

IEA NZE SCENARIO ANALYSIS⁽⁶⁴⁾: VALIDATING STRATEGY RESILIENCY

The International Energy Agency Net Zero Emissions by 2050⁽⁶⁵⁾ scenario (IEA NZE) outlines a pathway to achieve net-zero global emissions by 2050. It is one of multiple IEA scenarios, each of which is built to compare different versions of how the energy system might evolve.

The scenario assumes unprecedented and sustained energy efficiency gains, innovation and technology transfer, lower-emission investments, and globally coordinated greenhouse gas reduction policy. The IEA acknowledges that society is not on the IEA NZE pathway. ExxonMobil uses these extreme assumptions to further test the resiliency of its businesses and strategy.

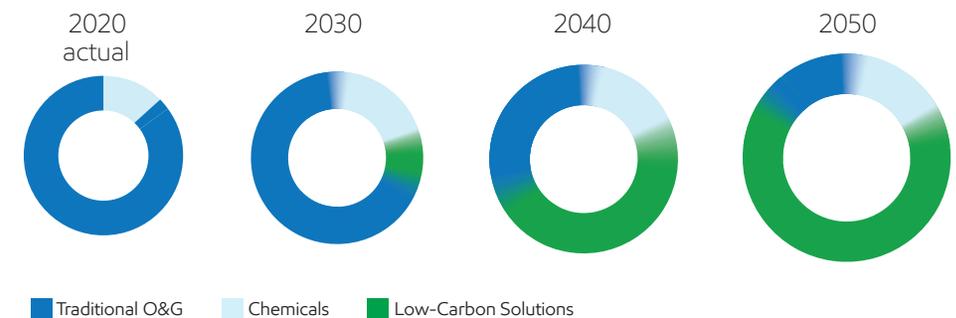
To test resiliency, ExxonMobil modeled a business and investment portfolio that could result under the assumptions provided by the IEA NZE. The analysis included existing operations and future opportunities across ExxonMobil’s businesses in oil, natural gas, fuels, lubricants, chemicals, lower-emission fuels, hydrogen and carbon capture and storage. The Company used the IEA NZE’s assumptions for demand and pricing for oil, natural gas and carbon. Where additional assumptions were necessary to estimate the performance of ExxonMobil’s portfolio and the current industry environment, the Company did so in a manner consistent with the IEA NZE narrative.⁽⁶⁴⁾ For example, the IEA NZE scenario did not provide assumed margins for refining and chemical businesses. Therefore, for refining, the Company used oil demand levels from the scenario and assumed margins would decline to the lowest level needed to incentivize the required production to meet IEA’s demand assumptions. For chemicals, margins were modeled consistent with history at a level sufficient to support the investment necessary to meet chemicals demand growth per the IEA NZE assumptions. For its Low Carbon Solutions business, the Company used the IEA’s demand assumptions and assumed this business reached an overall market position similar to ExxonMobil’s current businesses.

The chart below illustrates potential changes to ExxonMobil’s business portfolio through 2050 resulting from this modeling. It demonstrates that under the IEA NZE assumptions, the Company could continue to grow cash flows over time through reduced investments in oil and gas and increased investments in accretive projects in chemicals, carbon capture and storage, low emission fuels and hydrogen.

Consistent with the scenario’s long-term decline in oil and natural gas demand and pricing, the Company would cease oil and gas exploration in new basins and reduce spending on new developments. This would result in lower overall production as natural depletion outpaces investment in new volumes. It would also lead to initially higher net cash flow due to the lower investment levels. Upstream resources with shorter production cycles, such as unconventional developments, and a lower cost of supply, like deepwater production, would continue to attract capital and generate competitive returns.

Operating cash flow modeled under IEA NZE 2050 scenario

Trailing 5-year averages (nominal \$)



See supplemental information on [page 54](#) for a definition of operating cash flow.

