

Talking Points for External Engagements

August 14, 2025

This document is intended to be a reference when engaging with stakeholders in the normal course of business. The talking points in this document have been approved for conversations with government officials, regulators, policymakers, customers and employees. This document is not to be used as a handout or leave-behind.

Any communications or media response materials (e.g., publications, EM social media posts, presentations, speeches, intranet articles, media interview requests, press releases, etc.) based on these messages must be separately reviewed through the appropriate established P&GA or SIRP processes. Please direct questions to LCS P&GA Deputy, Susanna Lee.

Note: The abbreviation 'CCS' is used throughout this document for simplicity. However, when using these talking points externally, it is recommended that 'carbon capture and storage' be used; messaging research indicates 'CCS' is not well-known to many non-industry audiences.

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PART 1: Overarching narrative

ExxonMobil strategy

- We create solutions that improve quality of life and meet society's evolving needs.
- Our **Global Outlook** represents our best projection of where the world is going based on market fundamentals, economic trends, technology advancements, and policies. We use it to inform and shape our long-term strategy. Our 2024 outlook shows:
 - Global population growing by 2 billion people between now and 2050.
 - Energy use rising by 15% to support a growing population with rising living standards, many of whom live in the developing nations.
 - Renewables growing the fastest, coal shrinking the most, and oil and natural gas maintaining a major role in the energy mix 25 years from now.¹
- Modern living standards are made possible by ready, affordable access to energy. For the billions of people without that access even the most basic tasks of life can be extremely challenging.
- To achieve its stated emissions reduction ambitions, the world needs to reduce carbon emissions while providing the energy people need. This is the genesis of our **"and" equation**.
 - We're committed to meeting demand for energy and essential products AND driving emission reductions, reducing the life-cycle emissions of our operations and helping our customers to do the same.
 - We aim to achieve **net-zero** operating scope 1 and 2 greenhouse gas emissions by 2050.²
- A successful energy transition should focus on reducing emissions with affordable, scalable and reliable technology solutions while bringing billions of people out of energy poverty to improve global living standards.

Lower-emission investments

- Our commitment to lowering emissions – both ours and others, is evident. Across the corporation, we're pursuing up to **\$30G** in lower-emission opportunities from 2025 through 2030, with almost 65% to be spent on enabling the reduction of emissions for third-party customers.³
 - On an annualized basis, our spend is more than half of the budget of the U.S. Environmental Protection Agency (EPA).⁴ Think about that: One company, investing more than half as much as the U.S. agency responsible for environmental protection.
- We're pursuing opportunities with **attractive markets**. The energy transition won't be successful if it's not economically viable. ExxonMobil's focus on molecule-based offerings – like CCS, hydrogen and its derivatives, biofuels, and lithium – has an estimated potential market opportunity of around \$6 trillion by 2050 to build an advantaged business.⁵

¹ References: [2024 Global Outlook](#); [2024 Global Outlook slide library](#)

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

³ Reference: [2024 Corporate Plan Update](#). Lower emissions cash capex includes cash capex attributable to carbon capture and storage, hydrogen, lithium, biofuels, Proxima™, Carbon Materials, and activities to lower ExxonMobil's emissions and/or third party (3P) emissions.

⁴ \$9.1 billion enacted budget for the U.S. EPA FY 2025. <https://www.epa.gov/planandbudget/budget>

⁵ 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.

- Our investments in carbon capture, hydrogen, biofuels, and lithium have the potential to reduce 3rd-party emissions by >50 million metric tons per year by 2030 – equal to the CO₂ emissions from ~10 million U.S. homes' electricity use for one year.⁶
- In aggregate, these opportunities are expected to generate average returns of about 15%.
- We have the ability to invest in the largest and highest-return, lower-carbon opportunities anywhere in the world, but we recognize the significant uncertainty in how the energy transition and the LCS business will develop.
- We expect to pace emissions-reduction investments, effectively allocating resources as markets, customer commitments, and policy evolve. This minimizes the downside risks while establishing an advantaged position to capture and maximize the upside potential.
- If the necessary policy support and market development do not materialize in the timeline we expect, we'll defer or suspend investments.
- We've often said that for a lower-carbon venture to compete for capital, it needs to show competitive returns and be able to scale, both of which are not easy considering many businesses have failed to achieve them in the new energy space. We are one of the few companies capable of overcoming these challenges. We're more than leaders in this space, we're pioneering new solutions and frankly, we're the right people for the job.

LCS mission & strategy

- LCS aims to help accelerate the world's path to decarbonization while building a compelling new business. Our strategy focuses on creating new carbon-reduction solutions that deliver innovative products and technologies to our customers. Our initial areas of focus include carbon capture and storage, low-carbon hydrogen and its derivatives, and lithium. We aim to make these solutions available worldwide to industries that are the toughest to decarbonize (heavy industry, power generation, commercial transportation) – about 80% of the world's emissions come from these sectors.
- We've selected opportunities aligned with our **core competencies** – subsurface technology, hydrocarbon processing, and large-scale capital projects to name a few – which not only provide us with a competitive advantage, but also bring communities confidence knowing ExxonMobil's track record in safety and responsible operations will be applied to this new industry.
- We plan to build a low carbon business that is as profitable as our core businesses.

Our differentiators

- We bring a unique skill set which allows us to address a need that many others cannot: reducing emissions in the **hardest-to-decarbonize parts of the economy**, which include heavy industry, power generation, and transportation to name a few.
- **Technical expertise:** At heart, we're a technology company with over a 140-year legacy. We excel at delivering cost-effective, technically superior solutions. Our focus areas are rooted in our base business – this is something we know and something we're good at. Through rigorous techno-economic analysis and engineering, we can deliver commercially viable technologies at scale that are the right fit for emission-reduction projects.

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.

⁶ U.S. Environmental Protection Agency.

- **Integration & scale:** We have an integrated and diversified portfolio strategy that leverages existing infrastructure and value chain expertise, supporting multiple solutions that reduce emissions in our own operations and others'. We have a track record of executing large-scale complex and challenging projects on time and within budget.

PART 2: Enablers for success (collaboration, technology, policy)

Collaboration

- In any successful energy transition, collaboration is key.
- Unprecedented public-private collaboration and partnerships – including those on technology development, supportive policy, and infrastructure – will be critical in achieving a lower emissions future.
- We're not on this journey alone. By forging relationships with industry leaders, governments, and academic institutions, we're establishing ourselves as the partner of choice.

Technology

- We believe in an all-of-the-above approach because it's too early to rule out any technology.
- We are committed to advancing technologies needed to reduce emissions. We have been researching and developing low-carbon technologies for decades.
- Our R&D (research and development) is focused on areas where we can make a unique and significant contribution, and where we have the deep capabilities to drive progress.
- We are focused on growing where we have technology advantages today and policy is supportive. A broad range of solutions is needed to reduce emissions and markets will change over time. Additional potential focus areas aligned with our competencies and competitive advantages are always being considered.
- As examples, we are evaluating advanced biofuel solutions such as BECCS (Bioenergy with Carbon Capture and Storage), and we are working on playing a leading role in accelerating the development of cost competitive and scalable direct air capture (DAC) technology.

Market-forming policy

Overview

- Greenhouse gas emissions continue to rise, and society's net zero ambitions are currently unattainable.
- Investment is not happening fast enough nor in the form required.
- McKinsey Global Institute suggests that roughly \$9T per year in capital deployment is needed to both meet energy demand and achieve Net Zero by 2050.⁷
- Climate policy to-date has been largely ineffective in driving decarbonization at scale.
- Some policies have the potential to be "market-forming", which would help transition away from project-enabling government incentives to market-driven investments, but have not yet reached a level that activate hard-to-abate sectors.

Policy principles

- Energy policy must account for security, affordability, reliability, and environmental stewardship. We advocate for policy that takes a balanced view of each category.
- Consistency in policy is necessary for capital planning to take place in the long-term energy business.
- We need to let technologies and companies compete so the best solutions can win. Government-backed, technology-agnostic subsidies can kick-start various low-emission solutions, but they should have an expiration date because no government can afford to

⁷ McKinsey Global Institute. [The net-zero transition: What it would cost, what it could bring](#). January 2022.

subsidize the energy transition forever. Ultimately, an effective energy transition will require a functional, economically self-sustaining market.

- While our competitive advantages are formidable, we recognize that durable, predictable, and market-driven policy support is essential to enable new energy projects and produce the greatest emissions reductions at the lowest cost to society.
- To catalyze emissions reductions, accelerate advances in technology, and drive scale to improve costs, supporting policy remains critical at this early stage.
- Governments will play an important role in facilitating the development of markets for low-carbon products and services, encouraging consumer behavior and enabling the private sector to invest in the most effective technologies to meet demand.
- Government policy should be technology-neutral to incentivize businesses to innovate. No single technology on its own can enable society to achieve net-zero emissions. Picking winners and losers at this early stage isn't likely to be effective.
- As new emission-reduction policies are considered and implemented, it will be important to ensure energy-intensive industries can compete in markets that lack similar requirements.

