMINDER NEWSLETTER

Energy Sector Overview



Energy is at the heart of development. Energy makes possible the investments, innovations, and new industries that drive jobs, inclusive growth, and shared prosperity on a more livable planet.

Yet 685 million people still live without electricity worldwide, and about 2.1 billion people rely on polluting traditional fuels and technologies to cook their meals.

Scaling up renewables and energy efficiency, and investing in electrification at scale, while phasing down fossil fuels, is critical for providing clean energy.

Global shocks such as the COVID-19 pandemic, the war on Ukraine, and conflict in the Middle East have further slowed progress toward achieving universal access to affordable, reliable, sustainable, and modern energy by 2030 (Sustainable Development Goals SDG 7). Developing countries have faced the highest burdens as they have limited capacity to mitigate energy price volatility, leading to energy rationing in some countries and escalating poverty.

Hydropower also provides clean, renewable energy, one of the lowest-cost sources of electricity for consumers.

Solar mini-grids can provide high-quality, uninterrupted electricity to nearly half a billion people in underserved communities and be a least-cost solution to close the energy access gap by 2030.

Energy consumption accounts for more than three-quarters of greenhouse gas emissions. Accelerating the energy transition requires financing the massive deployment of renewable energy and energy efficiency while gradually retiring fossil fuels.

To achieve energy transition and access for all, investments in developing countries must grow sevenfold to \$1-2 trillion annually by 2030. Two-thirds of these investments will come from the private sector. For investors to come in, countries must strengthen power utilities that can transmit and distribute new renewable power and develop robust regulations and institutions to oversee the development of clean energy projects.

However, in developing countries, constrained fiscal space and lack of access to finance make costly upfront investments in energy efficiency and renewable energy out of reach. In addition, macroeconomic and political uncertainties discourage private-sector investors from supporting energy efficiency and renewable energy.

SOURCE: World Bank

Facts and Figures

Some of the immediate pressures from the global energy crisis have eased. Still, energy markets, geopolitics, and the global economy are unsettled and the risk of further disruption is ever-present. Fossil fuel prices are down from their 2022 peaks, but markets are tense and volatile due to conflicts in place, especially in Ukraine and the Middle East. The macroeconomic mood is downbeat, with stubborn inflation, higher borrowing costs and elevated debt levels. Today, the global average surface temperature is already around 1.2 °C above pre-industrial levels, prompting heatwaves and other extreme weather events, and greenhouse gas emissions have not yet peaked. The energy sector is also the primary cause of the polluted air, which is why more than 90% of the world's population is forced to breathe, which is linked to more than 6 million premature deaths a year. Positive trends in improving access to electricity and clean cooking have slowed or even reversed in some countries.

Investment in clean energy has risen by 40% since 2020. The push to bring down emissions is a key reason, but not the only one. The economic case for mature clean energy technologies is strong. Energy security is also an important factor, particularly in fuel-importing countries, as are industrial strategies and the desire to create clean energy jobs. Not all clean technologies are thriving and some supply chains, notably for wind, are under pressure, but there are striking examples of an accelerating pace of change.

Although demand for fossil fuels has been strong in recent years, there are signs of a change in direction. Alongside the deployment of low-emissions alternatives, the rate at which new assets that use fossil fuels are being added to the energy system has slowed. Sales of cars and two/three-wheel vehicles with internal combustion engines are well below where they were before the Covid-19 pandemic. In the electricity sector, worldwide additions of coal- and natural gas-fired power plants have halved, at least, from earlier peaks. Sales of residential gas boilers have been trending downwards and are now outnumbered by sales of heat pumps in many countries in Europe and the United States.

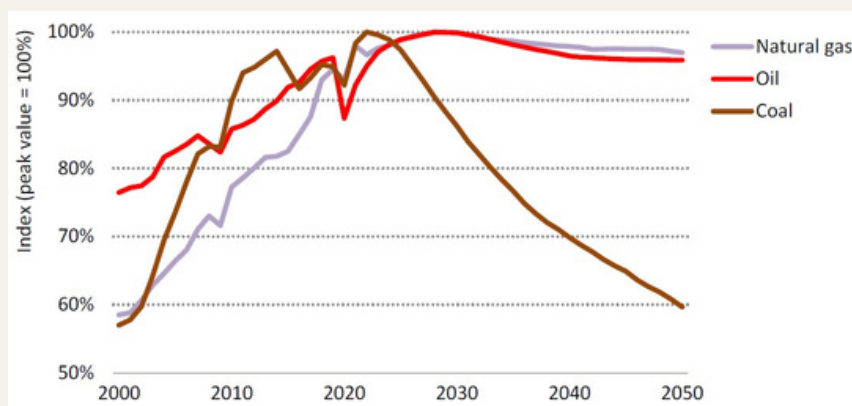
Over the past ten years, China accounted for almost two-thirds of the rise in global oil use, and nearly one-third of the increase in natural gas, and has been the dominant player in coal markets.

