

ENERGY NEEDS – CURRENT AND FUTURE

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Forecasting long-term energy trends begins with a simple fact: people need energy. Over the next few decades, population and income growth — and an unprecedented expansion of the global middle class — are expected to create new demands for energy. And as people's needs and modern technologies continue to evolve, so too will the energy landscape. The scale and nature of this challenge is readily apparent in ExxonMobil's Outlook for Energy: A View to 2040, our long-term global forecast of energy demand and supply trends. For example:

- As global economic output more than doubles by 2040, energy demand will increase about 35 percent, even with significant efficiency gains. Energy demand in developing (Non OECD) nations will rise about two-thirds, driving nearly all of the global increase.
- Rising demand for electricity remains the single largest influence on global energy consumption. Through 2040, it will account for half of the rise in global energy demand.
- Transportation energy demand will rise about 40 percent, driven by expanding commercial activity. However, global energy used for personal vehicles will be relatively flat, as significant fuel economy gains offset growth in the worldwide fleet.
- Technology is enabling the safe development of once hard-to-produce energy resources, significantly expanding available supplies. Oil and natural gas will supply about 65 percent of the growth in energy demand to 2040. Use of nuclear power and renewable energy will also grow, while demand for coal will peak around 2025 and then decline.
- Evolving demand and supply patterns will open the door for increased global trade opportunities. The changing energy landscape, in conjunction with an abundance of free trade opportunities, will help lead to more choices and creation of value that helps fuel economic growth and improve living standards worldwide.

Ongoing progress poses the dual challenge of meeting the world's energy needs to advance living standards while managing the environmental effects — including climate change — of energy use. There is no single or simple solution to this challenge. However, practical options to meet people's needs for reliable, affordable energy continue to expand, and gains in efficiency worldwide will help significantly reduce

demand growth. In addition, a gradual transition to less carbon-intensive energy sources like natural gas, nuclear and renewables will help curb global energy related CO₂ emissions, which are likely to peak around 2030 and then gradually decline. Understanding the factors that drive the world's energy needs — and likely choices to meet those needs — is the mission of The Outlook, a view that ExxonMobil uses to guide our own strategies and investments. By sharing The Outlook, we hope to broaden that understanding among individuals, businesses and governments. Energy matters to everyone, and we all play a role in shaping its future and helping advance prosperity.