Carbon-emissions accounting framework and product-level carbon intensity standards

- **SME:** Contact Simon Herbert (P&GA) for additional talking points.
- The world will need to establish a new industry – a carbon-reduction industry – and a market that pays for the cost of emission reductions.
- In the near term, supportive policy is critical to help spur lower-emission investments. Just as energy sources should not be supported in perpetuity, they should not be artificially discouraged.
- Over the longer term, to achieve broad emissions reduction, we believe product-level carbon intensity standards and a well-designed carbon emissions accounting framework could have a big impact.
- A carbon-emissions accounting framework is necessary for market-based solutions to thrive.
 - The truth is that the GHG Protocol Accounting and Reporting Standard was never designed as an accounting framework for products.
 - It was designed as an inventory-based reporting tool for companies and is structurally incapable of providing anything approximating an accurate tracking of CO₂ as it moves through the economy.
- Product-level standards helped reduce sulfur in diesel and lead in gasoline. They can work for carbon emissions too.
- This is a rational and constructive policy that will recruit the full range of technologies to lower emissions and still meet demand.

PART 3: Carbon capture, utilization, and storage

CCS overview

- **SME:** Matthew White (LCS)
- Carbon capture and storage (CCS) is the process of capturing CO₂ emissions from industrial activity or power plants at the source and injecting it into deep underground geologic formations for safe, secure, and permanent storage.
- CCS is one of the few proven and safe technologies that could enable some of the highest-emitting sectors to reduce their emissions now and at scale, such as the manufacturing, power generation, refining, petrochemical, steel, and cement industries.
 - More than two-thirds of energy-related emissions originate from single-point sources, like a refinery or manufacturing facility, where CCS can play an important role.
- The International Energy Agency (IEA) calls carbon capture and storage one of the critical technologies required to achieve net-zero emissions and the climate goals outlined in the Paris Agreement.
- CCS is also recognized as one of the few technologies that can enable negative CO₂ emissions when combined with bioenergy or direct air capture.
- CCS is not a new technology - it was first deployed in the 1970s. CCS projects have been operating around the world for decades.
- The IPCC's sixth assessment report (2022) said "if the geological storage site is appropriately selected and managed ... the CO₂ can be permanently isolated from the atmosphere."⁸

CO₂ utilization

- Captured CO₂ can be utilized in various applications, such as in the food and beverage and chemical industries, where the CO₂ is not permanently sequestered.
- ExxonMobil is evaluating utilization opportunities to understand where we can bring value to enable utilization ideas that are technically viable and economic at scale, and where there is a material market opportunity.
 - Permanent utilization solutions are the primary objective (e.g., incorporating CO₂ into building materials like cement).

CO₂ for enhanced oil recovery (EOR)

- **SME:** Matthew White (LCS), Brad Crabtree (P&GA)
- Captured CO₂ can be used to recover oil and gas through a process known as enhanced oil recovery (EOR).
 - In certain fields around the world, CO₂ is injected into existing oil and gas wells to increase production.
- A Class II well is a type of underground injection well that can be used for enhanced oil recovery.
 - As EPA has recognized, "CO₂ storage associated with Class II wells is a common occurrence and CO₂ can be safely stored where injected through Class II-permitted wells for the purpose of enhanced oil or gas-related recovery."⁹

⁸ IPCC_AR6_WGIII_SummaryForPolicymakers.pdf, p. SPM-37

⁹ 12 Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Generating Units, 80 Fed. Reg. 64510, at 64585 (Oct. 23, 2015).

- Our acquisition of Denbury strengthened our enhanced oil recovery operations and capitalizes on our unrivaled U.S. integrated infrastructure to accelerate the growth of our CCS business.¹⁰

CCS market development

- **SME:** Matthew White (LCS)
- CCS is capital-intensive, complex, and involves long-term commercial commitments. To promote its widespread adoption, we need to stimulate demand and cost-effective supply.
 - On the demand side, we need government incentives which eventually transition to a cost of carbon that the market will bear, accompanied by product prices reflecting the added cost of carbon abatement.
 - On the supply side, we need lower-cost projects. This will come with technology improvements, scale, and network efficiencies.
 - Together, these advances will increase the confidence to invest in CCS and enable a broad and deep market to be formed.

CCS at ExxonMobil

- **SME:** Matthew White (LCS)
- Our first third-party carbon capture and storage project is now in operation [June '25]. The project uses our CO₂ transport and storage network, the world's only large-scale system, to store up to 2 million metric tons of CO₂ per year that otherwise would have been emitted to the atmosphere.
- With almost 40 years of CCS experience, we have cumulatively captured more CO₂ than any other company — almost 150 million metric tons, which is approximately 35% of all manmade CO₂ that has ever been captured.¹¹ That experience helps position us to lead in accelerated, safe, scale-up of CCS.
- CCS is aligned with our competitive advantages and core competencies, like subsurface expertise.
- We own and operate the first and largest integrated CCS system in the U.S. and the world¹² with approximately 1,300 miles of pipeline connecting customers and permanent storage sites, most of which is in the U.S. Gulf Coast. Our existing system enables the potential to accelerate and scale CCS faster than anyone else.¹³
- The U.S. Gulf Coast is the ideal location for building our foundational CCS projects:
 - It's a major industrial area and one of the highest emitting regions in the U.S.
 - The region offers proximity to geological storage and extensive infrastructure.
- In Texas state waters, we've secured the largest offshore CO₂ storage lease in the U.S. (271,000 acres).¹⁴
- Our advantaged infrastructure and deep experience put us in the lead to deploy CCS at scale. We estimate our U.S. Gulf Coast CCS network can ultimately remove up to 100 MTA of captured CO₂ once optimized and fully developed.
- We have active CCS operations today in the United States, Australia and Qatar, and are progressing plans for new projects, some of which may enable the production of low-carbon hydrogen and low-carbon electricity for data centers.

¹⁰ [ExxonMobil announces acquisition of Denbury](#) (July '23)

¹¹ Global CCS Institute 2023 Cumulative CO₂ Capture Facilities Analysis conducted for ExxonMobil

¹² IHS Markit Energy Infrastructure Data

¹³ [ExxonMobil announces acquisition of Denbury](#) (July '23)

¹⁴ [ExxonMobil secures largest CO₂ offshore storage site in the U.S.](#) (October '24)

CCS customer agreements

- **SME:** Schuyler Evans (LCS)
- We have more CO₂ under contract for carbon capture and storage than any other company.
- We have grown our commitment to transport and store more than 17 million tons of captured CO₂ per year, which includes up to 9.8 MTA for third party customers and up to 7.5 MTA for the Baytown low-carbon hydrogen project.
- Our foundational CCS projects in the U.S. Gulf Coast include:
 - [CF Industries](#) – Donaldsonville, LA, 2 MTA, agricultural fertilizer (October '22).
 - In June '25, [CF began flowing CO₂](#) from their ammonia facility in Donaldsonville, Louisiana, into our U.S. Gulf Coast CCS System. As we ramp up to transport and permanently store up to 2 million metric tons annually, we'll enable CF to produce about 1.9 million tons of low-carbon ammonia on an annual basis.
 - [The next step](#): securing our Class VI permit, which will enable us to transition from permanently storing CO₂ through enhanced oil recovery to dedicated, permanent storage.
 - [Linde](#) – Beaumont, TX, 2.2 MTA, industrial gases (April '23)
 - [Nucor](#) – Convent, LA, 0.8 MTA, steel (June '23)
 - [CF Industries](#) – Yazoo City, MS, 0.5 MTA, agricultural fertilizer (July '24)
 - [Baytown Hydrogen & Ammonia Company](#) (jointly owned by ExxonMobil and ADNOC) – Baytown, TX, 7.5 MTA, low-carbon hydrogen and ammonia (September '24)
 - [New Generation Gas Gathering](#) "NG3" – Gillis, LA, 1.2 MTA, natural gas gathering (October '24)
 - [Calpine](#) – Baytown, TX, 2 MTA, natural gas power generation (April '25)
 - [Lake Charles Methanol II](#) – Lake Charles, LA, 1.1 MTA, blue methanol (July '25)
- These demonstrate the confidence customers have in our offer and our ability to execute.
- We're on our way to meeting our goal to have 30 MTA of CO₂ under contract with customers for transportation and storage by 2030.

