
# Low Carbon Solutions Spotlight

04.04.23 | VIDEO WEBCAST

Clinton, New Jersey
Carbon capture and storage research

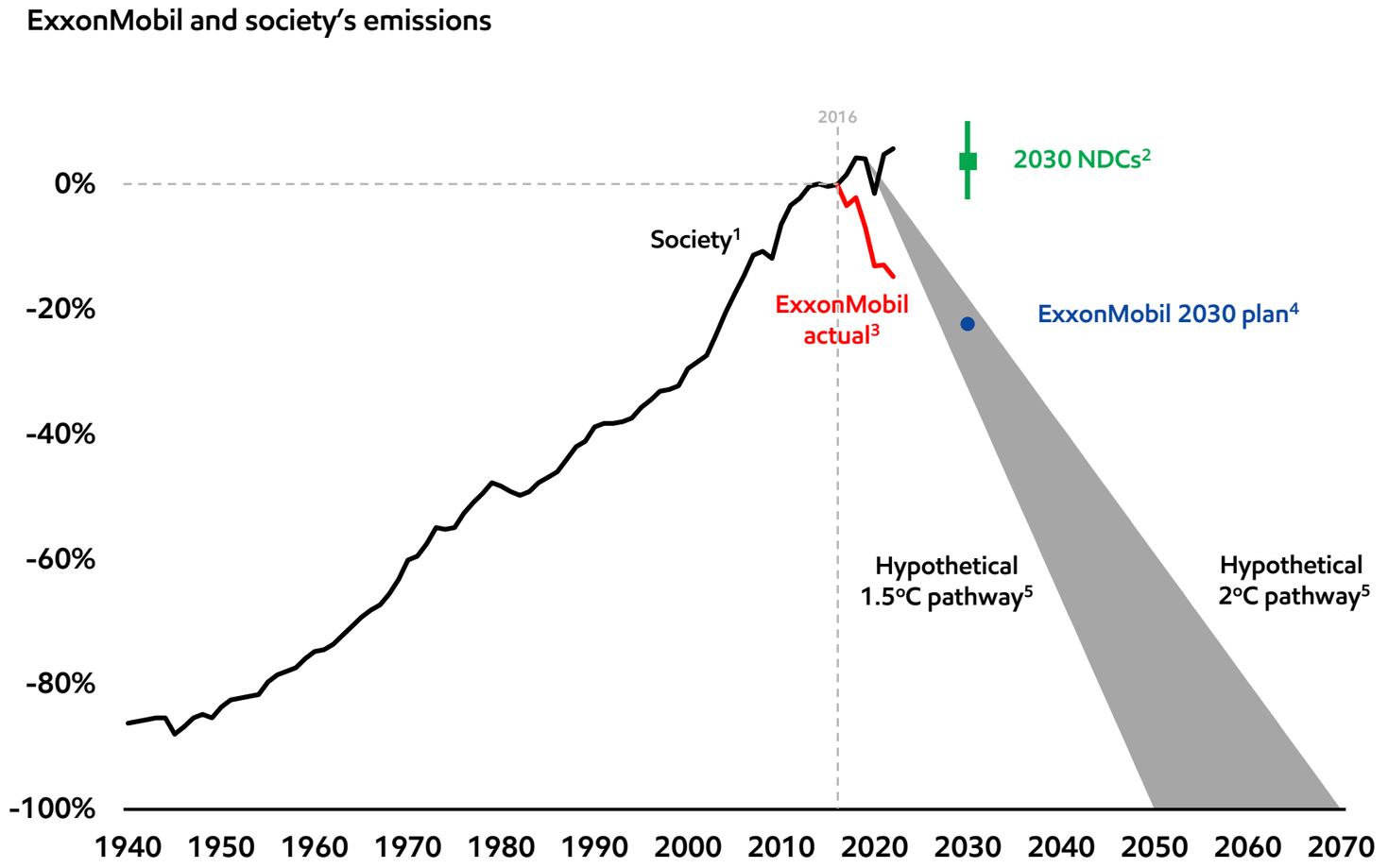
# Cautionary Statement

CAUTIONARY STATEMENT RELEVANT TO FORWARD-LOOKING INFORMATION FOR THE PURPOSE OF THE "SAFE HARBOR" PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995. Statements of future ambitions, aims, events or supporting conditions in this presentation, including projections, plans to reduce third party emissions and ExxonMobil's emissions intensity, expectations, estimates, the development of future technologies, and opportunity pipelines, are forward-looking statements. Similarly, emission-reduction roadmaps to drive toward net zero are dependent on future market factors, such as continued technological progress and policy support, including permitting, and represent forward-looking statements. Actual future results, including the achievement of ambitions to reach Scope 1 and 2 net zero from operated assets by 2050, to reach Scope 1 and 2 net zero in Upstream Permian Basin unconventional operated assets by 2030, to eliminate routine flaring in-line with World Bank Zero Routine Flaring, to reach near zero methane emissions from operated assets, to meet greenhouse gas emission-reduction plans or goals, divestment and start-up plans, and associated project plans; technology efforts such as timing and outcome of projects to capture and store $CO_2$, produce biofuels, and integrate hydrogen projects; revenues from the Low Carbon Solutions (LCS) business; LCS market growth; the size of the addressable LCS markets; and reserve or resource changes could vary depending on the ability to execute operational objectives on a timely and successful basis; policy and consumer support for emission-reduction products and technology; changes in laws and regulations including international treaties and laws and regulations regarding greenhouse gas emissions, carbon costs, and the ability to repurpose existing infrastructure and store $CO_2$; government incentives; trade patterns and the development and enforcement of local, national, and regional mandates; unforeseen technical or operational difficulties; the outcome of research efforts and future technology developments, including the ability to scale projects, technologies, and markets on a commercially competitive basis; changes in supply and demand and other market factors affecting future prices of oil, gas, and petrochemical products; availability of feedstocks for biofuels; changes in the relative energy mix across activities and geographies; the actions of competitors; changes in regional and global economic growth rates and consumer preferences; changes in population growth, economic development or migration patterns; military build-ups or conflicts; and other factors discussed in this release and in Item 1A. "Risk Factors" in ExxonMobil's Annual Report on Form 10-K for 2022 and any subsequent Quarterly Reports on Forms 10-Q, as well as under the heading "Factors Affecting Future Results" on the Investors page of ExxonMobil's website at www.exxonmobil.com. We do not undertake to provide any updates or changes to any data or forward-looking statements in this document. Neither future distribution of this material nor the continued availability of this material in archive form on our website should be deemed to constitute an update or re-affirmation of these figures or statements as of any future date. Any future update will be provided only through a public disclosure indicating that fact.

Energy demand modeling aims to replicate system dynamics of the global energy system, requiring simplifications. The reference to any scenario, including any potential net zero scenario, does not imply ExxonMobil views any particular scenario as likely to occur. In addition, energy demand scenarios require assumptions on a variety of parameters. As such, the outcome of any given scenario using an energy demand model comes with a high degree of uncertainty. Third-party scenarios discussed in this presentation reflect the modeling assumptions and outputs of their respective authors, not ExxonMobil, and their use or inclusion herein is not an endorsement by ExxonMobil of their underlying assumptions, likelihood or probability. Investment decisions are made on the basis of ExxonMobil's separate planning process. References to projects or opportunities may not reflect investment decisions made by the corporation or its affiliates. Individual projects or opportunities may advance based on a number of factors, including availability of supportive policy, technology for cost-effective abatement, company planning process, and alignment with our partners and other stakeholders. Capital investment guidance in lower-emissions investments is based on plan; however, actual investment levels will be subject to the availability of the opportunity set and focused on returns.

