Technology Enablers for Low CI H_2 at Scale

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Similarly, emission-reduction roadmaps to drive toward net zero and similar roadmaps for emerging technologies and markets, and water management roadmaps to reduce freshwater intake and/or manage disposal, are forward-looking statements. These statements are not guarantees of future corporate, market or industry performance or outcomes for society and are subject to numerous risks and uncertainties, many of which are beyond our control or are even unknown. 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 and other methane initiatives, to meet greenhouse gas emission reduction plans or goals, divestment and start-up plans, and associated project plans; technology advances including in the timing and outcome of projects to capture and store CO2 supply lower-emission fuels, produce hydrogen, produce lithium, obtain data on detection, measurement and quantification of emissions including reporting of that data or updates to previous estimates, and use plastic waste as feedstock for advanced recycling; progress in sustainability focus areas; and reserve or resource changes could vary depending on changes in supply and demand and other market factors affecting future prices of oil, gas, petrochemical or new market products and services; future cash flows; our ability to execute operational objectives on a timely and successful basis; policy and consumer support for emission-reduction and other advanced products and technology; changes in international treaties, laws, regulations and incentives, including those greenhouse gas emissions, plastics, carbon storage and carbon costs; evolving reporting standards for these topics and evolving measurement standards for reported data; 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 and technologies such as electrification of operations, advanced recycling, CCS, hydrogen production, or direct lithium extraction on a commercially competitive basis; availability of feedstocks for lower-emission fuels, hydrogen, or advanced recycling; 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; actions taken by governments and consumers resulting from a pandemic; changes in population growth, economic development or migration patterns; military build-ups, armed conflicts, or terrorism; and other factors discussed in this release and in Item 1A. 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The reference case for planning beyond 2030 is based on the Company's Global Outlook research and publication. The Global Outlook is reflective of the existing global policy environment and an assumption of increasing policy stringency and technology improvement to 2050. However, the Global Outlook does not attempt to project the degree of required future policy and technology advancement and deployment for the world, or ExxonMobil, to meet net zero by 2050. As future policies and technology advancements emerge, they will be incorporated into the Global Outlook, and the Company's business plans will be updated as appropriate. References to projects or opportunities may not reflect investment decisions made by the corporation or its affiliates. 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As such, the outcome of any given scenario using an energy demand model comes with a high degree of uncertainty. For example, the IEA describes its NZE scenario as extremely challenging, requiring unprecedented innovation, unprecedented international cooperation, and sustained support and participation from consumers, with steeper reductions required each year since the scenario's initial release. Third-party scenarios discussed in these reports 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 but may be secondarily tested for robustness or resiliency against different assumptions, including against various scenarios. These reports contain information from third parties. 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The reporting guidelines and indicators in the Ipieca, the American Petroleum Institute (API), the International Association of Oil and Gas Producers Sustainability Reporting Guidance for the Oil and Gas Industry (4th edition, 2020, revised February 2023) and key chapters of the GHG Protocol inform the EPI process and the selection of the data reported. 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, abatements and enabled 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. Any reference to ExxonMobil's support of, work with, or collaboration with a third-party organization within these publications do not constitute or imply an endorsement by ExxonMobil of any or all of the positions or activities of such organization. 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At the time of publication, ExxonMobil has completed the acquisition of Denbury Inc. These reports do not speak of these companies' historic governance, risk management, strategy approaches or emissions performance unless specifically referenced. These reports or any material therein is not to be used or reproduced without the permission of Exxon Mobil Corporation.

Finding your pathway through the energy transition

ExxonMobil's Low Carbon Solutions, founded in 2021, leverages our decades of experience to develop a growing portfolio of low-carbon solutions; carbon capture and storage, hydrogen production, lithium extraction and advanced biofuels.