CCS hubs

- **SME:** Matthew White (LCS)
- We're focused on helping accelerate the world's path to decarbonization by making that path economically viable and executable at a scale that matters. We believe CCS hubs, or clusters, are needed to help meet society's lower-emission goals.
- Instead of building multiple CCS facilities, each requiring its own pipeline infrastructure and storage site, a single hub could capture CO₂ emissions from several industries' sites and store them in the hub's network of storage locations. These hubs would be located in areas with large, high-emitting sectors that are near safe, underground CO₂ storage sites.
- We're pursuing the hub concept in areas that are ideally suited for the broad deployment of CCS, such as the U.S. Gulf Coast and Asia Pacific.¹⁵ We're also in discussions with other potential government and industrial partners around the world.
- For a successful hub, it is important to find anchor tenants to establish critical mass then build momentum for multiple value chains to support the hub.
- In many geographies there is a mismatch between nations that have CO₂ storage capacity and nations that are seeking solutions for their own emissions. Therefore, we need cross-border collaboration and partnership to facilitate partnership-driven solutions.

¹⁵ [ExxonMobil and Shell selected to work with the Government of Singapore on a carbon capture and storage value chain](#) (March '25)

CCS safety

CO₂ storage safety

- **SME:** Matthew White (LCS)
- At ExxonMobil, we've been safely and effectively engaged in CCS for almost 40 years, capturing more human-made carbon dioxide than any other company in the world.
- CO₂ is not explosive or flammable, and is stored safely thousands of feet underground, well below any sources of drinking water, and in deep rock formations beneath the sea and onshore.
- Decades of experience with large-scale CO₂ storage have shown that the potential risks of leaks can be managed with effective site selection, facility design, operational practices and monitoring.
- The potential risks associated with secure geological storage of CO₂ have proven to be minimal if properly regulated and managed.
- ExxonMobil's potential CO₂ storage sites are carefully selected only after undergoing rigorous analysis to ensure they are geologically suitable. This analysis helps mitigate the risk of the CO₂ migrating to other formations or to the atmosphere.
- The injected CO₂ is held in place by thick, impermeable seal rocks thousands of feet underground, which are similar to the rocks that have kept oil, natural gas and naturally occurring CO₂ underground for millions of years.¹⁶
- Once stored, the storage sites are monitored to track the evolution of the CO₂ plume and pressure. We use a set of technologies to monitor sites. Examples include pressure-monitoring transponders and 4D seismic technology.

CO₂ transportation safety

- **SME:** Michael Butler (EMPCo P&GA)
- *[Note: for specific talking points about CO₂ pipeline and storage incidents (Satartia, Sulfur, Archer Daniels Midland) contact EMPCo.]*
- Industry has been safely moving CO₂ via pipelines and injecting CO₂ into subsurface formations around the world for decades.
- There are more than 5,000 miles of CO₂ pipelines in the United States alone, transporting about 80 million metric tons of CO₂ per year.
- For more than 30 years, the U.S. Pipeline and Hazardous Material Safety Administration (PHMSA) has regulated the safe transportation of CO₂ in pipelines. This includes oversight of pipeline design, construction, pressure testing, operations and maintenance.
- Current PHMSA regulations (49 CFR Part 195) set requirements for the safe construction, operation, inspection, maintenance, monitoring and incident response for CO₂ pipelines.
- As CO₂ infrastructure expands, we support enhanced regulations and standards to ensure continued safe operations, where appropriate.
- We are committed to ensuring all pipelines that we operate run safely and reliably.
- ExxonMobil operates and has a joint interest in more than 15,000 miles of pipelines in North America. ExxonMobil strives to be an industry leader in safety.
- We design systems and programs to mitigate the risks of transporting and storing CO₂ and have been operating pipeline facilities for decades.
- We monitor our (company-operated) pipelines 24/7 from a state-of-the-art Operations Control Center based at our ExxonMobil Houston Campus in Spring, Texas.

¹⁶ [TECHNICAL REPORT TEMPLATE AND USER GUIDE \(doe.gov\)](#), p. 1

- We regularly test and maintain our facilities and pipelines using an integrated diagnostic system designed to proactively indicate potential risks and recommend the appropriate repair methods.
- In addition to our rigorous continuous improvement plans designed to help prevent incidents from occurring, we are also prepared to quickly and effectively respond if needed.
- We regularly communicate, plan, and conduct drills with local first responders to help ensure a well-coordinated response to any incident.
- In fact, ExxonMobil and the National Association of State Fire Marshalls have developed and delivered a new course to provide first responders with instruction and hands-on training on how to safely manage CO₂ releases. We provide first responders near our facilities and pipelines with the opportunity to participate in this course at no cost.¹⁷

CCS policy

CCS global policy principles

SME: Brad Crabtree (P&GA)

- The CCS opportunities we are evaluating have the potential to move forward with current technologies, but the support of well-designed policies and regulatory frameworks is critical to accelerating deployment and infrastructure development.
- Supportive policy is the most critical enabler of CCS adoption, but policy is currently fragmented across the globe and even within individual countries.
 - Important steps in the right direction have been taken in the U.S., Canada, Australia, the UK, Denmark, Norway, and the Netherlands, but incentives around the globe are insufficient to encourage broad CCS adoption.
- We support a policy and regulatory framework that would:
 - Sustain long-term government support for research and development.
 - Provide standards to ensure safe and secure CO₂ storage.
 - Allow for fit-for-purpose CO₂ injection well design standards.
 - Provide legal certainty for geologic storage ownership.
 - Ensure a streamlined permitting process for carbon capture and storage facilities.
 - Provide access to CO₂ storage capacity owned or controlled by governments.
 - Allow for high-quality offsets generated from carbon capture and storage, low-carbon, and carbon-removal projects.
- In many geographies there is a mismatch between nations that have CO₂ storage capacity and nations that are seeking solutions for their emissions. Therefore, we need cross-border collaboration and partnership, such as widespread ratification of the amendment to the London Protocol to unlock bilateral agreements to allow CO₂ transportation between countries, and other policies that facilitate partnership-driven solutions.
- “The IPCC notes that currently global rates of CCS deployment are far below those in modelled pathways limiting global warming to between 1.5°C to 2°C and stresses that enabling conditions such as policy instruments, greater public support and technological innovation are needed to scale up deployment”.¹⁸

¹⁷ [Real-life training to keep you safe](#) (May 2024).

¹⁸ [Global CCS Institute Brief: CCS in the IPCC Sixth Assessment](#) (May 2023), p. 3

United States

- **SME:** James Dunlap (P&GA)

45Q CCS credit

- CCS is being accelerated in the U.S. by policy support.
- The IRA increased the existing 45Q tax credit for carbon captured and stored. The IRA incentives have helped enable projects, but the financial gaps to widespread adoption still exist, especially for post-combustion carbon capture.
- Policy support increases the scope of potentially viable projects in our portfolio.

Federal Class VI permitting

- One of the primary challenges we currently face is the timely review and approval of Class VI permits. Delays in the permitting process can hinder our ability to move forward with critical projects and the important emissions reductions those projects bring.
- The industry would benefit from an increased pace of Class VI well permit approvals. We are supportive of state primacy for Class VI wells for this reason.
- Delays in permitting these projects send a negative signal to the market and could slow the widespread adoption of CCS throughout the region.
- Making the permitting process more efficient will help speed up investment in the American economy.
- The first CCS project ExxonMobil is advancing in the region is the Rose project in southeastern Texas. The Rose Class VI application was submitted to the EPA and the Texas Railroad Commission in March 2024.
- ExxonMobil submitted its second Class VI application to the EPA for the Sunflower project, also in southeastern Texas, in December 2024.

Other U.S. CCS policies

- The Bureau of Land Management (BLM) currently authorizes pore space access via its authority under the *Federal Land Policy and Management Act*. Additional legislative clarity from BLM is needed to address injection fees, exclusive access to pore space, the ability of the federal government to enter into unitization agreements, and adjacent issues (e.g., above-ground rights of way and plume movement).
- We support the bipartisan *Simplifying Pore Access for Carbon Emissions Sequestration (SPACES) Act*, which establishes a process for applicants to obtain exclusivity for storing CO₂ in federal pore space.
- The *Transportation Infrastructure Finance and Innovation Act* provides loan and credit assistance for surface transportation projects of national or regional significance, including CCS. We believe this program should be extended beyond 2026 and enhanced to increase available funding.
- We support development of regulations for sequestration of Offshore Continental Shelf as identified in the U.S. Infrastructure Investment and Jobs Act (IIJA).

Europe CCS policy

- **SME:** Marion Wurzel (P&GA)
- CCS is critical to achieve Europe's decarbonization ambitions. To scale up this critical technology, the EU needs a policy framework that incentivizes a viable business case to attract

investment, removes cross-border barriers, maximizes access to storage, and streamlines permitting.