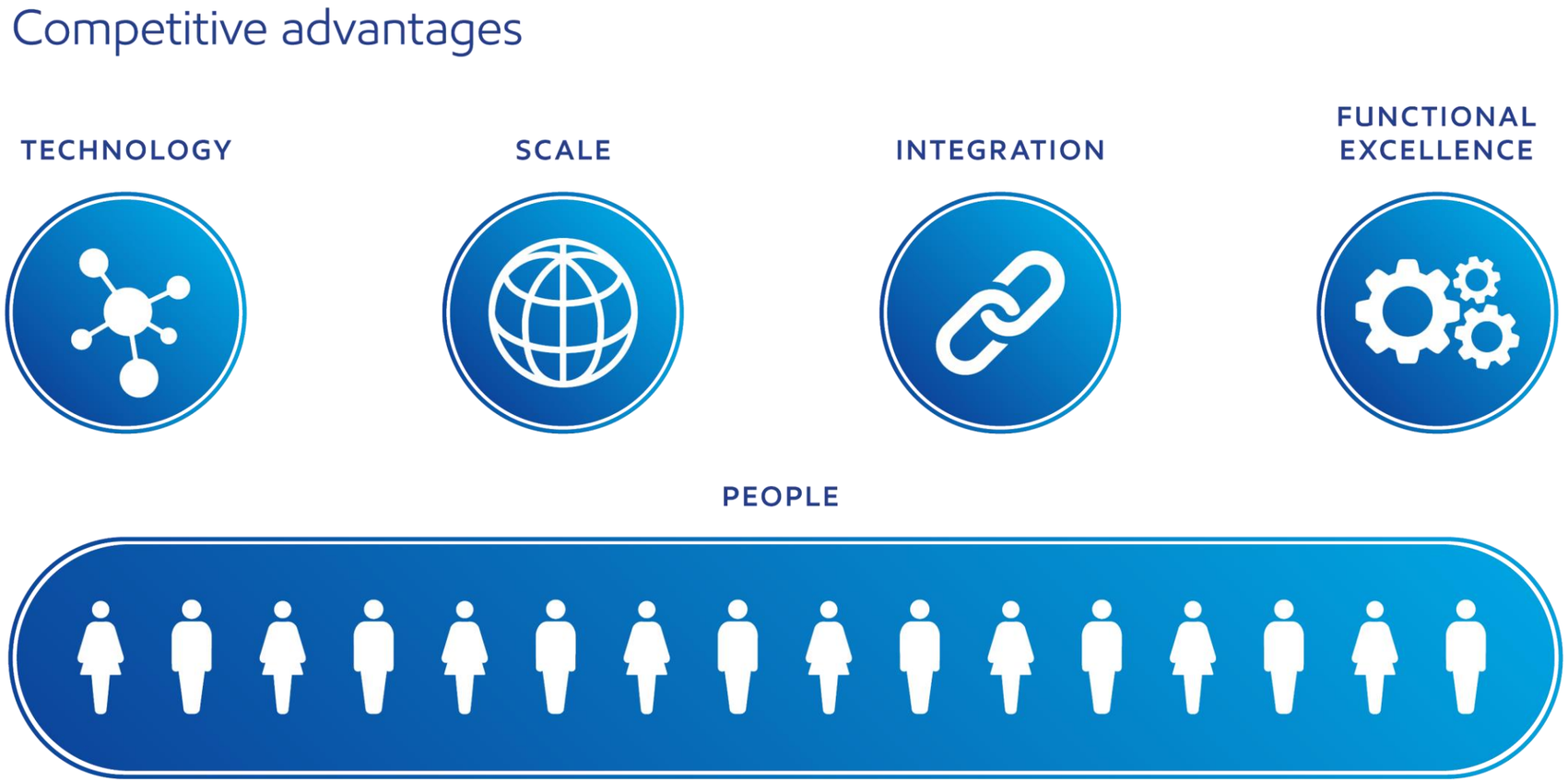
ExxonMobil reported emissions, including reductions and avoidance performance data, are based on a combination of measured and estimated data. Calculations are based on industry standards and best practices, including guidance from the American Petroleum Institute (API) and Ipieca. Emissions reported are estimates only, and performance data depends on variations in processes and operations, the availability of sufficient data, the quality of those data and methodology used for measurement and estimation. Emissions data is subject to change as methods, data quality, and technology improvements occur, and changes to performance data may be updated. Emissions reductions and avoidance estimates for non-ExxonMobil operated facilities are included in the equity data and similarly may be updated as changes in the performance data are reported. ExxonMobil's plans to reduce emissions are good-faith efforts based on current relevant data and methodology, which could be changed or refined. ExxonMobil works to continuously improve its approach to identifying, measuring and addressing emissions. ExxonMobil actively engages with industry, including API and Ipieca, to improve emission factors and methodologies, including measurements and estimates.

# Reaching net zero requires problem solving at immense scale




See Supplemental Information for footnotes.

# Unique combination of current competitive advantages crucial to Low Carbon Solutions



# Significant progress reducing our own emissions

**>10%**
reduction in operated greenhouse gas emissions intensity versus 2016[1]

**100%**
elimination of routine flaring in Permian Basin operated assets[2]

**>50%**
reduction in operated methane intensity since 2016[1]

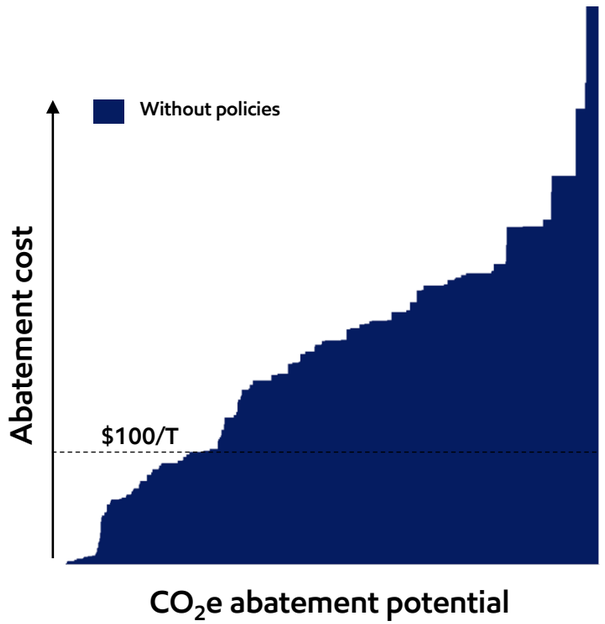
**20-30%**
reduction in operated greenhouse gas emissions intensity by 2030 versus 2016[3]

See Supplemental Information for footnotes.

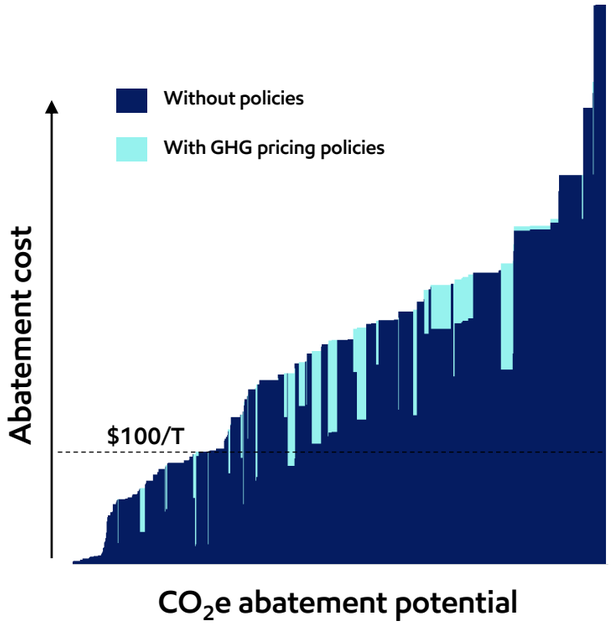
# Constructive policy critical to lowering emissions

**Potential greenhouse gas abatement options based on ExxonMobil emissions-reduction roadmaps supporting our net-zero ambitions[1]**

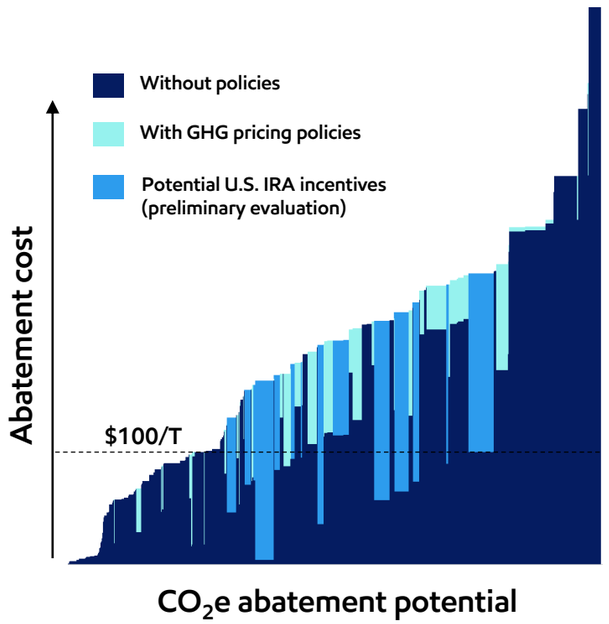
**Without policies**




**With current global policies**




**With current global policies and potential U.S. IRA incentives[2]**




See Supplemental Information for footnotes.

