GLOBAL ISSUE FEATURE

BUILT FOR THE ENERGY TRANSITION

To meet growing global energy demand and significantly reduce greenhouse gas (GHG) emissions, the world will require a suite of energy sources, actions and technologies. We view the global energy transition as a tailwind for our business, and we believe that natural gas will be a foundational fuel for decades to come. In order to ensure that liquefied natural gas (LNG) continues to play a positive role in addressing this dual challenge, we are working across our value chain in an effort to improve the carbon footprint of our LNG (see *page 16*).

> We are working across our value to chain to help ensure that LNG continues to play a positive role in addressing climate change and supporting the energy transition.

Key trends support a lasting role for LNG in addressing climate change

Based on a range of third-party and internal studies, we believe key trends in energy demand, policy and technological development support our view that natural gas plays both a bridging and destination role in the global energy transition. These trends include:

- **Economic growth in developing economies is driving global energy demand:** Although global primary energy demand fell by about 4% in 2020 due to the COVID-19 pandemic, it is already rebounding and forecast to return to its pre-pandemic level by 2023.[12] Emerging markets — especially in the Asia-Pacific region[13] — are expected to drive economic growth and global natural gas demand for decades to come.

- **Governments are implementing Paris Agreement-aligned policies to address climate change:** Governments are taking action to implement policies to meet the primary goal of the Paris Agreement — to limit global temperature rise to well below 2°C compared to pre-industrial levels. Many countries are increasing their climate ambitions, including adopting net-zero carbon emissions targets to limit global warming to 1.5°C.

- **Fuel displacement is a key pathway to achieving the well-below-2°C goal:** To meet the goals of the Paris Agreement, coal-to-gas displacement can deliver significant, near-term CO_2 emissions reductions and air quality benefits in specific countries and sectors. Since 2005, the United States has witnessed a 14% decline in energy-related CO_2 emissions, primarily due to fuel switching from coal to natural gas.[14] Since 2010, fuel switching from coal to natural gas has accounted for close to half of the total global CO_2 reductions. The IEA identifies fuel displacement from coal to gas as the "quickest route to emissions reductions," with the potential of curbing global power sector emissions by 10%.[15] U.S. LNG exports are, in effect, a mechanism for the U.S. to export our experience with rapid CO_2 emissions reductions globally, by enabling our customers to replicate those CO_2 emissions reductions by switching from coal to gas.

- **Natural gas also helps support a lower-carbon future:** In addition to near-term emissions reductions through fuel displacement and improvements to air quality, natural gas supports the adoption of renewables, as fast-cycling natural gas plants remain vital to smoothing out intermittency in solar and wind power. Under the IEA's Sustainable Development Scenario (SDS), demand for LNG could grow by 33% by 2040 relative to 2019 levels.[16] Based on our *Climate Scenario Analysis*, we believe our LNG will remain critical to meeting future demand.

- **Addressing methane emissions is essential to achieving the well-below-2°C goal:** Achieving reductions in methane emissions is essential to ensuring the long-term role of natural gas and delivering near-term climate benefits. Methane emissions account for nearly a quarter of global warming since the 1850s.[17] Near-term reductions in methane emissions are a powerful and cost-effective means of reducing global GHG emissions, given methane's higher global warming potential compared to CO_2.[18]

12. IEA (2021, March 2), Global Energy Review: CO_2 Emissions in 2020, *https://www.iea.org/articles/global-energy-review-co2-emissions-in-2020*; IEA (2020), World Energy Outlook 2020. **13.** Refers to the definition in the IEA's "WEO 2020" of the Asia-Pacific region. This includes China, India, Japan and Southeast Asia (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam). **14.** U.S. EPA (2021), Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019, *https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019*. **15.** IEA (2019, July), The Role of Gas in Today's Energy Transitions, *https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions*. **16.** IEA (2020), World Energy Outlook 2020. **17.** NASA Earth Observatory (2020), Methane Emissions Continue to Rise, *https://earthobservatory.nasa.gov/images/146978/methane-emissions-continue-to-rise*. **18.** Marielle Saunois et al. (2020, July 15), The Global Methane Budget 2000–2017, *https://essd.copernicus.org/articles/12/1561/2020/*.