But it is widely recognized, including by the country's leadership, that China's economy is reaching an inflection point. After a very rapid building out of the country's physical infrastructure, the scope for further additions is narrowing. The country already has a world-class high-speed rail network; and residential floorspace per capita is now equal to that of Japan, even though GDP per capita is much lower. This saturation points to lower future demand in many energy-intensive sectors like cement and steel.

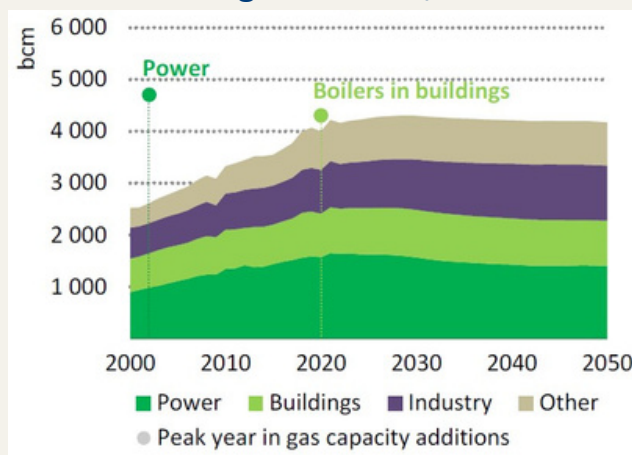
China's GDP growth forecast averages just under 4% per year to 2030. This results in its total energy demand peaking around the middle of this decade, with robust expansion of clean energy putting overall fossil fuel demand and emissions into decline. If China's near-term growth were to slow by another percentage point, this would reduce 2030 coal demand by an amount almost equal to the volume currently consumed by the whole of Europe.

The development of a clean energy system and its effect on emissions can be reinforced by policies that ease the exit of inefficient, polluting assets, such as aging coal plants, or that restrict the entry of new ones into the system. But the urgent challenge is to increase the pace of new clean energy projects, especially in many emerging and developing economies outside China, where investment in energy transitions needs to rise by more than five times by 2030 to reach the levels required.

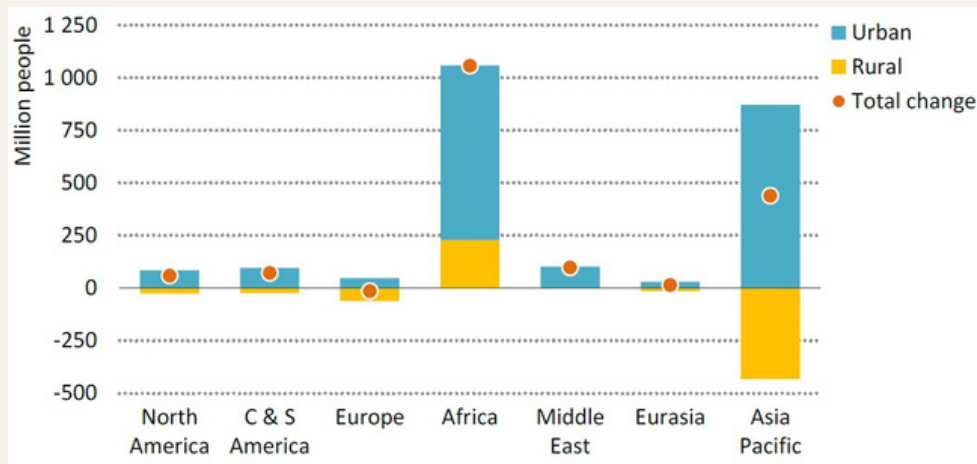
Fossil fuel consumption by fuel, 2000-2050