# Investing to reduce our own and others' emissions

~$17 billion

in lower-emission investments from 2022 to 2027

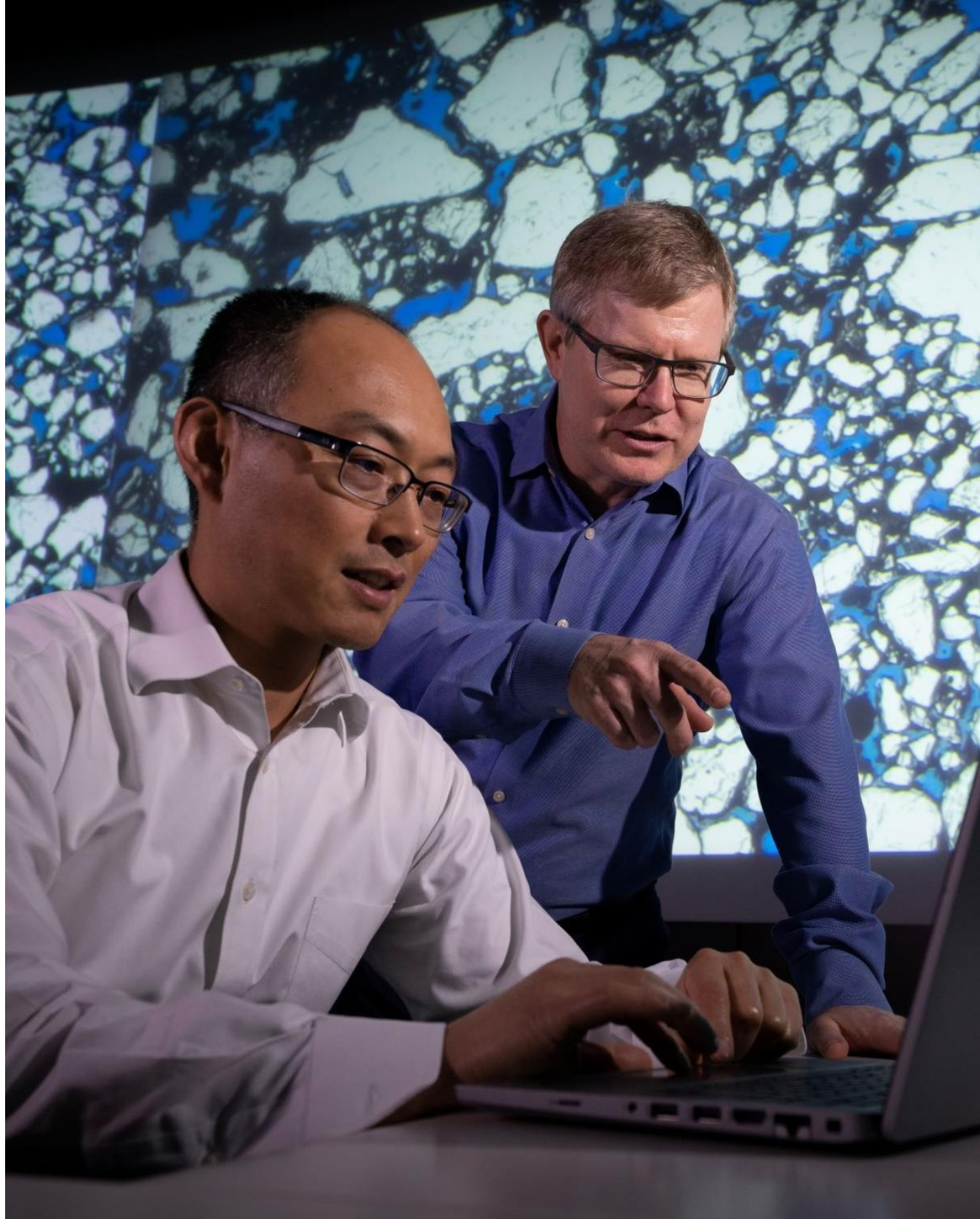
~60% of total focused on reducing our own emissions

~40% focused on reducing others' emissions

# Low Carbon Solutions

Accelerating the world's path to net zero ***AND*** building a compelling new business

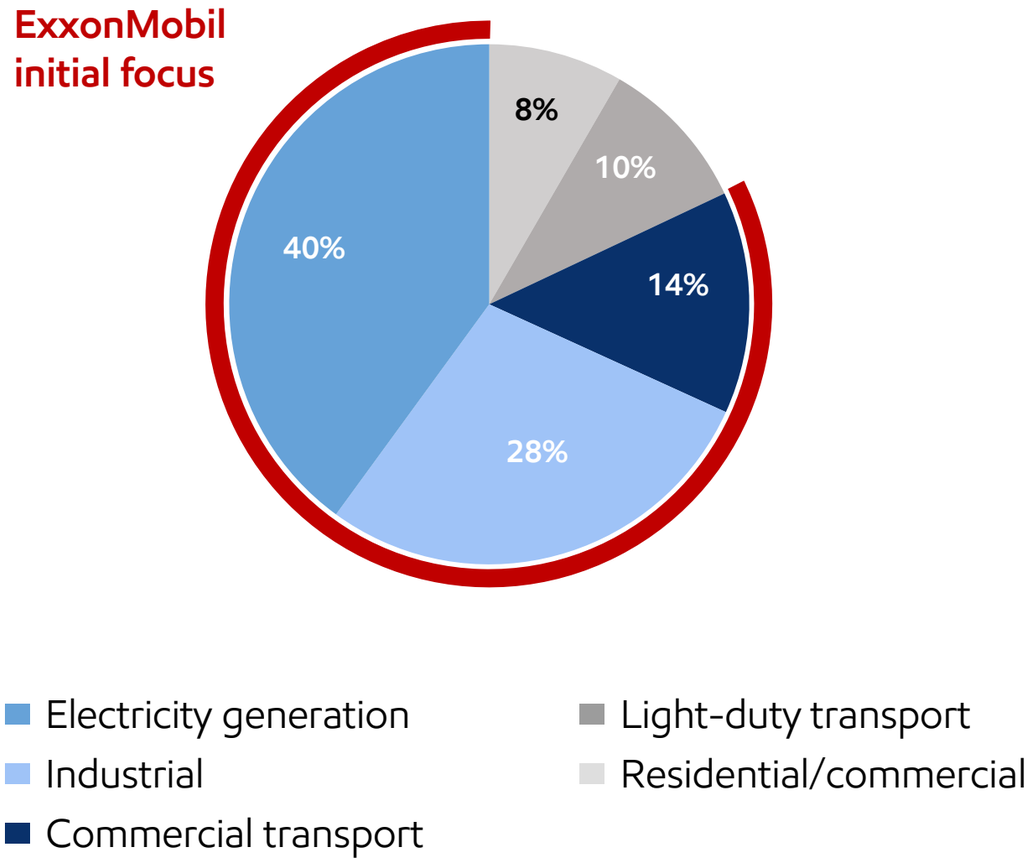
ExxonMobil



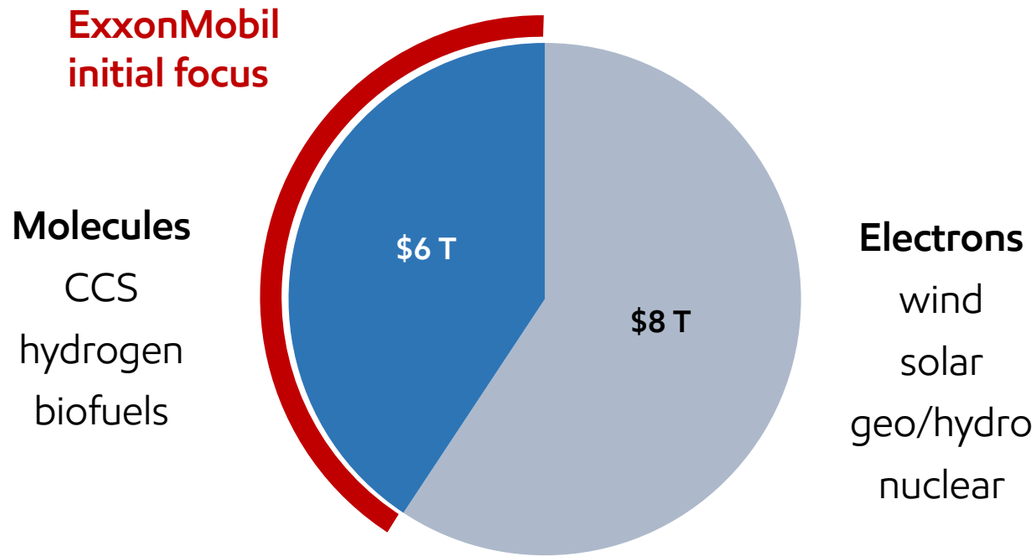
# Advantaged in a very large addressable market

**Energy-related $CO_2$ emissions by sector, 2021[1]**

33 billion metric tons




**Potential size of low-carbon markets, 2050[2]**




See Supplemental Information for footnotes.