- We welcome the recognition of CCS as a key technology in several recent EU announcements such as the Industrial Carbon Management Strategy (ICMS) and the 2040 GHG target communication, but key enabling policies are required to achieve these objectives.
- A clear business case and adequate investment are essential for scaling up the deployment of CCS technologies as required by the EU ICMS.
 - With substantial investment requirements outlined in the EU ICMS¹⁹, public financial commitment from the next EU Commission and Member States is vital to drive Europe's industrial transition towards environmental sustainability and global competitiveness.
 - It will also be crucial to revamp funding instruments at EU and national level to better recognize the challenge of operational costs (OPEX) and the complexity and capital intensity of CCS projects.
- While we welcome the recognition of CCS as a strategic technology under the EU Net Zero Industry Act, the mandate on CO₂ injection capacity in this act creates uncertainty about future EU policy and could be detrimental to the EU's energy security, further undermining the EU's industrial competitiveness.
 - A market-based policy would be more efficient and would reduce the cost of decarbonization to society.
 - Most current CCS storage projects in the EU are currently in the pre-feasibility stage. It takes several years to develop storage sites, so it is highly unlikely that these projects will start up by 2030, even with accelerated permitting.
 - We welcome the introduction of a derogation which can be sought by Member States in case of supply and demand imbalances. It is important that implementation details of this derogation maintain flexibility especially for potential investments where there is no business case, and for issues that are beyond the control of storage operators such as lack of infrastructure or critical commercial agreements with emitters.
- To reach the CCS targets in the EU's ICMS, it will be critical for the EU to leverage proximate storage space, particularly the North Sea. Given the large potential for CO₂ storage in the UK part of the North Sea, we support the connection of the EU and UK CO₂ infrastructure systems and regulations for the seamless movement of CO₂ between the EU and the UK. Regulations should also provide legal certainty that CO₂ stored in the UK is accepted under the EU ETS system.
 - CO₂ storage locations in the UK are geographically located near several large industrial emitters in the EU, such as Belgium and France, and may offer timely and cost-effective storage for CO₂ emissions.
 - Synergies in infrastructure between storage sites that are being developed in the Netherlands and the UK could reduce the cost of decarbonization for many EU emitters in the region. This would also support EU industries' efforts to restore global competitiveness – an issue of key concern to all of us.
 - Resolving this key issue in a timely manner would encourage timely investment decisions and prevent the flow of essential capital to other parts of the world.

¹⁹ EU ICMS: "Between EUR 6.2 and 9.2 billion by 2030 for transport infrastructure related to the NZIA objective" alone.

UK CCS policy

- **SME:** Jonathan Dredge (P&GA)
- We welcome UK Government's ambition to target 20-30 MTA of CO₂ storage by 2030, with an increase to at least 50 MTA by the mid-2030s.
- The Government's CCUS Vision also outlines the intention for a transition to a market-led economic model in the early 2030s. We welcome this policy direction, subject to the new framework supporting:
 - open negotiation between value chain participants
 - increased risk allocation to the private sector with no restrictions on the allocation between value chain participants
 - market-based transportation and storage fees commensurate to risk
- Confirmation of the new CCUS economic model, along with continued support for emitters, is key to unlocking CCUS investment for projects beyond the current Government Track process.

Asia Pacific CCS policy

- **SME:** Casey Delhotal (P&GA)
- Cross-border CCS will be critical to the decarbonization efforts of the Asia Pacific region.
- Finding a flexible, practical, low-cost pathway that allows countries to capture CO₂ in one country, and store it in another, and seek financial benefits (tax breaks, avoided taxes, carbon credits, etc.) in either country is needed to encourage large scale development of CCS in Asia.
- In order for cross-border CCS projects to take place prior to 2030, it is critical that governments in the region reach bilateral agreements to enable and facilitate project development by the private sector.
- The Asia Natural Gas & Energy Association (ANGEA) sponsored a report by Boston Consulting Group (BCG).²⁰ The report identified key issues that need to be addressed to foster growth of standardized bilateral agreements that would accelerate cross-border CCS projects.

Other country CCS policies

- Contact Laura Logan and Brad Crabtree (P&GA)

CCS alliances, coalitions, associations

- **PQC:** Brad Crabtree (P&GA)
- **Mitsubishi Heavy Industries (MHI) Alliance:** We have a strategic carbon capture technology alliance with Mitsubishi Heavy Industries (MHI), one of the major licensors of post-combustion CO₂ capture technology. This alliance combines ExxonMobil's and MHI's years of expertise in the industry and strengthens our ability to provide customers with an end-to-end carbon capture, transportation and storage solutions in the market. The joint effort will build upon KM CDR Process® and Advanced KM CDR Process®, developed by MHI and KEPCO, the only liquid amine carbon capture technology commercially demonstrated at greater than 1 million metric tons per year.²¹
- **FuelCell Energy Collaboration:** We've partnered with FuelCell Energy to develop carbonate fuel cell technology for carbon capture. We are building a demonstration facility at the Rotterdam Manufacturing Complex to test carbonate fuel cell (CFC) technology. The CFC technology not

²⁰ Asia Natural Gas & Energy Association (ANGEA). *Cross-border CCS Study*. December 4, 2024.

²¹ *ExxonMobil, Mitsubishi Heavy Industries form carbon capture technology alliance* (November '22)

only captures CO₂ emissions but also produces low carbon power, heat, and hydrogen as co-products, enhancing the efficiency and economic viability of CCS.²²

- We are sharing our CCS expertise through participation in the **Zero Emissions Platform (ZEP)**, which advises the European Union on the deployment of CCUS under the Commission's Strategic Energy Technologies Plan. Founded in 2005, the ZEP is a coalition of stakeholders that supports CCS as a key technology for addressing climate change.
- We are a member of several regional and local organizations that support the broad deployment of CCS, including the **Asia CCUS** network, the **Carbon Capture Storage Association (CCSA)**, **Houston CCS alliance** among others.

CCS projects

North America

U.S. – Louisiana

- **POC:** Bruce Chalton (LCS)
- Combined projects have the potential to reduce existing CO₂ emissions by up to 4 million metric tons per year.
- **CF Industries (October 2022):**
 - In June '25, [CF began flowing CO₂](#) from their ammonia facility in Donaldsonville, Louisiana, into our U.S. Gulf Coast CCS System. As we ramp up to transport and permanently store up to 2 million metric tons annually, we'll enable CF to produce about 1.9 million tons of low-carbon ammonia on an annual basis.
 - [The next step:](#) securing our Class VI permit from the EPA, which will enable us to transition from permanently storing CO₂ through enhanced oil recovery to dedicated, permanent storage.
- **EnLink (October 2022):** *[We are not talking externally about the status of the Pecan Island transportation and storage agreement.]*
- **Nucor (June 2023):** ExxonMobil and Nucor Steel have entered into a definitive agreement for the capture, transport and storage of up to 0.8 million metric tons of CO₂ per year from Nucor's manufacturing site in Convent, Louisiana.
 - Under the Nucor contract, we will design, permit and install CO₂ capture facilities at Nucor's manufacturing site in Convent, Louisiana, about midway between Baton Rouge and New Orleans. We will then transport and permanently store the CO₂ deep underground. Start-up is expected in 2026.
 - The project will use much of the same infrastructure that is being developed to transport and store up to 2 million metric tons of CO₂ per year from CF Industries' facility in Donaldsonville, Louisiana.
- **NG3 (October 2024):** We have entered into a commercial agreement with NG3 (New Generation Gas Gathering project) to transport and store up to 1.2 MTA of CO₂ from their facility in Gillis, LA. NG3 will gather and treat natural gas produced in east Texas and Louisiana for delivery to U.S. Gulf Coast markets, including for LNG export. NG3 is our first natural gas processing customer — adding to our roster of industries we're serving.
- **Lake Charles Methanol II (July 2025):** We'll transport and store up to 1.1 MTA of CO₂ from Lake Charles Methanol II's (LCM II) project in Louisiana. LCM II plans to use advanced natural

²² [ExxonMobil to build CCS pilot plant with FuelCell Energy Using Carbonate Fuel Cell Technology](#) (December '23)

gas reforming and CCS solutions to produce low-carbon hydrogen. This hydrogen will be converted into blue methanol, supporting decarbonization across global chemical and energy industries.

- Why is this important?
 - We are providing a scalable solution to reduce CO₂ emissions from major manufacturers.
 - It supports Louisiana's plan to reduce the state's CO₂ emissions to net-zero by 2050.

U.S. – Texas

- **POC:** Bruce Chalton (LCS)
- **Linde (April 2023):** ExxonMobil will transport and permanently store up to 2.2 MTA of CO₂ from Linde's new clean hydrogen plant in Beaumont, TX.
- **Calpine (April 2025):** ExxonMobil to transport and permanently store up to 2 million metric tons per year of CO₂ from Calpine's Baytown Energy Center, a cogeneration facility. This is part of Calpine's Baytown CCS Project that is designed to capture the facility's CO₂ emissions,²³ enabling the 24/7 supply of low-carbon electricity. Calpine plans to produce ~500 megawatts of reliable low-carbon electricity, enough to power >500,000 homes.
- **Rose injection/storage project:**²⁴
 - ExxonMobil has obtained the rights to approximately 13,000 acres of permanent underground storage in Jefferson County.
 - The project includes an 18-mile pipeline to connect the storage site with area industry.
 - ExxonMobil submitted a Class VI permit application for the project to the EPA and the Railroad Commission of Texas in early 2024.
 - CO₂ injection is expected to begin after EPA and the Texas RRC have approved our Class VI permit.