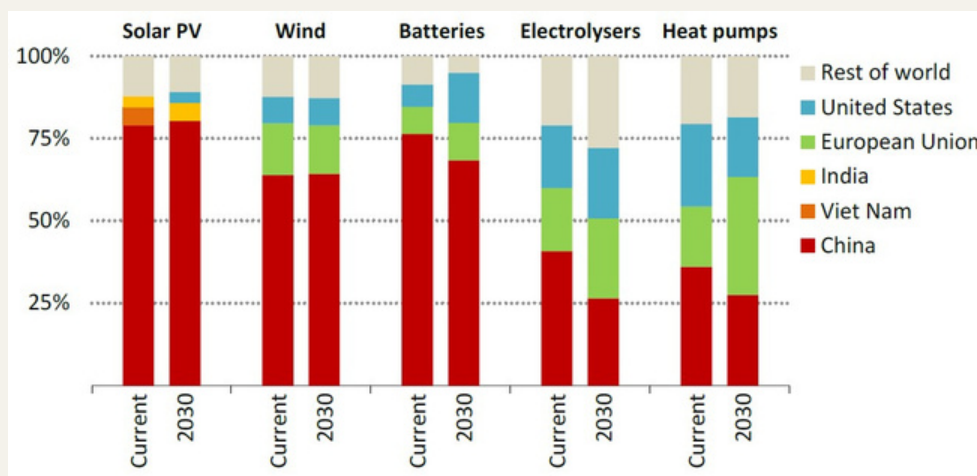
Global natural gas demand, 2000-2050



Change in population in urban and rural areas by region to 2050



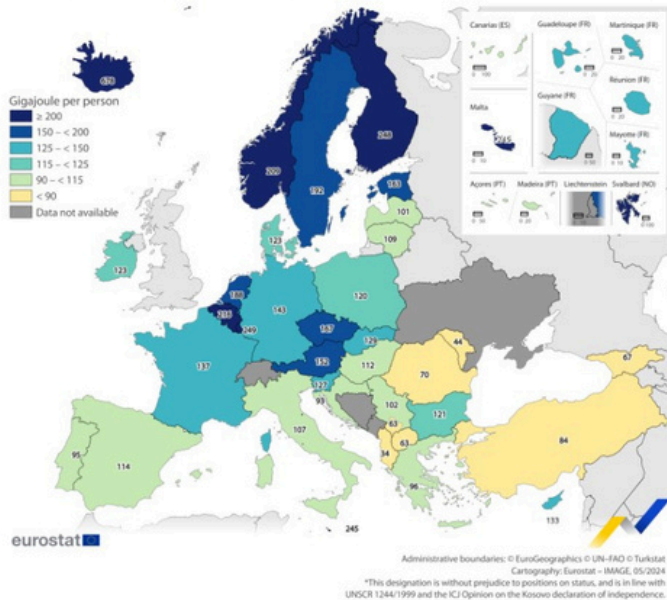
Share of top three manufacturing regions for key clean energy technologies in 2023 and 2030 based on announced projects



SOURCE: IEA

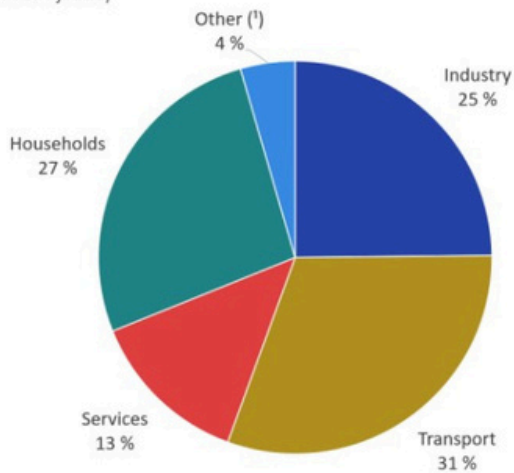
Facts and Figures: Europe

Energy consumption per capita, 2022



Map 1: Energy consumption per capita, 2022.
(Gigajoule per capita)
Source: Eurostat (nrg_bal_s), (demo_pjan)

Final energy consumption by sector, EU, 2022
(% of total, based on terajoules)



(*) International aviation and maritime bunkers are excluded from category Final energy consumption for transport.
Source: Eurostat (online data code: nrg_bal_s)

eurostat

Figure 10: Final energy consumption by sector, EU, 2022

(% of total, based on terajoules)

Source: Eurostat (nrg_bal_s)

International Energy Agency

The International Energy Agency (IEA) is a Paris-based autonomous intergovernmental organisation, established in 1974, that provides policy recommendations, analysis and data on the global energy sector. The 31 member countries and 13 association countries of the IEA represent 75% of global energy demand.