# Unlocking the opportunity

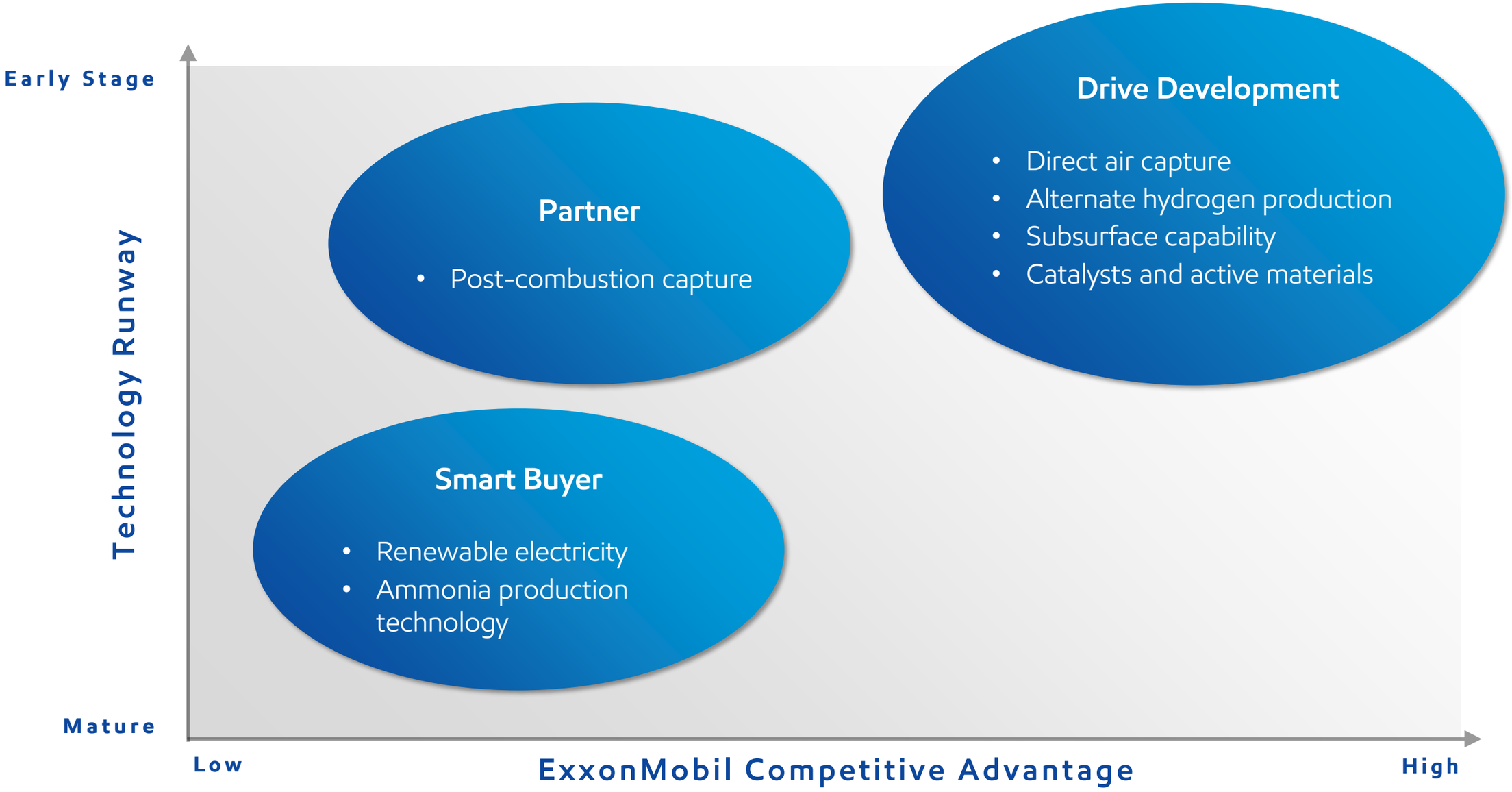

See Supplemental Information for footnotes.

# Positioning Low Carbon Solutions for exponential growth

| Illustrative Growth Phase[1] | | 0 → 1 | 1 → 10 | 10 → 100 |
|---|---|---|---|---|
| **Indicative timeframe** | | First ~5 years | Years ~5+ | Years ~10+ |
| **ExxonMobil activity focus** | | Foundational projects<br>Current technology deployment<br>New technology programs | Scale ~10x<br>Current technology scaling<br>New technology deployment | Scale another ~10x<br>New technology scaling<br>Carbon negative prominent |
| **Societal emissions trajectory** | | Current | Potential emissions peak | Declining to net zero |
| **Supporting conditions:** | **Carbon "price" and policy** | Current | 1-2x current | 2-3x current |
| | **Technology breakthroughs** | Current | 10-20% lower abatement cost | 30-70% lower abatement cost |
| | **Infrastructure** | Current | Some repurposing | Large scale, new, and repurposed |
| **Total addressable market (TAM)** | | $B x 10s | $B x 100s | $Ts |
| **ExxonMobil Low Carbon Solutions revenue potential** | | $Bs | $B x 10s | $B x 100s |

See Supplemental Information for footnotes.

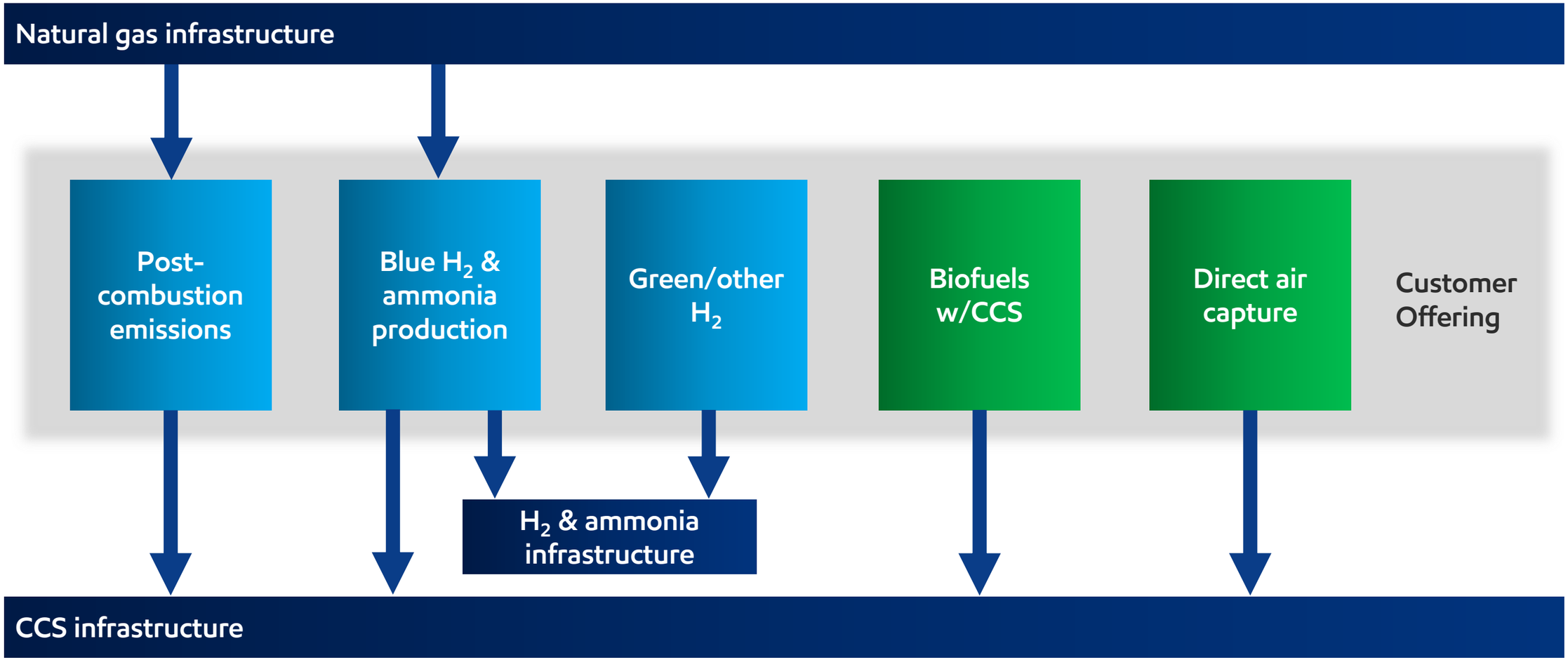
# Expanding our advantage through technology