U.S. – LaBarge, Wyoming

- **POC:** Greg Pulliam (P&GA)
- The LaBarge asset (specifically the Shute Creek Facility) is in operation and is capturing more CO₂ than any other facility in the world to date.
- The expansion project will capture up to 1.2 million metric tons of CO₂, in addition to the 6-7 million metric tons captured at LaBarge each year.
- The CCS expansion project at LaBarge remains on track. We estimate startup to be in 2025.
- Estimated \$400 million investment advances ExxonMobil's commitment to reducing CO₂ emissions from our operations.
- This expansion will reduce 3% of our upstream operated emissions.²⁵
- Our Shute Creek (Wyoming) Gas Plant started operations in 1986.
- **[If asked: The expansion project is designed for CO₂ sequestration. The facility currently disposes of excess CO₂ along with hydrogen sulfide into two acid gas injection wells.]**

Canada

- **POCs:** Bryan Healey (Imperial LCS), Lisa Schmidt (Imperial P&GA)
- Imperial has identified potential CCS opportunities to help reduce greenhouse gas emissions intensity at its facilities in Canada.

²³ Calpine's Baytown CCS Project is designed to capture 95% of the facility's CO₂ emissions.

²⁴ [Rose carbon capture and storage project](#) (EMPCo website)

²⁵ [ExxonMobil to expand carbon capture and storage at LaBarge, Wyoming, facility](#) (February 2022)

- The company continues to collaborate with industry partners and government on supportive public policy and refine economics in support of a favorable project investment decision.
- Imperial also has stood up a Low Carbon Solutions organization to help customers find ways to decarbonize their businesses.

Canada – Pathways

- Imperial is a founding member of the Pathways Alliance, which accounts for up to 95% of oil sands production in Canada.
- Imperial is a founding member of the Pathways Alliance, which is proposing to build a carbon capture and storage network in Alberta. The project would see CO₂ captured from approximately 20 oil sands facilities and transported nearly 400 kilometers by pipeline to the Cold Lake area, where it would be stored underground in a joint carbon storage hub.
- In the fall of 2022, the Government of Alberta selected the Pathways Alliance proposed carbon capture and storage hub, near Cold Lake, to advance to the next phase.
- Engineering work is underway and Pathways is currently working on detailed evaluation of the proposed hub.
- Pathways Alliance continues to work with federal and provincial governments to obtain sufficient levels of fiscal support and the required regulatory approvals necessary to make this project a reality.

Canada – Medicine Hat

- We (Imperial) are working with the City of Medicine Hat (located in southeast Alberta) to explore the potential for a carbon capture and storage hub in the area. We are still very early in the assessment process.
- Imperial has applied to the Province of Alberta to transfer the local pore space rights (Carbon Sequestration Exploration Agreement) from the City of Medicine Hat.²⁶
- The project would be designed to transport and store carbon dioxide from local industries.
- Feasibility work is underway, with plans to drill appraisal wells in early 2025 to gather more information in the area.
- If feasible and approved, operations could potentially start up later this decade.
- We are meeting with local stakeholders and sharing more information about the potential project.
- Any final investment decision would be based on several factors, including government support and regulatory approvals, market conditions and economic competitiveness.

Canada – Cold Lake

- Imperial is evaluating a carbon capture project in Cold Lake. Early design and engineering work is underway, with potential startup later this decade, if the project is approved.
- This project has the potential to be one of the first CCS projects to move forward within the Pathways Alliance initiatives. Early work continues on the foundational carbon storage hub project for the Pathways Alliance, which is now working to obtain a carbon sequestration agreement from the Government of Alberta in the Cold Lake region. Imperial's carbon storage area is part of the Pathway's planned pore space application.

²⁶ [Project Clear Horizon Carbon Sequestration Evaluation Agreement assigned to Imperial](#) (February '25)

Asia Pacific

POC: Egon Van Der Hoeven (LCS)

Australia

- We hold a 25% interest in Gorgon, a Chevron-operated project off the western coast of Australia. Shell is also a primary interest holder.
 - The Gorgon CCS facility has captured 10 million metric tons of CO₂ since startup, and our equity share of that total is 2.5 million metric tons.
 - Chevron/Shell/EM awarded GHG assessment permit G-20-AP in Australian 2023 bid round, located offshore Western Australia adjacent to existing operations on Barrow Island.
 - Any questions regarding the current status of operations should be directed to Chevron. Performance issues associated with that project do not necessarily translate to similar CCS projects elsewhere in the world, as they are specific to the local geology of the area.
- Since 2022 we have been progressing the South East Australia Carbon Capture and Storage project (SEA CCS) to determine the potential for CCS in the broader Gippsland Basin and we have now completed front-end engineering and design work to evaluate the suitability of the Bream field as a suitable storage location for CO₂.
 - While we are not proceeding with the initial Bream development concept, we continue to explore alternative options for development of the SEA CCS project, including alternative ways to develop the Bream reservoir as a storage location, as well as screening other larger gas fields that are currently still producing gas.
- The Gippsland Basin Joint Venture, a 50-50 JV between Woodside Energy (Bass Strait) and Esso Australia, has entered into agreements with Air Liquide Australia, and separately with BOC, to capture and reuse CO₂ extracted from Gippsland gas.
 - Under the long-term CO₂ supply agreements, Air Liquide and BOC have built a CO₂ processing and purification facilities next to the Longford gas plants.
 - Esso will capture and send excess CO₂ from the Longford gas conditioning plant to Air Liquide and BOC, who will then process and provide CO₂ to Australian businesses for reuse.
 - Construction of both facilities and modifications to the Longford gas conditioning plant are complete and commissioning has commenced.

China *[if asked]*

- In June 2022, we signed an MOU with CNOOC, Shell and the Guangdong Provincial Development and Reform Commission to pursue a world-class CCS project at the Dayawan Petrochemical Industrial Park. A CCS hub at Dayawan could capture up to 10 million metric tons of CO₂ per year to help reduce emissions from our operations and other partners' assets in the industrial park, subject to the joint study. It would potentially be one of the largest CCS projects in the world.
- In January 2023, we signed a Joint Study Agreement (JSA) with CNOOC, Shell, and Guangdong Provincial Development and Reform Commission to progress joint study for a potential CCS project at the Dayawan Petrochemical Industrial Park.
- In August 2023, Chinese Central Government announced plans to boost funding for demonstration projects featuring advanced green and low-carbon technologies (including

CCUS/CCS). With this policy, fiscal and financial support from local and central government through budgetary finances and other incentives will be in place for selected demonstration projects. In April 2024, six CCUS projects were selected by the National Development and Reform Commission (NDRC) in the first batch of 47 demonstration projects.

- The Dayawan CCS project partners progressed the joint study to better define the technical basis and regulatory and policy support framework required to activate phase 1 of the project, with the pre-feasibility study completed in early 2024.
- ExxonMobil continuously evaluates its global portfolio of businesses and opportunities for growth, restructuring or divestment, depending upon fit with its overall strategic business objectives
- Upon careful consideration, ExxonMobil decided to prioritize other competing investment opportunities in our global CCS portfolio that offer better clarity and certainty of economic viability.
- China's CCS market is important to ExxonMobil. We remain committed to enhancing our strategic collaboration with the Guangdong province by continuing to monitor and evaluate opportunities in supporting the low-carbon transition of the Guangdong province.

Indonesia

- Since the signing of an MoU between ExxonMobil and Pertamina in 2021, both parties have further committed to establishing a regional Carbon Capture and Storage (CCS) hub. This includes advancing technical and commercial study of a targeted injection site and advocating for the supportive policy and regulations with the Government of Indonesia which is essential in progressing CCS commercial development. Currently, ExxonMobil is progressing a Joint Venture (JV) agreement with Pertamina to jointly submit a carbon storage license application to the Ministry of Energy.
- We are encouraged by the issuance of the Presidential Regulation on Carbon Capture and Storage and the subsequent Ministerial Regulation. These regulations represent significant milestones in providing frameworks for Indonesia's journey toward emission reduction leadership in the region while benefiting the country's economic growth.
- We look forward to collaborating with the administration to develop further implementing regulations, including attractive fiscal policies, cross-border transport, and commercial frameworks. These measures are essential to boost this new industry, potentially positioning Indonesia as the region's leader in achieving its net-zero target.
- ExxonMobil supports Indonesia's endeavor to work with neighboring governments to progress the CCS cross-border mechanism benefiting the region and Indonesia by bringing in investments in rapidly growing sustainable industries.
- We believe the implementation of CCS technology will attract new investments for Indonesia and align with the upcoming administration's priorities in achieving the Net Zero Emission (NZE) target.