Tomorrow's solutions tailored along **today's energy systems**

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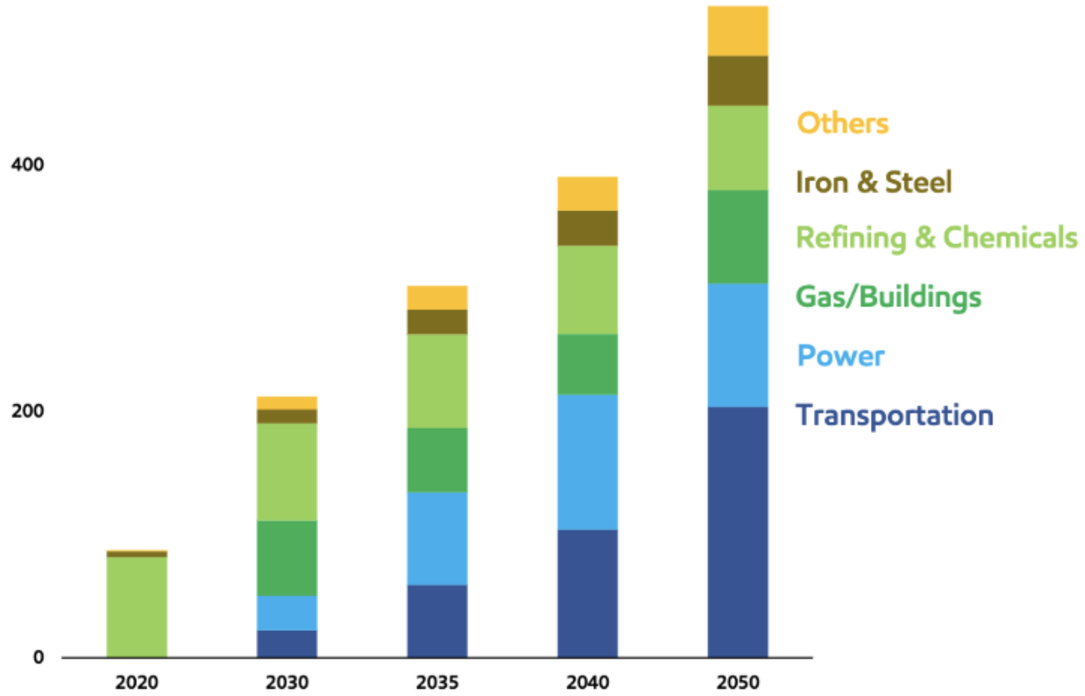
H_2 is an energy carrier that can support GHG emissions reduction in hard-to-electrify end-uses

IEA NZE H_2 Global Demand



Source: IEA Data, with IEA end-use categories aggregated into above categories

Hydrogen potentially the lowest-cost option to significantly reduce emissions in sectors including:

- Industry
- Heavy Duty Transportation
- Iron and Steel
- Power

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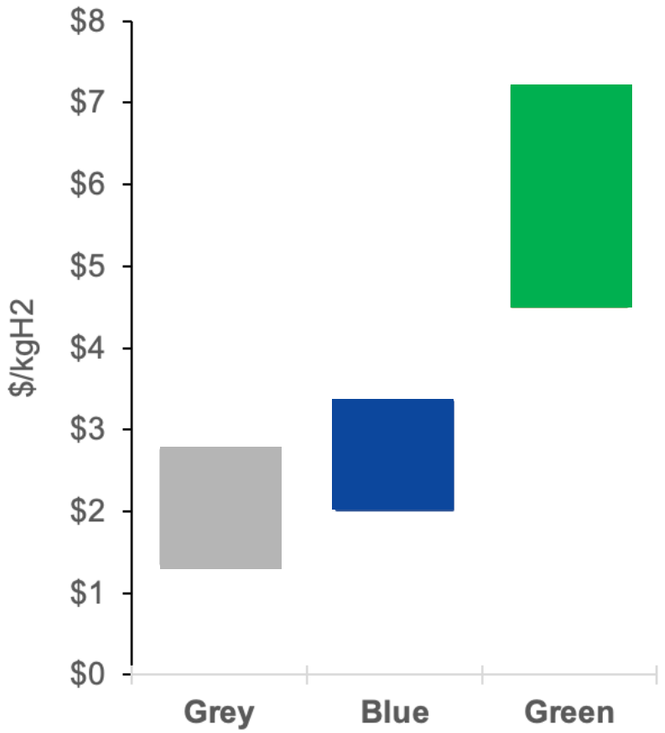
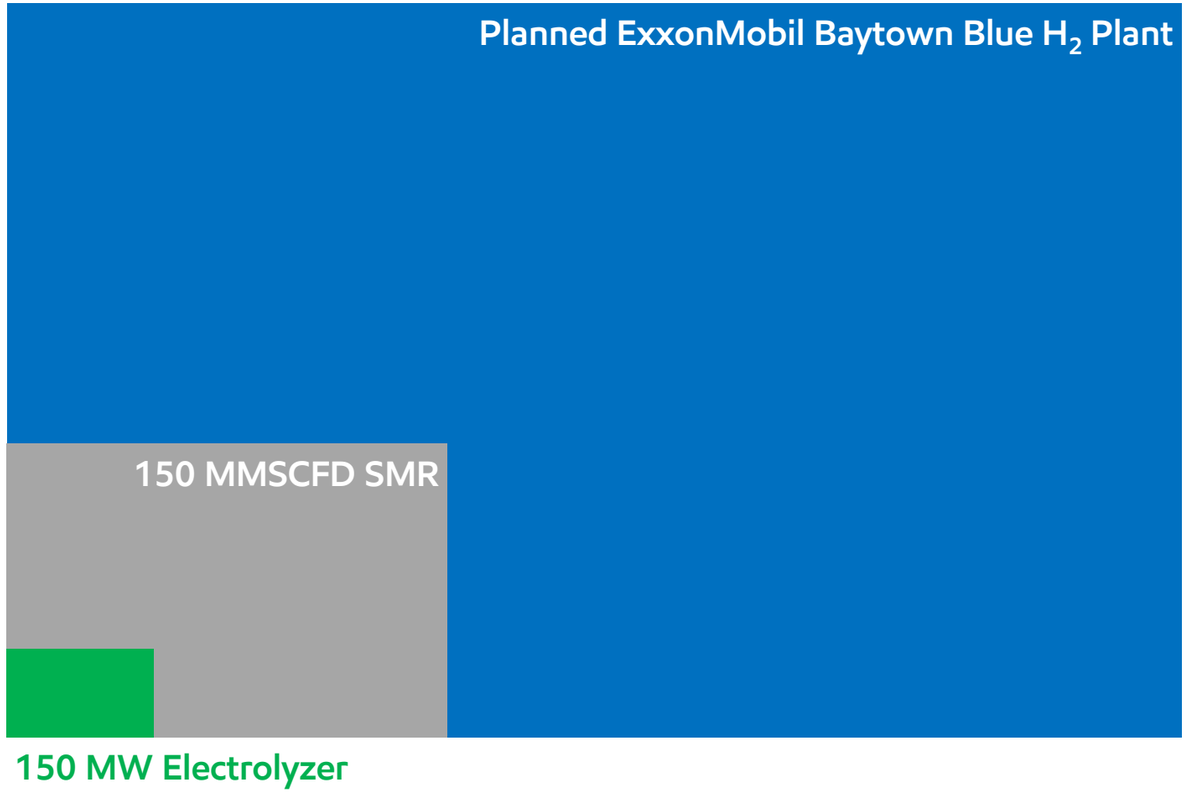
Blue hydrogen is available at scale today