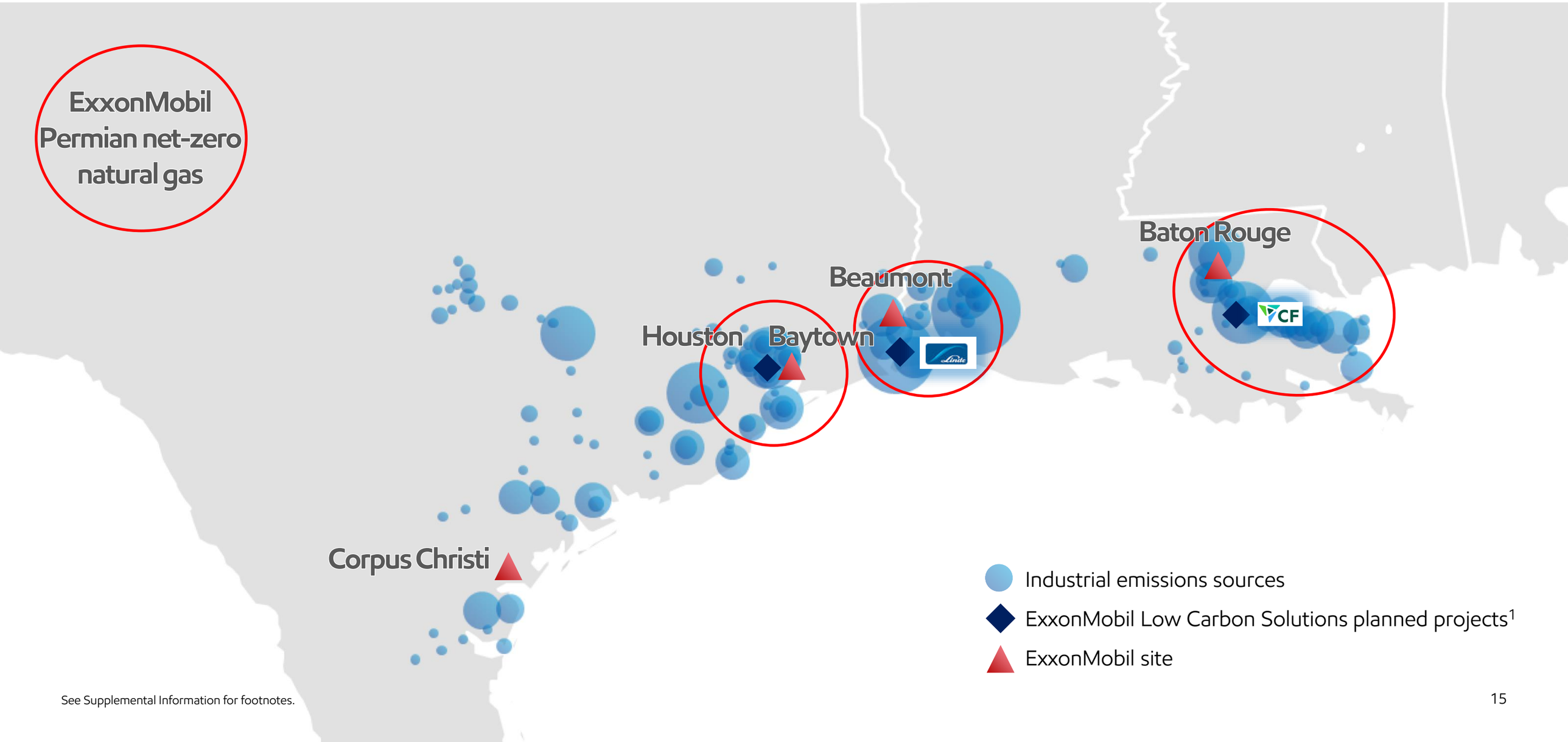
# Expanding our advantage through project execution


Module Delivery, ExxonMobil Corpus Christi Chemical Complex, Texas

# Expanding our advantage through integrated value chains



# Building integrated value chains on the U.S. Gulf Coast




See Supplemental Information for footnotes.

# World's largest low-carbon hydrogen facility at Baytown, Texas

ExxonMobil Baytown Complex, Texas

# First-of-its-kind CCS project in Louisiana

CF Industries Donaldsonville, Louisiana Complex

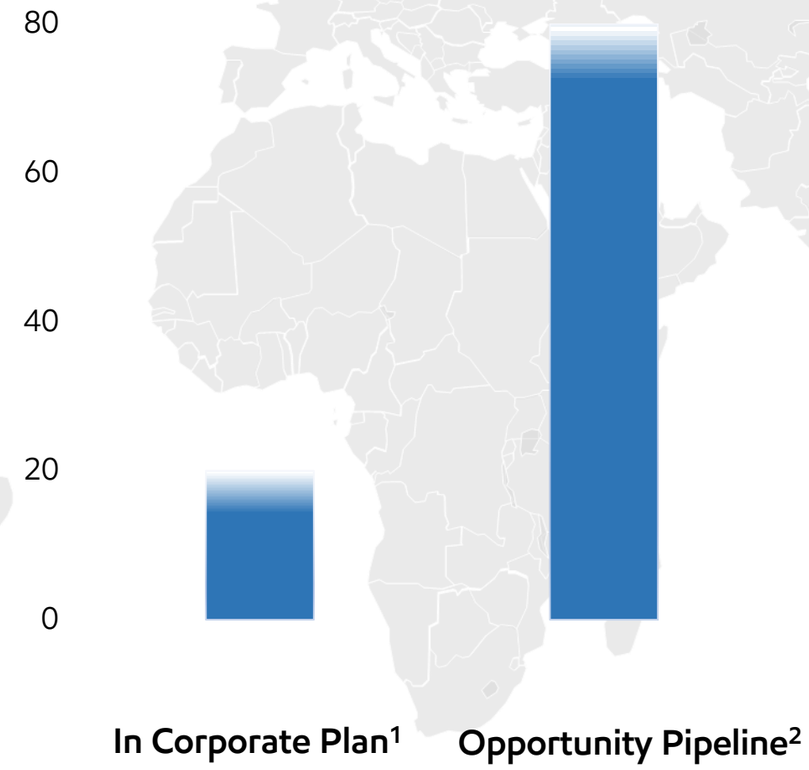
# Large-scale renewable diesel in Strathcona

ExxonMobil Strathcona Refinery, Alberta, Canada

# Growing global pipeline of attractive opportunities

**Low Carbon Solutions potential customer emissions impact**

**MTA $CO_2e$**




See Supplemental Information for footnotes.

