## ROADMAPS TO NET-ZERO

## Comprehensive Imperial roadmaps to net-zero<sup>1</sup> by 2050 completed in 2022

Imperial's roadmaps consider energy security, including energy access and affordability. Unplanned or premature retirement of traditional energy sources could have negative consequences on energy security if not appropriately synchronized with emerging lower-carbon solutions.

## **Scenarios**

No single transition pathway can be reasonably predicted, given the wide range of uncertainties. Key unknowns include yet-to-be developed government policies, market conditions, and advances in technology that may influence the cost, pace and potential availability of certain pathways. Many scenarios are hypothetical constructs and are highly sensitive to assumptions that will change in the future. Scenarios that employ a full complement of technology options are likely to provide the most economically efficient pathways. Imperial uses reputable third-party energy transition scenarios to inform our strategic thinking, stress test assets and challenge 'business as usual' assumptions including potential timing for implementation and scale-up of lower-carbon solutions. Imperial's roadmaps anticipate continued advancement in technology and Canadian public policy.

Scenarios considered are either worked backward from a hypothetical outcome to identify the factors that would need to occur to achieve that outcome, such as the International Energy Agency's (IEA) net-zero by 2050 (NZE) scenario or are projected based on a sector-by-sector assessment of the current and announced government policies around the world like Exxon Mobil Corporation's (ExxonMobil's) Outlook for Energy, which is a directionally similar projection to the IEA's Stated Policies Scenario (STEPS). <sup>4</sup> As the IEA has acknowledged society is not on the IEA NZE Pathway, Imperial has also considered the IEA's Sustainable Development Scenario, a well below 2°C pathway in its roadmaps.

## ExxonMobil's Outlook for Energy

Imperial uses the Outlook for Energy (Outlook) <sup>5</sup> developed by ExxonMobil as the basis for developing its business plans as it projects the company's view of future energy supply and demand for 2030 and beyond. The Outlook is ExxonMobil's latest projection of energy supply and demand through 2050 using models based on current trends in economic development, technology, global policies, geopolitics and consumer behaviour. It does not attempt to project the degree of necessary future policy, technological advancement and deployment for the world, or Canada, to meet net-zero by 2050. As policies and technology are implemented, the Outlook is refreshed which will then inform Imperial's business plans.

