PRESS RELEASE

TotalEnergies Energy Outlook 2026

TotalEnergies Publishes its Annual Report on Scenarios for the Evolution of the Global Energy System

Paris, November 2nd, 2026 – As a contribution to the public debate on the energy transition, TotalEnergies publishes the 8th edition of its "TotalEnergies Energy Outlook", which presents an overview of the energy system as well as scenarios for its evolution through 2060. (documents available at this link).

A global energy system between transition and resilience

Access to energy is a prerequisite for economic and human development, yet more than half of the world's population still lacks access to sufficient energy to improve its level of development in terms of education, health and wealth creation.

To meet this energy need, demand for all energy sources is still growing today: coal, oil, gas and electricity, renewables in particular. However, the growth rate of fossil fuels and of their associated greenhouse gas emissions is slowing, while global economic growth continues at a pace above 3%. This is the sign of an energy system that has begun its transition: for the same level of wealth created, it consumes less energy and emits less CO_2.

The evolution of energy investment flows illustrates this phenomenon. Investment in low-carbon energies, including end-uses with the electrification of demand, has almost doubled, from $1,200 billion in 2015 to $2,100 billion in 2025. China is the leading player, accounting for around 60% of solar panel additions, 70% of wind turbines, and 60% of electric car sales, and exporting its "green" technologies widely to the rest of the world. As a result, the share of electricity in global final energy demand has been rising by 1.3% per year since 2000, and this electricity is increasingly decarbonized: in 2025, the increase in electricity demand was met entirely by new low-carbon sources.

The Strait of Hormuz crisis in 2026, following the Ukrainian crisis in 2022, is testing the resilience of the energy system and bringing security of supply to the fore. Resilience and security of supply require developing domestically available energies (renewables, biofuels, etc.) as well as diversifying supply sources and storing fossil fuels, given their weight in today's energy system. But this crisis can also act as an accelerator of the energy transition: since the second quarter of 2026, electric car sales have accelerated in Asia, Latin America and Europe, and biofuel blending requirements have increased, even though coal, often produced domestically, remains essential to Asian power systems.

Three Scenarios to 2060

TotalEnergies is updating its three energy-future scenarios, each based on assumptions that differ in terms of governments' climate ambitions and cooperation, thereby integrating the challenges of the energy trilemma: security of supply, affordability and sustainability.

The **Trends** scenario reflects the current trajectory of the various countries: it assumes that current public policy orientations, technological developments, and customer behavior will continue into the future. It accounts for the recent acceleration in the penetration of mature low-carbon technologies: solar and wind to produce low-carbon electricity, electric vehicles and heat pumps. However, infrastructure constraints, particularly power grids, geopolitical tensions, and cost-related barriers limit their large-scale deployment. In this scenario, OECD countries do not achieve carbon neutrality by 2050, while China approaches it by 2060. Global demand for petroleum products increases and plateaus during the 2030s before beginning a slow decline. Gas demand continues to grow before stabilizing in the 2040s. This scenario leads to an estimated temperature increase of between +2.6°C and +2.8°C by 2100.

The **Momentum** scenario is a forward-looking approach, more ambitious than current trends, which assumes that OECD countries approach carbon neutrality by 2050 and China by 2060. It involves: (i)

increased electrification of final demand, (ii) the near phase-out of coal in OECD countries, a sharp reduction in its use in China and only slight growth of this energy source in India, (iii) the use of natural gas as a transition energy for power and industry in all countries, and (iv) the deployment of new energies in sectors that cannot be electrified (for example, low-carbon hydrogen in industry, sustainable fuels in aviation and shipping). In this scenario, fossil fuels still cover half of the growth in energy demand in India and the rest of the world due to insufficient low-carbon investment. This scenario leads to an estimated temperature increase of between +2.3°C and +2.4°C by 2100.