# Targeting advantaged, high-growth business model

## Advantaged

ExxonMobil technology, scale, and expertise

One-stop shop

## High growth

Rapidly expanding market

Early mover advantage

## Stable

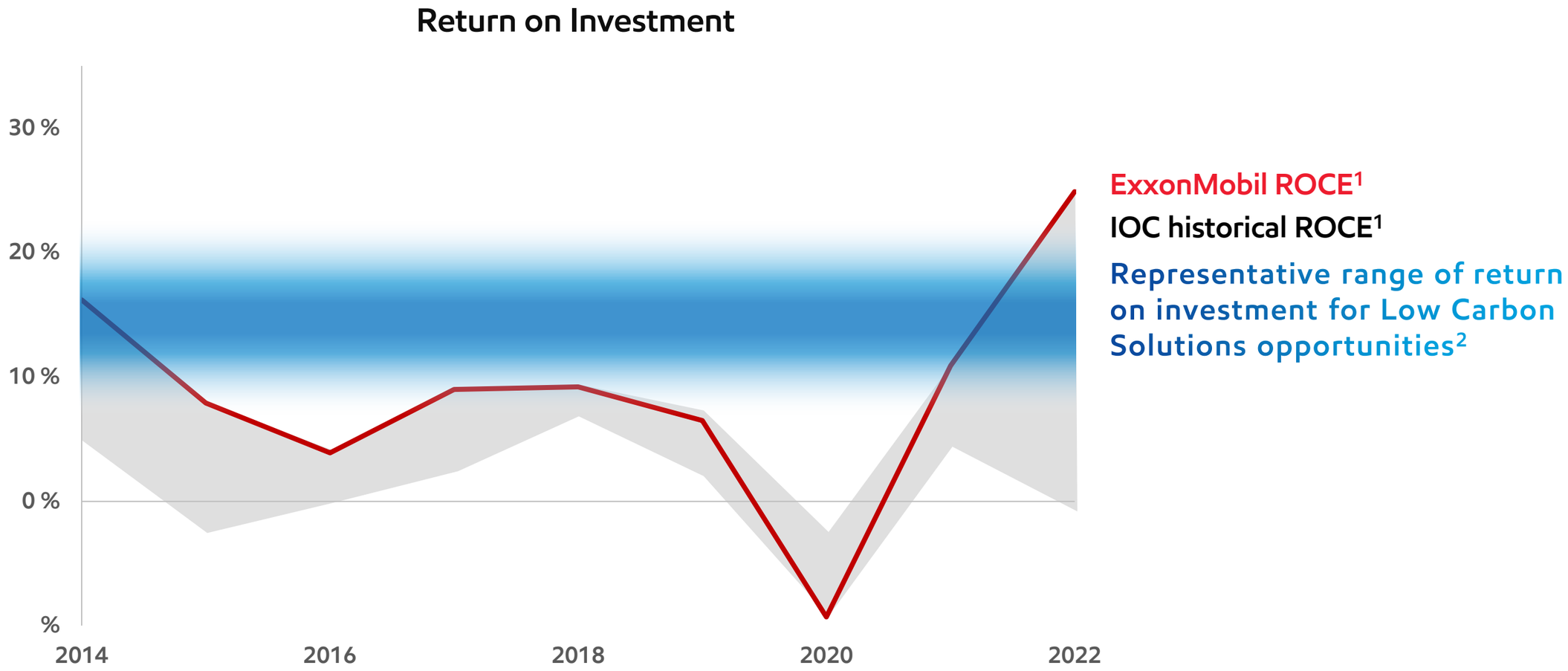
Long-term contracts

Less cyclical

## Robust

Strong double-digit returns

# Targeting strong portfolio returns

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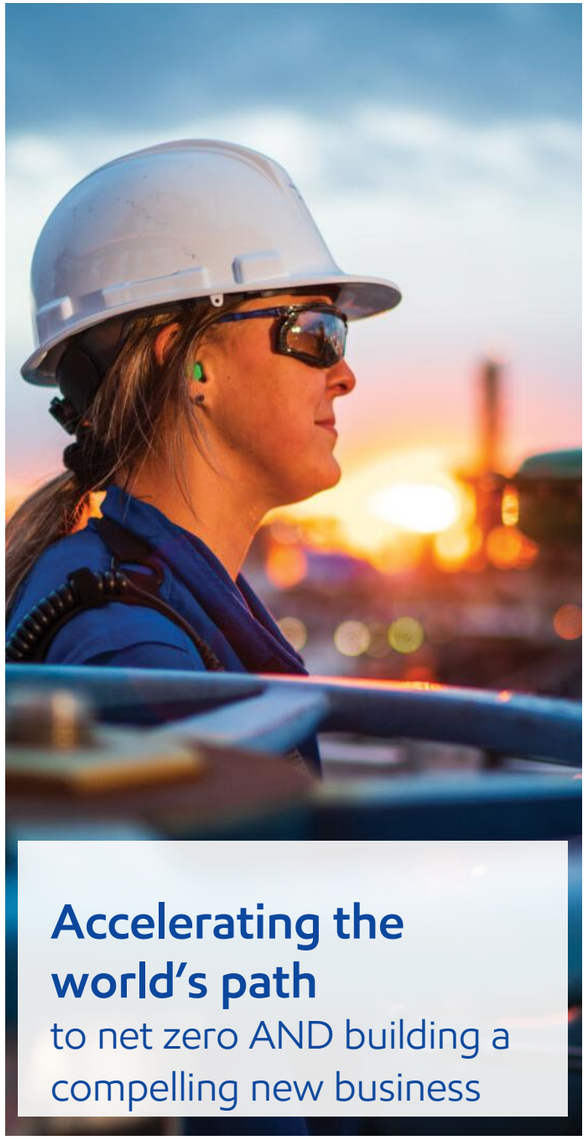
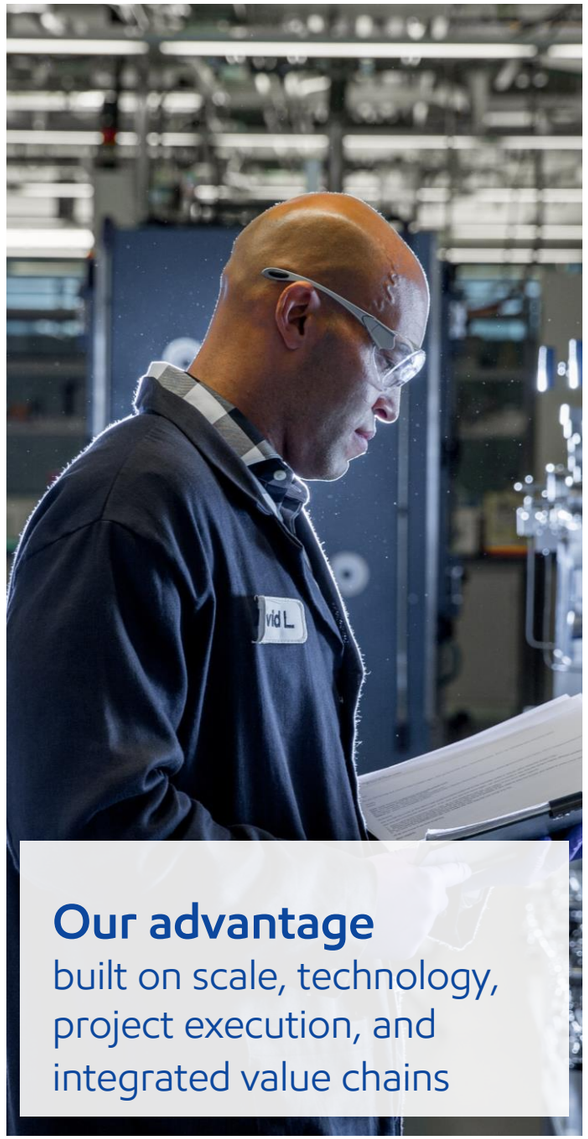
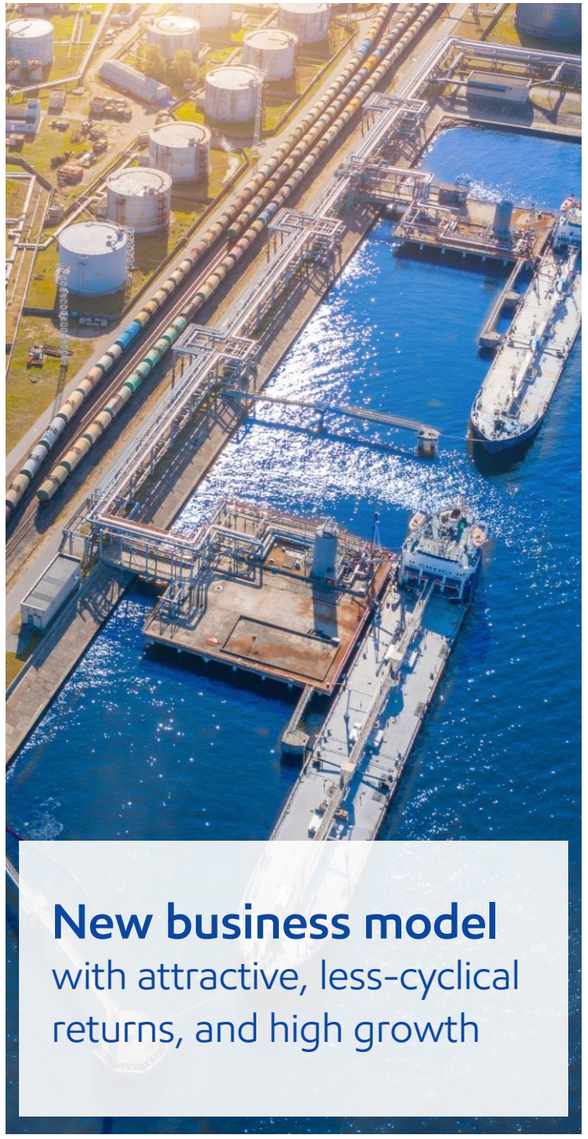
# Key takeaways