Japan

- In September 2024, Mitsubishi Corporation, Nippon Steel Corporation, ExxonMobil, Mitsubishi Chemical Corporation, and Mitsubishi Corporation Clean Energy Ltd. were commissioned by Japan Organization for Metals and Energy Security (JOGMEC) to conduct a feasibility study for building an overseas CCS value chain targeting emissions in the Ise Bay area. This expands on an earlier study in 2023.

Malaysia

- *[For any external inquiries, contact Casey Delhotal (P&GA) for guidance.]*

Singapore

- ExxonMobil and Shell have formed a consortium, called S-Hub, which has been selected to work with the Government of Singapore as lead developers for a cross-border carbon capture and storage (CCS) project.
- S-Hub and the Singapore Economic Development Board (EDB) signed a Memorandum of Understanding in December 2023 to coordinate the planning and development of a CCS project.
- The project is expected to be capable of capturing and permanently storing at least 2.5 million tons of CO₂ per year, by 2030.
- The S-Hub project plans to capture and securely store CO₂ emissions from Singapore deep underground or under the seabed. Storage sites will be selected after undergoing rigorous analysis to ensure their suitability.
- We are seeing interest in the AP region, including Singapore, for low-carbon ammonia²⁷ that can be produced from our Baytown Blue Hydrogen project.

South Korea

- In May 2024, PT Pertamina (Persero), Korea National Oil Corporation (KNOC), and ExxonMobil entered a strategic partnership to advance transboundary carbon capture and storage (CCS) initiatives between Korea and Indonesia, which is formalized in a framework agreement.
- The collaboration leverages the expertise of all three companies to accelerate the development of solutions for carbon reduction within the region by identifying potential areas for collaboration, through the value chain, for the development and commercialization of CCS projects between Indonesia and Korea.

Europe

POC: Michael Foley (LCS)

Belgium

- We are participating in a multi-stakeholder CCS project at the Port of Antwerp, Europe's largest integrated energy and chemical cluster.
- The project, known as Antwerp@C, would collect CO₂ emissions from industrial sources in the Port for storage, potentially capturing 8 million metric tons of CO₂ annually by 2030 – a 50% reduction in the area's CO₂ emissions.
- The other members of the Antwerp@C project are TotalEnergies, BASF, INEOS, Fluxys, Borealis, Air Liquide and the Port of Antwerp.
- Antwerp@C CO₂ Export Hub receives 144,6 million of EU funding for CO₂ capture infrastructure.

Netherlands

- We have signed a joint development agreement (JDA) to advance our interest in the Port of Rotterdam CO₂ Transportation Hub and Offshore Storage (Porthos) project.

²⁷ [Keppel and ExxonMobil to explore low-carbon ammonia solutions for Singapore](#) (April 2023)

- Porthos is a partnership between the Port, Gasunie and the Dutch government-owned EBN. We are a potential customer, along with Shell, Air Liquide and Air Products.
- The Porthos project aims to collect approximately 2.5 million metric tons of CO₂ emissions from industrial sources per year and transport them via pipeline to depleted natural gas fields in the North Sea.
- In June 2022, we signed a cooperation agreement with Neptune Energy, Rosewood Exploration and EBN to progress a CCS project in the depleted L10 natural gas field in the Dutch North Sea.
- The project has the potential to capture 4-5 million metric tons of CO₂ annually and is in Pre-FEED.
- We are party to a cooperation agreement with Shell as part of the Shell Offshore Carbon Storage venture (SOCS) in the Netherlands. This venture aims to develop several stores using the Aramis infrastructure offering capacity to customers from 2029/2030 onwards.

United Kingdom

- Acorn:
 - ExxonMobil, through its affiliate Esso Exploration and Production UK Limited, as a partner in the SEGAL (Shell Esso Gas & Associated Liquids) system, has signed a Memorandum of Understanding with the Acorn project in northeast Scotland.
 - The project is exploring the potential to capture CO₂ from industrial facilities, including the St. Fergus gas processing complex, and transport it to depleted offshore natural gas fields for safe, secure and permanent storage. SEGAL owns one of the three gas terminals at St. Fergus.
 - We are awaiting confirmation of next steps for Acorn and Scottish Cluster.
- The Solent Cluster **[if asked]**:
 - Due to lack of policy certainty and timelines, we will not proceed with this project at this time. Still, we're committed to reducing emissions and progressing large-scale emission reduction projects when there is supportive policy in place.
 - We are committed to reducing emissions from our operated assets.
 - We continue to evaluate a range of emissions reductions solutions in the UK, but we have decided not to progress appraisal of CO₂ storage opportunities in the English Channel at this time.
 - Our investment decisions are informed by several factors including the policy, fiscal and market environment.
 - Over the past three years, we have made sustained efforts with UK government to secure this certainty and enable the large-scale investment required and will continue to collaborate to address the necessary factors needed.
 - We are actively evaluating the potential for decarbonization projects that can deliver meaningful emissions reductions at our operational sites.
- UK Southern North Sea (SNS) CCS Licenses
 - We are participating in several appraisal licenses in the UK Southern North Sea after successful bids within the first UK licensing round.
 - We will comply with the terms on the storage licenses we were awarded. However, maturation of these opportunities into viable business opportunities is impacted by the uncertainty on CCS policy.

Middle East

POC: Khaled Maherzi (LCS)

- We are evaluating opportunities across the region to progress emissions reduction.

Qatar

- We are a partner in several joint ventures with Qatar Energy that operate a CCS project at Ras Laffan. The project has the capacity to capture 2.1 million metric tons of CO₂ per year.
- The project, which came online in 2019, is the largest CCS facility in the Middle East. QatarGas is the operator. Our equity in the project's capture capacity is about 600,000 metric tons per year.

CCS public content

News releases / LinkedIn announcements

- [Lake Charles Methanol II "LCM II"](#) (July '25)
- [Calpine, ExxonMobil sign CO₂ transportation and storage agreement for power generation project](#) (April '25)
- [Bringing carbon capture and storage to scale](#) (April '25)
- [Carbon capture - A transformative business for Indonesia](#) (April '25)
- [New Generation Gas Gathering "NG3"](#) (October '24)
- [ExxonMobil secures largest CO₂ offshore storage site in the U.S.](#) (October '24)
- [Khaled bin Mohamed bin Zayed Witnesses Signing Ceremony for ADNOC and ExxonMobil Partnering in World's Largest Low-Carbon Hydrogen Facility](#) (September '24)
- [ExxonMobil signs carbon capture agreement with CF Industries in Mississippi](#) (July '24)
- [NTU Singapore, ExxonMobil and A*STAR launch S\\$60 million corporate lab for low carbon solutions](#) (April '24)
- [ExxonMobil and Shell selected to work with the Government of Singapore on a carbon capture and storage value chain](#) (March '24)
- [ExxonMobil to build CCS pilot plant with FuelCell Energy Using Carbonate Fuel Cell Technology](#) (December '23)
- [ExxonMobil completes acquisition of Denbury](#) (November '23)
- [ExxonMobil announces acquisition of Denbury](#) (July '23)
- [Scaling up carbon capture and community investments in Louisiana](#) (June '23)
- [ExxonMobil signs carbon capture agreement with Nucor Corporation, reaching 5 MTA milestone](#) (June '23)
- [Linde Signs Agreement with ExxonMobil for Carbon Dioxide Off-take](#) (April '23)
- [ExxonMobil, Mitsubishi Heavy Industries form carbon capture technology alliance](#) (November '22)
- [Landmark emissions-reduction project in Louisiana announced; CF Industries, ExxonMobil, EnLink Midstream to collaborate](#) (October '22)

ExxonMobil Articles

- [How we're capturing carbon and storing it safely](#) (May '25)
- [2024: A breakout year for our carbon capture and storage business](#) (January '25)
- [Excitement in the air: insights from our direct air capture \(DAC\) pilot](#) (September '24)
- [Real-life training to keep you safe](#) (May '24)

Direct Air Capture (DAC)

Overview & Strategy

- **SME:** Matt Reeves (LCS)
- One of the most promising emerging technologies is Direct Air Capture (DAC), which can capture CO₂ directly from the atmosphere and has the potential to offset other emissions from hard to abate sectors.
 - DAC uses adsorbent materials to remove CO₂ directly from the atmosphere. It creates a truly carbon negative solution to offset the hardest to abate sources of emissions. It is also more flexible than point source capture because it can be deployed anywhere.
- Recent IEA Net Zero and IPCC Scenarios highlight it as an important part of the solution: they estimate that the world needs around 400 MTA to up to 1 billion tons of CO₂ removal via direct air capture per year by 2050.
- But the key challenge with direct air capture technology is cost – how to efficiently capture CO₂ from dilute sources, somewhere in the range of 400 ppm – while economically scaling up the process.

DAC at ExxonMobil

- We are running a pilot at our Baytown, Texas manufacturing site.²⁸ The focus of this prototype is to prove the technical feasibility of our unique DAC platform. Our intention is to take the information we gain and use it to improve the technology for the next iteration, to eventually build a commercial- scale and economically viable system.
- We plan to play a lead role in accelerating the development of cost competitive and scalable DAC technology.
- We have been working on DAC technology for years and have gained great insight into what is needed to advance this breakthrough solution.