The IEA was set up under the framework of the Organisation for Economic Co-operation and Development (OECD) in the aftermath of the 1973 oil crisis to respond to physical disruptions in global oil supplies, provide data and statistics about the global oil market and energy sector, promote energy savings and conservation, and establish international technical collaboration. Since its founding, the IEA has also coordinated use of the oil reserves that its members are required to hold.

In subsequent decades, the IEA's role expanded to cover the entire global energy system, encompassing traditional fuels such as gas, and coal as well as cleaner and fast-growing energy sources and technologies including renewable energy sources; solar photovoltaics, wind power, biofuels as well as nuclear power, and hydrogen, and the critical minerals needed for these technologies.

The core activity of the IEA is providing policy advice to its member states and Associated countries to support their energy security and advance their transition to clean energy. Recently, it has focused in particular on supporting global efforts to accelerate clean energy transition, mitigate climate change, reach net zero emissions, and prevent global temperatures from rising above 1.5 °C. All IEA member countries have signed the Paris Agreement which aims to limit warming to 1.5 °C, and two-thirds of IEA member governments have made commitments to emission neutrality by 2050.

The IEA's current executive director is Fatih Birol, who took office in late 2015. IEA publishes a range of reports and other information including its flagship publication, the annual World Energy Outlook, as well as the Net Zero by 2050 report.

Members: Australia, Austria, Belgium, Canada, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Mexico, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, The Netherlands, Türkiye, United Kingdom, United States

Accession countries (Accession countries are those going through the process of becoming full members): Argentina, Chile, Colombia, Costa Rica, Israel, Latvia

Association countries: Brazil, China, Egypt, India, Indonesia, Kenya, Morocco, Senegal, Singapore, South Africa, Thailand, Ukraine

Structure

The IEA's structure includes a Governing Board, Ministerial Meetings, and Standing Groups and Committees.

The Governing Board constitutes the main decision-making body of the organisation. It is composed of member country representatives and meets three to four times a year. The Governing Board is responsible for the IEA's administrative proceedings and approving binding decisions about energy developments.

The IEA Ministerial Meeting is the biennial gathering of energy ministers who determine the broad direction of the IEA. The Ministerial allows for the development of ideas which are subsequently put to the Governing Board.

Standing Groups meet multiple times a year and are made up of officials from member states. The IEA has several Standing Groups and Committees, focusing on energy research and technology, long-term cooperation, emergency preparedness, and other topics.

SOURCE: IEA, Wikipedia

SKYMINDER AT A GLANCE FOR ENERGY SECTOR

Solutions available for more than **240**
countries and jurisdictions

Best in class information thanks to more
than **40** providers, both local and global

13 available products and solutions

Web and **API** integration



SKYMINDER SOLUTIONS

SkyMinder is the worldwide CRIF platform helping you to take decisions based on high-quality information. If you are required to evaluate a business partner in the Energy Sector, a customer or a supplier, in a risk evaluation process or for compliance requirements or a cyber risk assessment, SkyMinder is the right solution.

Requirement	SkyMinder Solution	Description
Know business partners and risk level - have on board new suppliers - understand in depth customers creditworthiness	Full Report, Slim Report, Quick Report	Information, with different level of details, related to all companies in the world, including firmographics, credit limit, risk indicator, management, shareholders, negative events etc.
Receive immediate notification with related details if a change affects a company	Full Monitoring	Detailed information about changes affecting a company as soon as happened. Combined possibility to request for free updated report.
Be alerted if there is change in company's information	Alert	Information related to the area involved by a change as soon as an event happened.
Periodically checks if there are changes involving companies	Planned Revision	Scheduled revision with updated report including company's changes if applicable
Obtain documents from Official Registry and LEI repository	Official Registry and LEI	Product range including documents coming from public sources or from LEI Registry
Company ownership overview	Verification Report	List of shareholders to understand company's structure
Compliance requirements and fraud checks	Compliance Report and Extended Check Report	Anti-Bribery and Money Laundering lists checks related to financial crimes.
Risk of Cyber attack	Cyber Risk Report	Assess the level of risk related to a business partner in being involved in a cyber attack
Understand overall value of intangible assets of a company	Patent Due Diligence Report	Patent Asset Overview with geographical coverage, remaining life of active patent assets, high-value patent assets, technology and patent deployment, technology timeline, peer comparison, key inventors.