ADVOCATING FOR SOUND POLICIES

Recognizing that sound government policies are required and can act as an accelerator for lower-emission alternatives, ExxonMobil actively participates in climate-related policy discussions around the world.

The Company focuses on practical policy solutions that recognize the increasing global demand for affordable and reliable energy while enabling scalable development and deployment of lower- and zero-greenhouse gas emission technologies.

Durable and predictable market-driven policies can further incentivize developments and scale investments in lower-emission technologies to help achieve the Paris Agreement goals at the lowest cost to society.

A good example is a coordinated and transparent economy-wide price on carbon such as a carbon tax. An established carbon price would enable all technologies to compete, and cost-effectively lower carbon intensity while delivering meaningful emission reductions. Broad adoption of an economy-wide price on carbon could also help spur the development of global carbon markets as envisioned in Article 6 of the Paris Agreement.

In the absence of economy-wide carbon pricing, well-designed sector-based policy options could also be an effective way to reduce emissions. ExxonMobil supports the approaches outlined below, which help address emissions in manufacturing, transportation and power generation.

Understanding life-cycle emissions to better inform policy decisions

ExxonMobil has been working with the MIT Energy Initiative to develop a new life-cycle analysis tool that covers pathways of multiple technologies representing most sources of greenhouse gas emissions. This tool, called the Sustainable Energy System Analysis Modeling Environment (SESAME[41]) is based on well-referenced, peer-reviewed public sources and will evolve to perform full life-cycle analyses for more than 1,000 technology pathways, from primary energy sources to final products or services including those from the power, transportation, industrial and residential sectors. To date, a series of SESAME-related publications in peer-reviewed journals have been released exploring areas such as the U.S. electric power systems[42,43,44].

MANUFACTURING

For the manufacturing sector, ExxonMobil's focus is on carbon capture and storage and hydrogen. The International Energy Agency [https://www.iea.org/reports/ccus-in-clean-energy-transitions] and the U.N. Intergovernmental Panel on Climate Change have identified both hydrogen and carbon capture and storage as vital to reducing emissions associated with manufacturing and heavy industry.

The carbon capture and storage opportunities that ExxonMobil is evaluating have the potential to move forward with current technologies. However, to drive investment and deploy the technology at the pace and scale needed to meet the Paris Agreement goals, governments must establish durable regulatory and legal frameworks as well as incentives, similar to those available for other more established low-emission technologies. Low-carbon policies should be clear, cost-effective, technology-neutral and aligned with free-market principles.

ExxonMobil supports a policy and regulatory framework for carbon capture and storage that would:

- Sustain long-term government support for research and development.
- Provide standards to ensure safe, secure and permanent CO_2 storage.
- Allow for fit-for-purpose CO_2 injection well design standards.
- Provide legal certainty for pore space ownership.
- Ensure a streamlined permitting process for carbon capture and storage facilities.
- Provide access to CO_2 storage capacity owned or controlled by governments.
- Allow for trading of high-quality offsets generated from carbon capture and storage and low-carbon projects.

ExxonMobil is actively engaging stakeholders and potential partners on these policy enablers that can unlock Low Carbon Solutions business opportunities and contribute to a lower-emission future.

TRANSPORTATION

A holistic Low Carbon Transport policy that combines a market-based, technology-neutral fuel standard with a life-cycle vehicle CO_2 emission standard could drive emission reductions across the entire vehicle fleet.

ExxonMobil advocates for a carbon intensity-based fuel standard approach that can also be extended to the harder-to-decarbonize aviation and marine sectors. The Company was a lead participant in developing the American Petroleum Institute's policy framework that includes an action plan to reduce life-cycle emissions in the U.S. transportation sector.

POWER GENERATION

A technology-neutral clean energy standard, or carbon intensity standard, could reduce CO_2 emissions in the electricity sector by setting targets based on carbon intensity and incentivizing necessary infrastructure and lower-emission options, including natural gas, renewables, carbon capture and storage and negative-emission technologies such as bioenergy with CCS, and direct air capture.

ExxonMobil participated in the U.S. Chamber of Commerce's development of policy principles to underpin a U.S. clean energy standard for the electricity sector. The Company continues to support engagement with the U.S. government on this issue.

As part of its participation in policy discussions, ExxonMobil engages through trade associations and industry collaboration efforts, including the Oil & Gas Climate Initiative. The Company uses various communications channels, including this report, press releases, exxonmobil.com and the Exxchange advocacy portal to clearly and transparently articulate ExxonMobil's climate-related policy positions. These positions inform and provide the basis for the Company's lobbying and advocacy efforts.

Houston CCS Hub

ExxonMobil and 13 other companies have expressed interest in deploying large-scale carbon capture and storage technology near Houston, one of the nation's most concentrated sources of industrial CO_2 emissions[45]. The carbon capture and storage hub could remove 100 million metric tons of CO_2 emissions every year from power plants, refineries and petrochemical plants by 2040. The concept will require government policy that enhances tax credits to create greater incentives for broad technology deployment or a price on carbon to create a market incentive for capturing emissions.