DAC policy

- **SME:** Alison Hills (P&GA)
- The high costs of negative-emissions DAC technology underscore a need for greater incentives (than 45Q) for developers to progress technological innovation and advancement.
- The U.S. government can play a critical role in supporting DAC project developers with demand certainty by securing commercial offtakes through a government funded/backed outlet.
- U.S. government procurement can stimulate technology research and development and deployment, thereby reducing costs and increasing effectiveness of the technology at a faster pace than the incentives available today. For instance, \$1 billion in funding could result in 1 million tons of CDR (carbon dioxide removal) emissions at a price of \$1000/ton.
- Such a DAC-based fund and market also provides the government the chance to define minimum specifications for high-integrity carbon credits allowed to trade in the market.
- Existing policy (U.S. IRA) can be leveraged to increase demand certainty for project developers by enabling them to apply DAC credits to policies for hydrogen (45V), power (45Y), lithium (45X), and biofuels (45Z), as well as the U.S. EPA power plant rules. This “DAC pairing” would help establish a robust CDR market and stimulate development of negative emission technologies.

²⁸ [Excitement in the air: insights from our direct air capture \(DAC\) pilot](#) (September '24)

Low Carbon Data Centers (LCDC)

- **SME:** Yvonne Moret (LCS)
- There has been much recent conversation about the strategic importance of AI and the tech industry's tremendous need for power to enable it.
- ExxonMobil is uniquely able to address this need with a low carbon solution using natural gas power generation, abated by carbon capture and storage.
 - We are the largest producer of oil and gas in the U.S. and are working to increase our Permian basin production (to approximately 2.3 MBD) and liquified natural gas (LNG) portfolio (to 40 MTA) by the end of the decade.²⁹
 - We own and operate the first and largest integrated CCS system in the U.S. and the world³⁰ with approximately 1,300 miles of pipeline connecting customers and permanent storage sites, most of which is in the U.S. Gulf Coast.
- We plan to use a state-of-the art carbon capture unit to capture over 90% of the CO₂ emissions from power generation and transport it to permanent storage sites with our CCS system.
- We are closely working with potential customers, partners, and suppliers in real time with strong interest.
- **[If asked]:** *This is not a pivot from a molecule approach to an electron approach. We don't bring a lot of value creation to the power generation step in and of itself. We bring value in our ability to provide low-carbon-intensity natural gas to that power system and the ability to capture, transport and permanently store the CO₂ associated with power generation. The value proposition for low carbon data centers is on the molecules side of the equation for us.*

²⁹ [Powering the AI revolutions with reliable energy](#) (July '25)

³⁰ IHS Markit Energy Infrastructure Data

PART 4: Hydrogen and hydrogen carriers

Hydrogen overview

- **SME:** Prasenjeet Ghosh (LCS)
- Hydrogen is an energy carrier that produces zero greenhouse gas emissions when used as a fuel.
- A hydrogen carrier is a substance that can store and transport hydrogen (e.g., ammonia and methanol).
- All types of low-carbon hydrogen and hydrogen carriers are needed to achieve a lower emissions future and they may be the lowest cost options to reduce emissions in hard-to-electrify end-uses.
- ExxonMobil, the U.S. Department of Energy, and institutions around the world identify low-carbon hydrogen as one of the critical tools in reducing carbon emissions and combating climate change.
- Low-carbon hydrogen and hydrogen carriers are also versatile and can replace higher-emission fuels.
 - Where electrification is not practical or cost effective, they can be a suitable solution.
 - For example, low-carbon hydrogen can be used for industrial heating and as feedstock in chemicals, refining, steel, and biofuels manufacturing. It can also be used for heavy-duty transportation, and even in power generation.
- Fuel switching from natural gas to low-carbon hydrogen (or hydrogen carriers) is a flexible solution to reduce CO₂ emissions. It is particularly advantaged when retrofitting a facility where CCS is impractical.
- Hydrogen can also be manufactured with lower carbon emissions than conventional fuels.
 - It can be produced from various energy sources, like natural gas with carbon capture and storage (CCS) through a process called steam methane reforming, or via renewables by electrolysis of water.
 - However, producing low-carbon hydrogen today is more expensive than current energy sources, like natural gas and coal. We are working towards lowering the cost of producing low-carbon hydrogen.
- Hydrogen is odorless, and if released, rises quickly away from the ground. Hydrogen is flammable, but industry has been effectively managing this risk for decades.

Hydrogen infrastructure

- Hydrogen could be mixed with natural gas and transported using existing pipeline infrastructure.³¹ We are working with others to better define the parameters for such mixing.
- Broad deployment of CCS technology could enable increased production of low-carbon hydrogen from hydrocarbons (e.g., natural gas) or biomass.
- The Houston area anchors the world's leading hydrogen system, producing approximately one-third of the hydrogen used in the U.S. each year. The area is also home to more than half of the country's hydrogen pipelines, and one-third of the global total.³²

³¹ HyBlend: Opportunities for Hydrogen Blending in Natural Gas Pipelines (December 2022).

³²<https://static1.squarespace.com/static/5bd0cda394d71a3556faeb6c/t/6022ff8c59eed438f73aeeaa/1612906382736/Houston+Hydrogen+Whitepaper+Final.pdf>, p. 4

Ammonia overview

- **SME:** Brent Novak (LCS)
- One of the main challenges for deploying low-carbon hydrogen is the cost of transporting it over long distances. Converting hydrogen to ammonia can reduce transport costs.
 - Because ammonia can be converted to a liquid at moderate cryogenic temperatures (-30°C), it can have a much lower transportation cost than hydrogen, which requires a much lower temperature (-260°C).
- Ammonia is widely used today as an industrial and agricultural chemical, particularly in fertilizer.
- Ammonia is versatile – it is expected to have a growing role in power generation, industrial heat, and marine fuels.
- The ammonia molecule (NH_3) has no carbon and generates no CO_2 when used as fuel.
- Ammonia is typically produced using natural gas – sometimes called unabated ammonia – using a safe, well-established manufacturing process, but CO_2 is a byproduct.
- Low-carbon ammonia can be made from natural gas when CCS is used to capture and securely store the associated CO_2 . Ammonia produced this way can have >90% of CO_2 emissions removed compared to unabated ammonia.³³
- When comparing various processes for producing low-carbon ammonia, methods using natural gas with CCS can be less costly than other low-carbon ammonia production methods, particularly in locations that have access to low-cost natural gas and nearby CCS infrastructure.
- **[If asked]:** *Ammonia is toxic and must be handled with appropriate care, using sound engineering, safety, and environmental practices. Industry has been safely managing ammonia for more than a century. When combusting ammonia, appropriate NO_x management technologies will be needed.*

Hydrogen at ExxonMobil

- The hydrogen business is not new for us. Today, we are one of the largest hydrogen players in the world, producing and consuming more than 1 million tons combined each year in our refining and chemical operations.
- We are technology agnostic when it comes to how low-carbon hydrogen is produced. All types of low-carbon hydrogen are needed to help achieve a lower emissions future. Different production technologies could be advantaged depending on location-specific infrastructure, feedstock availability, and end use applications.
- We look to be a player in low-carbon hydrogen where we can add value, create a competitive advantage and meet customer demand. Today, producing hydrogen from advantaged natural gas with CCS can be deployed at scale economically. As we adapt to the growing market or develop new technologies, we may consider other hydrogen production pathways.
- CCS underpins our hydrogen business in the U.S. Gulf Coast, where we plan to produce low-carbon hydrogen and ammonia from differentiated, low-carbon-intensity natural gas sourced from our Permian assets.
- [See [Baytown-low carbon hydrogen and ammonia](#) project for additional talking points.]
- [Contact LCS marketing (Rachel Pickett) for ExxonMobil™ Low Carbon Hydrogen and ExxonMobil™ Low Carbon Ammonia brand use guidance.]
- **[If asked about white (naturally occurring) hydrogen]:** *ExxonMobil is aware of recent efforts around the world to discover underground deposits of naturally-occurring hydrogen. While the*

³³ IEA. [Carbon Capture, Utilisation and Storage – Energy System](#)

geochemical formation of hydrogen in certain deep subsurface formations is well known, there have been essentially no discoveries of significant accumulations at sufficient purity that could lead to economically viable production at scale. We continue to monitor progress as multiple public and private ventures are progressed.]

