

# Emission-reduction plans and progress

## Progress toward net zero by 2050

With advancements in technology and the support of clear and consistent government policies, we aim to achieve net-zero Scope 1 and 2 greenhouse gas emissions in our operated assets by 2050.

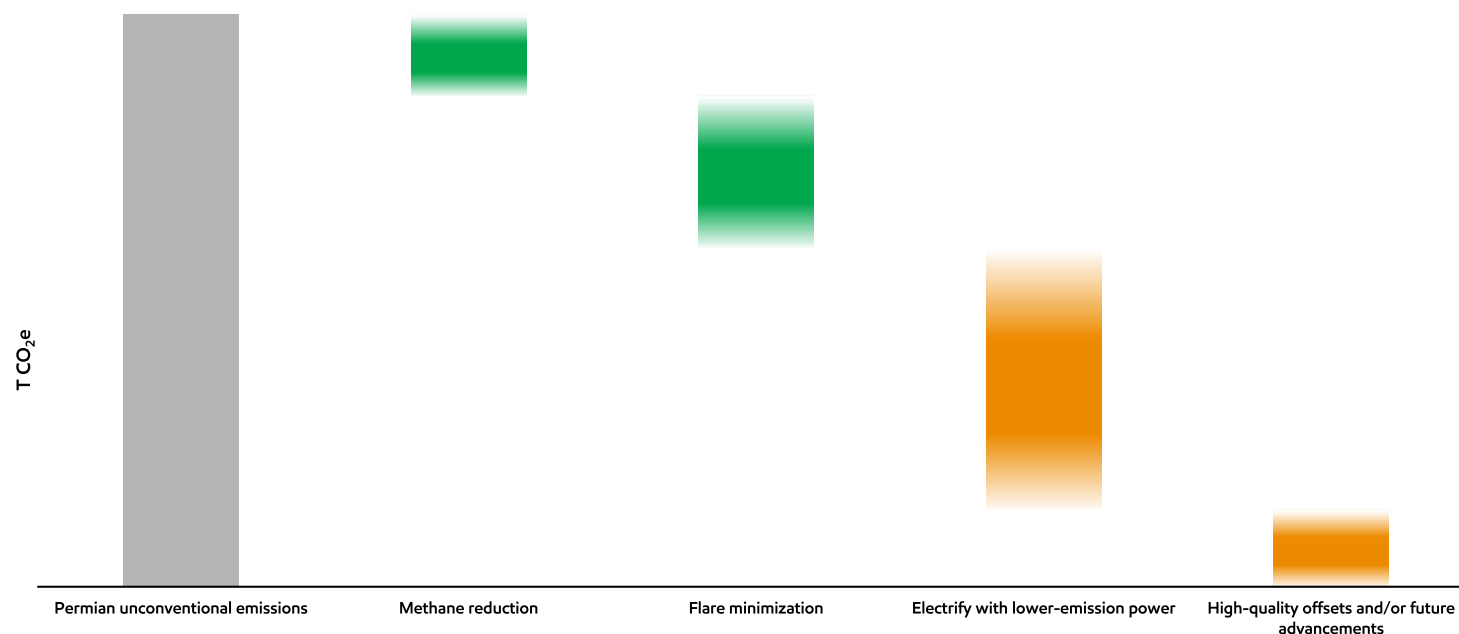
Our net-zero ambition is backed by a comprehensive approach centered on detailed emission-reduction roadmaps. We completed these roadmaps in 2022 and continue to update them to reflect technology and policy, and to account for the many potential pathways and the pace of the energy transition.

We are using this approach in our Permian Basin unconventional operations, where we are on track to achieve our industry-leading plans to reach net-zero Scope 1 and 2 emissions by 2030.

Our progress on the roadmap includes:

- Electrifying operations: Our first 23 electrical compressors are online and we deployed an electric frac unit in 2023.
- Lower-carbon power: In 2023, we signed long-term agreements to enable over 475 megawatts of wind capacity for our assets in Texas and New Mexico. We also conducted behind-the-meter solar evaluation.
- Upgrading equipment: We have replaced all the pneumatic devices in our Permian unconventional operations, more than 6,000 in total.
- Deploying technology: We further expanded our methane detection and mitigation technology, eliminated routine flaring, and upgraded equipment.

## Potential GHG abatement options for ExxonMobil Permian unconventional operated assets supporting 2030 net-zero plan<sup>1</sup>



### 2030 greenhouse gas emission-reduction plans<sup>2</sup>

We are working to continuously improve our performance, methods to detect and address methane emissions, and our measurement of emissions, with the aim to lower our emissions in support of our greenhouse gas emissions plans.