Source: S&P Global Commodity Insights, ©2023 by S&P Global Inc
Note: Lower range is USGC cost, upper range is EU cost; 10% WACC; Assumes no policy credits or taxes



Source: ExxonMobil illustration of large scale plant capacities for different production methods

ExxonMobil Baytown Blue Hydrogen

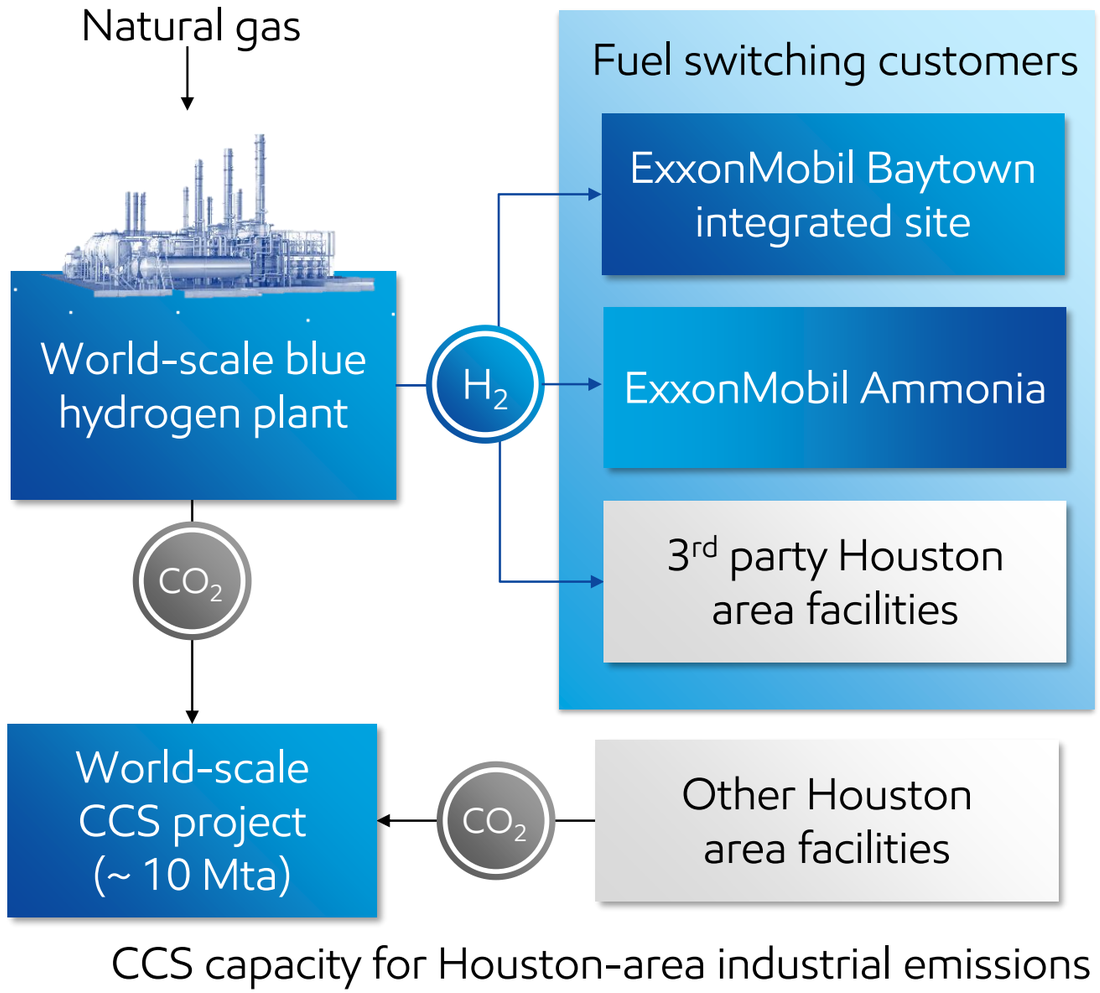
Provides emission-reduction opportunities and forms initial contribution to Houston CCS Hub