The **Rupture** scenario is a normative scenario built backwards from an end point in 2050 that would limit global warming below 2°C, in line with the Paris Agreement. Achieving this scenario currently appears out of reach given today's geopolitical rivalries, as it would require significantly strengthened multilateral cooperation in favor of global decarbonization. In this scenario, the use of coal in the power sector would decline much more rapidly. The share of natural gas would remain broadly stable, while deeper electrification would drive a sharp increase in low-carbon power generation. This scenario leads to an estimated temperature increase of between +1.8°C and +1.9°C by 2100.

Geopolitics at the Heart of Energy Decisions

Against a backdrop of heightened geopolitical tensions and rivalries, different regions of the world are following increasingly differentiated trajectories.

The United States has not only achieved energy independence thanks to shale oil and gas but also became a net exporter of gas in 2017 and of petroleum products in 2020. It has leveraged abundant, competitively priced domestic gas production to reduce its CO_2 emissions by gradually replacing coal-fired power plants with gas-fired plants. In the coming years, it will remain the world's leading exporter of liquefied natural gas and will continue to rely on domestic fossil fuels to meet its demand; these will still account for around 60% of primary energy in 2060, compared with 80% today. At the same time, the United States will also rank among the major electricity powers, driven in particular by the growth of data centers and artificial intelligence.

China is becoming an electro-state, extending its dominance in low-carbon technologies through integration across their entire value chains. Although it continues to increase its installed coal-fired capacity, the massive penetration of renewable power sources, the construction of a large fleet of nuclear power plants, and the retrofitting of coal-fired plants to make them more flexible are enabling it to reduce the share of coal in primary energy from around 60% in 2025 to around 25% in 2060. The extensive electrification of road transport will reduce the share of oil from around 20% in 2025 to around 10% in 2060.

The European Union is leading the way in reducing emissions by continuing to decarbonize its power mix but faces massive investment needs in power grids and the twofold challenge of preserving the competitiveness of its industry while overcoming public reluctance generated by the additional costs of decarbonizing energy uses. Fossil fuels will still account for around 60% of primary energy in 2035. Europe must therefore balance securing its fossil energy supplies with scaling up the electrification of end uses, particularly in transport and heat generation.

"The global energy system continues to walk a fine line, between resilience and sovereignty challenges, once again highlighted by the crisis in the Middle East, and an ongoing transition. Developments since the Strait of Hormuz crisis underline the importance for governments to promote domestic energies, through power generation, notably from renewables, the electrification of demand, and biofuels, while investing in securing the fossil energy system through the diversification of supply sources and investment in storage and transport infrastructure. Some of the trends observed in 2026 comfort the transition pathway initiated since the Paris Agreement, but do not support an acceleration sufficient to achieve the goal of limiting warming to below 2 degrees," said **Aurélien Hamelle, President for Strategy & Sustainability**. "*We anticipate increasingly differentiated energy trajectories by region: fossil energy-producing countries will continue to use their domestic resources, oil and gas for the United States, coal for China, India and other Asian countries. China is pursuing its massive electrification while leveraging its lead in the deployment and export of low-carbon technologies, whereas Europe will seek a balance between maintaining ambitious climate objectives, preserving the competitiveness of its industry and financing the investments required for the transition and energy security."*

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About TotalEnergies

TotalEnergies is a global multi-energy company that produces and supplies energy: oil and biofuels, natural gas and green gases, renewables and electricity. Its more than 100,000 employees are committed to making energy more affordable, cleaner, more reliable and accessible to as many people as possible. Present in more than 130 countries, TotalEnergies places sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of populations.

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Outlook

The TotalEnergies Outlook (TEO) sets out potential scenarios of energy mix evolution at world and regional levels until 2060, and the associated likely increase in global average temperature by the end of the century. It is based on in-house analysis conducted by the strategy and climate teams of TotalEnergies, and on data and input from third-party forecasters, data providers and consultants. The projections contained in the Trends outlook and the Momentum and Rupture scenarios rely on a set of assumptions that may or may not materialize in the future. The TEO is meant to contribute to the debate and discussions around the energy transition and, while it is taken into consideration by TotalEnergies to inform its strategic decisions, the TEO is not a presentation of TotalEnergies' strategy, which is presented in other publications (Sustainability and Climate Report, Investors' presentations).