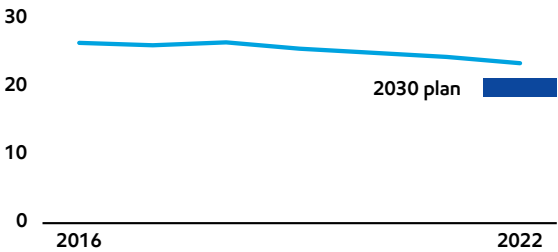
Our 2030 plans are expected to result in a 20%-30% reduction in corporate-wide greenhouse gas intensity, including reductions of 40%-50% in upstream intensity, 70%-80% in corporate-wide methane intensity and 60%-70% in corporate-wide flaring intensity. These plans apply to Scope 1 and 2 greenhouse gas emissions from our operated assets versus 2016 levels.

Our actions to reduce emissions through 2030 include:

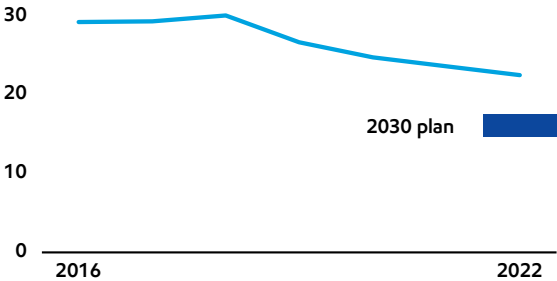
- Achieving net-zero Scope 1 and 2 greenhouse gas emissions in our Permian Basin unconventional operated assets.
- Deploying carbon capture and storage, hydrogen, and lower-emission fuels in our operations.
- Further reducing methane emissions at operated assets in alignment with the [Global Methane Pledge](#) and the [Aiming for Zero Methane Emissions Initiative](#) developed by the Oil and Gas Climate Initiative. To do this, we're deploying best practices and advanced technologies, including satellite, aerial, and ground-sensor networks.
- Further reducing flaring in upstream operations to meet the World Bank Zero Routine Flaring Initiative, which mitigates methane and greenhouse gas emissions.
- Integrating energy sources with lower emissions into our facilities, for example through long-term renewable power purchase agreements and equipment electrification.
- Improving energy efficiency in our businesses by adapting operational and maintenance processes, such as improving furnace performance.
- Substituting blue hydrogen for natural gas to reduce emissions from our manufacturing operations.
- Deploying innovative solutions to further reduce greenhouse gas emissions with future advancements in technology and supportive policies.

## Progress toward 2030 greenhouse gas emission-reduction plans<sup>3,4</sup>

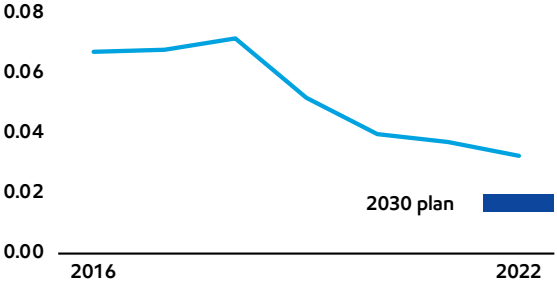
**Corporate-wide operated GHG emissions intensity**  
(T CO<sub>2</sub>e/100 T)  
2022 year-end actual



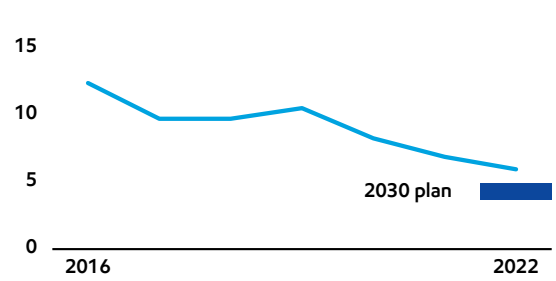
**Upstream operated GHG emissions intensity**  
(T CO<sub>2</sub>e/100 T)  
2022 year-end actual