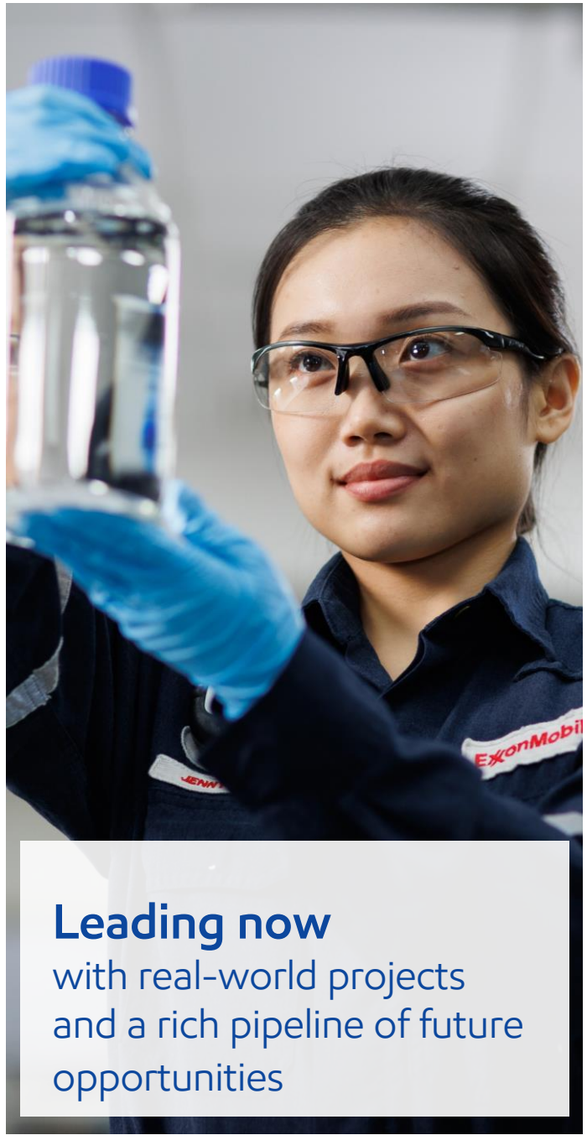
**Accelerating the world's path**
to net zero AND building a compelling new business



**Our advantage**
built on scale, technology, project execution, and integrated value chains



**New business model**
with attractive, less-cyclical returns, and high growth




**Leading now**
with real-world projects and a rich pipeline of future opportunities


ExxonMobil
Q&A

# Supplemental Information

**Slide #3 / Reaching net zero requires problem solving at immense scale**

1. 1940-2022 global society $CO_2$ emissions estimates based on data from IEA $CO_2$ Emissions in 2022 Report; includes energy-related combustion and industrial process $CO_2$ emissions.
2. Projected 2030 global society GHG emissions based on latest announced Nationally Determined Contributions, as per UNFCCC 2022 Synthesis Report and ExxonMobil analysis. Land use, land-use change and forestry excluded.
3. ExxonMobil Scope 1 and 2 greenhouse gas emission estimates from operated assets compared to 2016 levels.
4. ExxonMobil 2030 GHG emission-reduction plans are intensity-based and for Scope 1 and 2 greenhouse gas emissions from operated assets compared to 2016 levels. These plans include actions that are also expected to achieve absolute reduction in corporate-wide greenhouse gas emissions by approximately 20%, compared to 2016 levels. See https://corporate.exxonmobil.com/news/newsroom/news-releases/2021/1201_exxonmobil-announces-plans-to-2027-doubling-earnings-and-cash-flow-potential-reducing-emissions
5. The IPCC Global Warming of 1.5°C special report states that in model pathways with no or limited overshoot of 1.5°C, global net anthropogenic $CO_2$ emissions reach net zero around 2050, and for limiting global warming to below 2°C (with at least 67% probability of likelihood) $CO_2$ emissions are projected to reach net zero around 2070. The Hypothetical 1.5°C Pathway and Hypothetical 2°C Pathway are derived from the 2050 and 2070 net zero end points, respectively, using a linear relationship from societal greenhouse gas emissions in 2019 as the starting point. ExxonMobil uses the Hypothetical 1.5°C and 2°C pathways to illustrate the company's expected operated Scope 1 and 2 emissions performance relative to the Paris Agreement goal of limiting global temperature increase to well below 2 degrees Celsius and the pursuit of limiting the increase to 1.5 degrees. (Article 2, Paris Agreement). Emission figures for future years are hypothetical, and are subject to change. ExxonMobil analysis.

**Slide #5 / Significant progress reducing our own emissions**

1. ExxonMobil Scope 1 and 2 greenhouse gas emission estimates from operated assets (2022, compared to 2016 levels); we are working to continuously improve our performance and methods to detect, measure and address greenhouse gas emissions.
2. References to routine flaring herein are consistent with the World Bank's Zero Routine Flaring Initiative/Global Gas Flaring Reduction Partnership's (GGFRP) principle of routine flaring, and excludes safety and non-routine flaring. 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.
3. ExxonMobil's 2030 GHG emission-reduction plans, based on Scope 1 and 2 emissions of ExxonMobil operated assets compared to 2016 levels, https://corporate.exxonmobil.com/News/Newsroom/News-releases/2021/1201_ExxonMobil-announces-plans-to-2027-doubling-earnings-and-cash-flow-potential-reducing-emissions.

**Slide #6 / Constructive policy critical to lowering emissions**

1. With advances in technology and the support of clear and consistent government policies, we aim to achieve net-zero operated Scope 1 and 2 greenhouse gas emissions by 2050. We have also set a goal to be net zero in Scope 1 and 2 greenhouse gas emissions by 2030 for our Permian Basin unconventional operated assets.

   Charts illustrate potential GHG abatement options for Scope 1 and 2 greenhouse gas emissions, based on current roadmaps for major operated assets and ExxonMobil analysis. These options are not all-inclusive, may not reflect investment decisions made by the company, 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 advancement, alignment with our partners and other stakeholders, and as annual company plans are updated.

2. Based on preliminary ExxonMobil analysis of U.S. IRA provisions. All assumptions and interpretations of U.S. IRA incentives are subject to change. IRS has yet to publish guidance and regulations to implement the U.S. IRA 45V.

# Supplemental Information

**Slide #9 / Advantaged in very large addressable market**

1. ExxonMobil 2022 Outlook for Energy Outlook for Energy | ExxonMobil
2. Total addressable market based on ExxonMobil analysis of the IPCC's Sixth Assessment Report Scenarios Database hosted by IIASA for carbon capture and storage, wind, solar, hydrogen, nuclear, biofuels, geothermal and hydropower. Secondary energy demand and prices in 2050 in the Lower 2°C scenarios (Category C3) were used, where available, to calculate an estimate of potential market revenue. Carbon capture and storage estimate includes both CCS and Direct Air Capture and used price of carbon for pricing estimate. Biofuels estimate used liquids pricing for pricing estimate. 2020 dollars.