In addition, under this scenario, production of traditional refined products would decline as sites are either closed, converted to terminals or reconfigured to shift production to chemicals, lubricants, basestocks and lower-emission fuels. Investments in carbon capture and storage, hydrogen, and biofuels, would increase significantly as carbon pricing provided in the IEA NZE scenario increases. The Company would continue to make accretive investments in its chemicals business as demand for these products grows in the IEA NZE scenario, with many of these products generating lower life-cycle emissions relative to available alternatives.

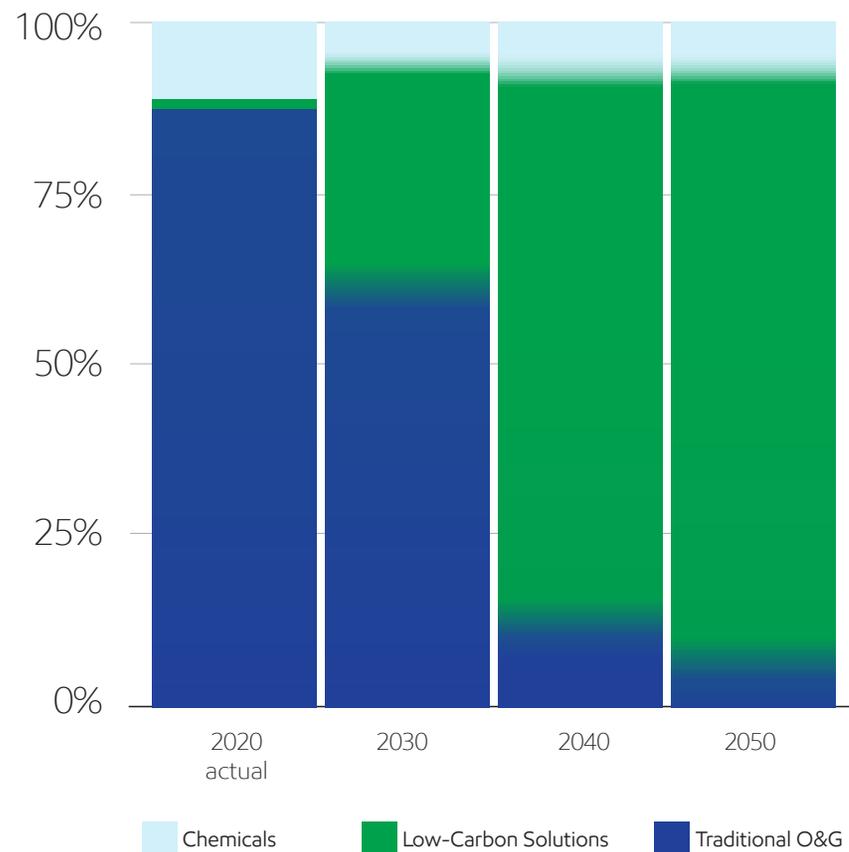
Existing oil and gas production and fuels manufacturing assets would be optimized and operated as long as economically justified, consistent with the IEA NZE demand assumptions, which project daily production of 24 million barrels of oil and 169 billion cubic feet of natural gas will still be needed to meet demand in 2050.

Overall, under IEA NZE, significant growth potential exists in chemicals, low-emission fuels, carbon capture and storage, and hydrogen. ExxonMobil is positioned to effectively compete in these businesses by leveraging existing differentiated capabilities and repurposing assets. Throughout the modeled period, IEA NZE's assumed carbon price supports attractive investments in key growth areas that drive increases in cash flow. The Company's core capabilities, experience and advantages in scale, integration, technology, project execution and people would be critical success factors in this hypothetical transition path.

Assessing under the IEA NZE scenario helps the Company identify targeted investments that will generate competitive returns and deliver value to shareholders across a wide range of future scenarios.

Capital expenditures modeled under IEA NZE 2050 scenario

Trailing 5-year averages



Third-party quality assurance model review

An independent third party, Wood Mackenzie, performed a quality assurance audit of ExxonMobil's portfolio model, confirming the integrity of the calculations and overall model functionality and validating the IEA NZE assumption inputs were accurately reflected in the model, ensuring the output is a reasonable expression of the portfolio mix as defined by the model inputs.