**Corporate-wide operated methane emissions intensity**  
(T CH<sub>4</sub>/100 T)  
2022 year-end actual



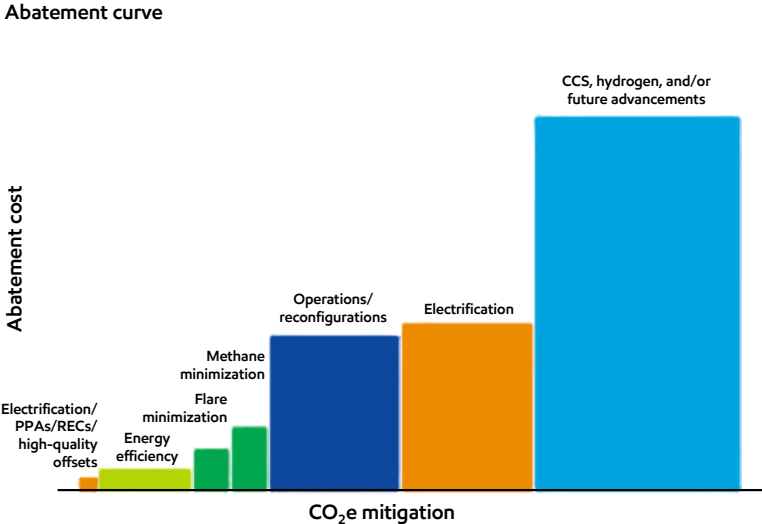
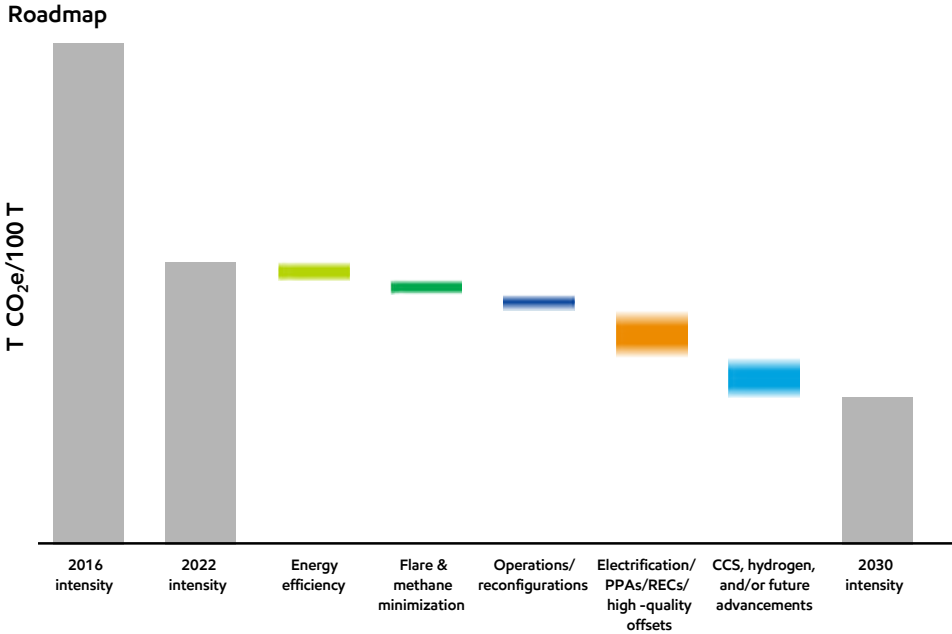
**Corporate-wide operated hydrocarbon flaring intensity**  
(m<sup>3</sup>/T)  
2022 year-end actual



## Approach to greenhouse gas emissions reductions in business planning

We incorporate actions needed to advance our 2030 emission-reduction objectives into our medium-term business plans, which we update annually. The reference case for planning beyond 2030, including impairment assessments and future planned development activities, is based on our [Global Outlook](#). The Outlook considers the existing global policy environment, announced policy changes, technology advances, consumer preferences and the historical precedents for each of these areas. It does not attempt to project the degree of future policy, technology advancement, or deployment necessary for the world or ExxonMobil to meet net zero by 2050. As additional policies are implemented and technology advances beyond our estimates, we incorporate those changes into the Outlook and update our business plans accordingly as part of our annual planning cycle.

# Potential GHG abatement options for ExxonMobil operated assets supporting 2030 GHG emission-reduction plans<sup>5</sup>



Higher-cost options reflects the need for additional policy and continued advocacy.

## Footnotes

1. These charts illustrate potential greenhouse gas abatement options for Scope 1 and 2 greenhouse gas emissions. These options are not all-inclusive and are subject to change as a result of a number of factors, including abatement reduction magnitude, implementation timing, abatement cost, portfolio changes, policy developments, technology advancements, and as annual company plans are updated. Includes energy attribute certificates, such as renewable energy certificates (RECs) and guarantees of origin (GOOs).
2. ExxonMobil's 2030 GHG emission reduction plans, <https://corporate.exxonmobil.com/news/news-releases/2021/1201-exxonmobil-announces-plans-to-2027-doubling-earnings-and-cash-flow-potential-reducing-emissions>.
3. Ibid.
4. Based on Scope 1 and 2 emissions of ExxonMobil operated assets through 2022 (versus 2016). ExxonMobil's reported emissions, reductions, and avoidance performance data are based on a combination of measured and estimated emissions data using reasonable efforts and collection methods. Calculations are based on industry standards and best practices, including guidance from the American Petroleum Institute (API) and Ipieca. There is uncertainty associated with the emissions, reductions, and avoidance performance data due to variation in the processes and operations, the availability of sufficient data, quality of those data, and methodology used for measurement and estimation. Performance data may include rounding. Changes to the performance data may be reported as part of the company's annual publications as new or updated data and/or emission methodologies become available. We are working to continuously improve our performance and methods to detect, measure and address greenhouse gas emissions. ExxonMobil works with industry, including API and Ipieca, to improve emission factors and methodologies, including measurements, and estimates.
5. These charts illustrate potential greenhouse gas abatement options for Scope 1 and 2 greenhouse gas emissions. These options are not all-inclusive and are subject to change as a result of a number of factors, including abatement reduction magnitude, implementation timing, abatement cost, portfolio changes, policy developments, technology advancements, and as annual company plans are updated. Includes energy attribute certificates, such as renewable energy certificates (RECs) and guarantees of origin (GOOs).