**Slide #10 / Unlocking the opportunity**

1. Total Addressable Market refers to the total revenue potential of low carbon markets as defined on Slide #9.

**Slide #11 / Positioning Low Carbon Solutions for exponential growth**

1. Illustrative Growth Phases are hypothetical and do not represent a forecast of future performance or conditions (e.g., revenues and / or market share). Societal emissions trajectory does not represent a specific emissions scenario or group of scenario projections. Exponential growth potentially occurs, assuming carbon "price" materializes at stipulated levels, government policies are implemented that support development and deployment of necessary technologies, technology breakthroughs enable lower abatement costs, and infrastructure is repurposed and built at large scales. Actual conditions may vary widely across the world. References to total addressable market conditions include ExxonMobil's initial areas of focus, as defined on Slide #9 (carbon capture and storage, hydrogen, second generation biofuels). Potential revenue assumes double-digit returns and scale of business activity materializes consistent with supporting conditions.

**Slide #15 / Building integrated value chains on the U.S. Gulf Coast**

1. References in this slide to "ExxonMobil Permian net zero natural gas" means natural gas expected to be produced with net zero Scope 1 and 2 GHG emissions from ExxonMobil operated unconventional facilities in the Permian Basin, and used at ExxonMobil's facilities in the U.S. Gulf Coast. Slide reflects potential opportunities as of March 28, 2023. May not reflect all potential opportunities or final investment decisions made by the company. Individual opportunities may advance based on a number of factors, including availability of supportive policy, technology for cost-effective abatement, and alignment with our partners and other stakeholders. Project viability and returns may vary. The company may refer to these opportunities as projects in this presentation or external disclosures at various stages throughout their progression.

**Slide #19 / Growing global pipeline of attractive opportunities**

1. Estimated $CO_2$ emissions reductions based on the potential implementation of Low Carbon Solutions' projects or opportunities that are part of ExxonMobil's 2022 company plans. Such projects or opportunities are at various stages of maturity. Individual projects or opportunities may advance to a final investment decision by the company based on a number of factors, including availability of supportive policy, technology for cost-effective abatement, and alignment with our partners and other stakeholders. Level of potential emissions abatement is illustrative in nature. Actual emissions abatement may differ.
2. Estimated $CO_2$ emissions reductions based on the potential implementation of Low Carbon Solutions' projects or opportunities that are not part of ExxonMobil's 2022 company plans. Individual projects or opportunities may advance based on a number of factors, including availability of supportive policy, technology for cost-effective abatement, and alignment with our partners and other stakeholders. Level of potential emissions abatement is illustrative in nature. Actual emissions abatement may differ.

**Slide #21 / Targeting strong portfolio returns**

1. IOC group includes ExxonMobil (XOM), TotalEnergies (TTE), Shell (SHEL), BP (BP), Chevron (CVX). Competitor data estimated on a consistent basis with ExxonMobil and based on public information. Return on Average Capital Employed (ROCE) for the Corporation is net income attributable to ExxonMobil excluding the after-tax cost of financing, divided by total corporate average capital employed. For this purpose, capital employed means the Corporation's net share of property, plant and equipment, and other assets less liabilities, excluding both short-term and long-term debt.
2. Estimate of potential range of return values for a representative hypothetical portfolio of Low Carbon Solutions opportunities.

# Darren W. Woods

Chairman and Chief Executive Officer

Darren Woods is a graduate of Texas A&M University, where he earned a Bachelor of Science degree in electrical engineering. He also holds a Master of Business Administration degree from Northwestern's Kellogg School of Management in Evanston, Illinois.

Mr. Woods joined Exxon Company International in 1992 as a planning analyst in Florham Park, New Jersey. He progressed through a number of domestic and international assignments for Exxon Company International, ExxonMobil Chemical Company, and ExxonMobil Refining and Supply Company.

In 2005, Mr. Woods was appointed vice president of ExxonMobil Chemical Company in Houston, Texas, where he managed global specialty-chemical businesses. In 2008, he was named ExxonMobil Refining and Supply Company's director of refining for Europe, Africa, and the Middle East, and was based in Brussels. In 2010, he was appointed vice president of supply and transportation, based in Fairfax, Virginia.

Mr. Woods was appointed president of ExxonMobil Refining and Supply Company and vice president of Exxon Mobil Corporation in 2012. In 2014, Mr. Woods was elected senior vice president of Exxon Mobil Corporation.

Effective January 1, 2016, Mr. Woods was elected president of Exxon Mobil Corporation and a member of the board of directors.

The ExxonMobil Board of Directors elected Mr. Woods as Chairman and Chief Executive Officer, effective January 1, 2017.

Mr. Woods is currently vice chairman of the National Petroleum Council, and he serves on the board of directors of the American Petroleum Institute and the board of trustees of the Center for Strategic and International Studies. He is also a member of the Business Roundtable, the Business Council, and the Texas A&M University Engineering Advisory Council.

# Kathryn A. Mikells

Senior Vice President and Chief Financial Officer

Kathryn A. "Kathy" Mikells joined Exxon Mobil Corporation in August 2021 as senior vice president and chief financial officer. As CFO, Ms. Mikells leads the company's finance functions, including treasury, tax, and audit as well as the company's strategic planning, global services, and investor relations functions.

Before coming to ExxonMobil, Ms. Mikells spent six years as chief financial officer for London-based Diageo, Plc.  At Diageo, the global beverage manufacturer and marketer, she led all traditional corporate finance functions and oversaw the company's supply chain and procurement, strategy and business development, and shared services and information technology departments before her departure in June 2021.

Ms. Mikells' career in finance spans several industries. After receiving a Bachelor of Science from the University of Illinois, Ms. Mikells began her career in 1987 at General Electric Company as an investment analyst. After leaving GE, she held finance leadership positions in banking, including the Canadian Imperial Bank of Commerce.

In 1994, after earning a Master of Business Administration in Finance from the University of Chicago, she began a 16-year career at United Airlines Holdings Incorporated, where she served in several corporate planning and financial roles before being appointed senior vice president and chief financial officer in 2008.

After her time with United, Ms. Mikells went on to serve as chief financial officer at ADT Incorporated and Xerox Holdings Corporation before joining Diageo in 2015.

Ms. Mikells serves on the board of Hartford Financial Services Group. She is a native of Chicago.

# Dan L. Ammann

President, Low Carbon Solutions

Dan Ammann is president, ExxonMobil Low Carbon Solutions. In this role, Dan is building a global business focused on developing and implementing at scale a portfolio of lower-emission energy solutions that will accelerate society's progress toward net zero. The company plans to invest approximately $17 billion in lower-emission energy solutions through 2027.

Dan joined ExxonMobil Low Carbon Solutions from Cruise, an autonomous vehicle company majority-owned by General Motors, where he was named CEO in 2018. From 2014 to 2018, he was president of General Motors, after serving as chief financial officer from 2011 to 2014. Dan started at General Motors in 2010 as treasurer, when he helped lead General Motors' initial public offering following the company's 2009 restructuring.

Dan began his career as an investment banker, starting at Credit Suisse First Boston in 1994, and moving to Morgan Stanley in 1999, where he was named a managing director in 2005. He received a bachelor's degree in management studies from the University of Waikato in New Zealand.

# Jennifer K. Driscoll

Vice President, Investor Relations

Jennifer K. Driscoll is the Vice President of Investor Relations at ExxonMobil, responsible for managing the company's relationships with current and potential equity holders as well as with sell-side analysts.

Before joining the company in February 2022, she was head of Investor Relations at Caterpillar Inc. for three years. Previously, she was Director of Investor Relations at DuPont for three years, Vice President of Investor Relations at Campbell Soup for six years, and Vice President of Investor Relations at Best Buy Co., Inc. for eight years. Including her first role as Vice President of Investor Relations at RBC Capital Markets (then Dain Rauscher), she currently has more than 23 years of experience in Investor Relations and has earned the Investor Relations Charter (IRC) credential. She served on the board of the National Investor Relations Institute from 2018 to 2021. She is past president of NIRI chapters in Philadelphia and Minneapolis.

A National Merit Scholar, she earned a Bachelor of Administration degree from St. Catherine University and an Master of Business Administration degree in finance from the University of St. Paul, both of which are in St. Paul, Minnesota.