Project Scope

- New blue hydrogen plant, 1 billion cubic feet per day
- Capability to capture over 98% of CO_2 scope 1 emissions

Opportunities

- Reduce ExxonMobil Baytown site emissions by up to 30%
- Accessible low-cost natural gas
- Close proximity to quality underground storage
- Leverages existing capabilities



CCS capacity for Houston-area industrial emissions

Hydrogen Storage & Transport

Observations

- Pipelines are preferred option
- On-road truck transport until sufficient H_2 demand growth
- Can repurpose existing NG network
- Different types of storage for different time scales

Opportunities

- Increase efficiency of compression and liquefaction
- Ammonia
- Other liquid "carriers" and adsorbents

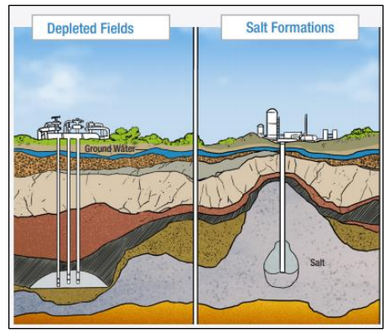
Transmission Pathways

				Energy Loss	
				H_2	NG
H_2 gas 20 bar 25°C	**Pipeline Feed at City-Gate**	H_2 Gas 70 bar, 25°C		2%	<1%
	Compressed H_2 via Trucks	H_2 Gas 400 bar, 25°C		8%	3%
	Liquid H_2 via Trucks	Liquid H_2 1 bar, -253°C		23%	8%

Station (day) ▪ cH_2 ▪ LH_2

Grid buffer (week) ▪ cH_2 ▪ LH_2

Geologic (seasonal) ▪ cH_2



Industrial heat application – Burner technology

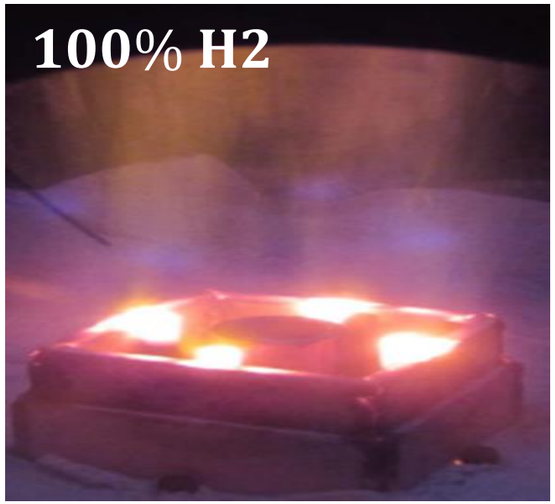
Zeeco alliance - A groundbreaking solution putting industry on the path to net zero

Alliance objectives

- Significantly lower emissions for industrial manufacturers
- Ultra-low NOx, 100% hydrogen ready industrial burners

Value Chain Opportunities

- Reduce emissions at manufacturing operations worldwide
- Enable to offer customers end-to-end solution
- Support growth / development of low-carbon H_2 market



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Collaboration critical to a successful innovation pipeline

DISCOVERY → DEVELOPMENT → 1ST DEPLOYMENT → DEPLOYMENT AT SCALE

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NC NATIONAL CARBON CAPTURE CENTER

NREL Transforming ENERGY

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Integrating affordable and scalable technology solutions


Thank You!