Hydrogen mobility [if asked]

- **SME:** Prasenjeet Ghosh (LCS)
- *In our current (2024) Global Outlook, hydrogen is expected to be a solution to lower emissions for commercial transportation together with higher efficiency, lower-emission conventional fuels, biofuels and electricity. We continuously monitor signposts which are incorporated in future Global Outlooks.*
- *Policies are developing for commercial transportation to support hydrogen demand and infrastructure build-out. These policies span from mandates to generate widespread demand to incentives to overcome higher cost. Current demand is limited but, per our Global Outlook, we expect it to grow.*
- *As a future hydrogen supplier, we are evaluating how best to participate in and develop the commercial transportation market. We monitor signposts and advocate for policy to develop the commercial transportation market as a strategic sector for low-carbon intensity (CI) hydrogen demand.*

Hydrogen technology

Methane pyrolysis

- **SMEs:** Prasenjeet Ghosh (LCS), Jacob Thiant (EMTEC)
- Methane pyrolysis is an emerging technology that produces hydrogen from methane with much lower, potentially zero, CO₂ emissions versus conventional reforming technology. This makes it very attractive in locations where CCS is challenged.
- Methane pyrolysis requires significantly less energy compared to other CO₂-free hydrogen generation processes (e.g., five to seven times less energy compared to hydrogen generated via renewables by electrolysis), making it significantly cost-advantaged.
- Methane pyrolysis uniquely produces two valuable co-products (versus one) – low-carbon hydrogen and solid carbon.
- Methane pyrolysis takes advantage of existing global LNG infrastructure that can supply methane feed at scale, so it can be more quickly deployed at scale.
- Scaling this technology is aligned with the core capabilities and operating experience of ExxonMobil; as a result, we are exploring opportunities in this space.

Hydrogen burners

- **SMEs:** Hector Ayala, David Spicer (EMTEC)
- ExxonMobil and Zeeco have a strategic alliance to market the ZEECO® next-generation ultra-low NO_x, 100% hydrogen ready burner. The new burner can significantly lower emissions for industry as they explore fuel switching from natural gas to hydrogen.³⁴
- We've designed a next-generation hydrogen burner for steam crackers that can operate on up to 100% hydrogen fuel. We're the first to demonstrate this technology at industrial scale.³⁵ At

³⁴ [ExxonMobil and Zeeco drive emissions reduction with next-generation ultra-low NO_x, 100% hydrogen ready burners](#) (February '24)

³⁵ 98% hydrogen was tested, the maximum concentration currently available at the site for commercial demonstration.

our olefins plant in Baytown, we've installed 44 pyrolysis burners.³⁶ Our demonstration achieved a 90% reduction in direct CO₂ emissions.³⁷

Hydrogen policy

- **SME:** Brad Crabtree (P&GA)

Context

- Significantly reducing greenhouse gas emissions, while continuing to meet the growing demand for affordable energy is a tough challenge to solve. We are doing both and that remains our priority.
- The policies that have been pursued to date are largely focused on limiting the supply of traditional sources of energy and trying to drive more expensive alternatives that, frankly, aren't striking a balance to simultaneously progress energy security and the energy transition.
- Transitioning to less carbon-intensive systems is going to require money. That's the challenge of the transition – it's going to be more expensive.
- And so, as a company that has a responsibility to invest and generate a return, we've got to find ways to do that without the demand or the customer base that's willing to pay for it today.
- Today, if you look at the drivers to invest in the energy transition, there aren't market forces or incentives to invest, which is why government policy is either mandating or subsidizing new energy projects.
- So we're leveraging existing policies and incentives, like 45V tax credits in the U.S., as a catalyst to get started while we work on the technologies to lower the cost – we call these “project-enabling” policies.
- Ultimately, we need to transition away from “project-enabling” policies to market-driven investments – that's what's needed to successfully roll this out across every economy around the world. No government can afford to subsidize the energy transition forever.
- It's time for a thoughtful and pragmatic approach that leverages the power of the market and the expertise of the business community.

Global hydrogen policy principles

- Energy policy must account for security, affordability, reliability and environmental stewardship. We advocate for policy that takes a balanced view of each category.
- Since low-carbon hydrogen and hydrogen carriers are currently more expensive than incumbents, sustained market-forming policy will be needed to grow end-use markets.
- Policies should be technology neutral, based on a transparent value of carbon, and account for the carbon intensity of hydrogen production using a Lifecycle Assessment (LCA) approach.
- We support policies that allow all types of low-carbon hydrogen to compete on a level playing field, regardless of the energy source from which it is produced.
- Key enablers for investment in projects to supply low-carbon hydrogen and hydrogen carriers include:
 - Adequate and durable government fiscal incentives to support production of all low-carbon hydrogen and hydrogen carriers at scale
 - A cohesive legal framework for all segments of the value chain
 - Government support for demand-side market and infrastructure development
 - Incentives for technology development, including intellectual property protection

³⁶ Baytown breakthrough: Our next-generation hydrogen burner can help decarbonize a key industry (January '25)

³⁷ ExxonMobil calculation based on fuel composition during testing relative to the baseline average fuel composition of the furnace.

United States

- **SME:** James Dunlap (P&GA)
- Any policy definition of “clean” or “low-carbon” hydrogen should be based on carbon intensity evaluated on a full life-cycle approach basis.

45V Hydrogen tax credit

- **SME:** James Dunlap (P&GA)
- If we move forward with our hydrogen project we will be turning natural gas into virtually carbon-free hydrogen (with 98% of the carbon dioxide captured and stored) at our Baytown facility.
- This would be the world’s largest facility of its kind and is expected to produce 1 billion cubic feet (~900 kta) of hydrogen daily.
- The finalized 45V rules (January ’25) for the hydrogen production tax credit were a key step forward.
 - We’re pleased that the rules recognize the benefits of differentiated natural gas and the acknowledgment of our distinctive CCS technology that leverages excess steam for power production.
 - However, we are disappointed that under the [July ’25] approved 45 tax credit, timing for startup of construction was shortened from 2033 to the beginning of 2028. While our project can meet this timeline, we’re concerned about the development of a broader market, which is critical to transition from government incentives.
 - If we can’t see an eventual path to a market-driven business, we won’t move forward with the project.
 - We’re working to determine if the combination of 45Q and a shortened 45V will provide the support needed to catalyze a broader low-carbon hydrogen market.
 - We’re also working to translate heads of agreements into firm sales contracts, including exports of ammonia to Asia and Europe and domestic hydrogen sales.
- Projects like ours can help supply essential energy products to the U.S. and the rest of the world, create jobs here at home, and offer a new application for U.S.-produced natural gas.
- A strong U.S. hydrogen production capability is another component of energy security and puts the country in a strong position in the marketplace against foreign sources of low-carbon energy.

United Kingdom

- **SME:** Jonathan Dredge (P&GA)
- Durable and predictable policy is needed as the foundation for investment in hydrogen production. The Hydrogen Production Business Model (HPBM) is well understood, and we welcome the private law contract approach. However, further policy clarity is needed to derisk investment, that includes:
 - Confirmation of the potential role of CCUS-enabled hydrogen in the UK, along with the approach and timing for access to the HPBM.
 - Design of the proposed Gas Shipper Obligation as a long-term and sustainable funding mechanism
- We welcome the technology agnostic carbon intensity based Low Carbon Hydrogen Standard (LCHS). Providing the option for hydrogen developers to input their actual carbon intensity based on emissions will incentivize greater emissions reductions and promote innovation.

- Confirmation is needed on the approach to upstream natural gas emission framework to support differentiation between different sources of natural gas.

Europe

- **SME:** Bert De Backker (P&GA)
- *[Note: EU terminology for “low-carbon hydrogen” refers to pink and blue hydrogen and excludes green hydrogen; in this document it means all forms of low-carbon hydrogen.]*
- A reset of the current EU hydrogen strategy is urgently needed as EU industry is under high competitive pressure³⁸ and needs pragmatic, low-cost solutions not offered by the current policy.
 - The reality is that despite significant funding support and an extensive regulatory framework, the current EU policy does not activate the low-carbon hydrogen market required to meet EU GHG emissions reduction targets. This is because it is not technology neutral and lacks a pragmatic approach in technical regulations (e.g., its GHG methodologies).
 - Renewable hydrogen is part of the solution but it lacks scalability and, in many regions across the EU, its current high production cost is prohibitive to large scale deployment.
 - As a result, hydrogen demand also lacks the scale to justify required infrastructure investments like the EU hydrogen backbone.
- We think that for the EU to progress towards its GHG reduction targets, all types of low-carbon hydrogen will be needed. It is in the EU interest and paramount to competitiveness of its industry to provide a level playing field between all forms of hydrogen produced locally or imported.
- The EU can benefit from openness to international trade in renewable and low-carbon hydrogen carriers which has the potential for huge societal benefits as demonstrated in a recent joint report by the Hydrogen Council and the International Hydrogen Trade Forum.³⁹ It highlights the opportunity (blue) hydrogen or ammonia exports from the U.S. to the EU can bring, specifically for some of the current major hydrogen consuming countries where domestic renewable hydrogen is currently very expensive.

Asia Pacific ammonia policy

- Supportive policies in countries like South Korea and Japan are driving interest in low-carbon ammonia for power generation and industrial uses.

Other country policies

- Contact Laura Logan and Brad Crabtree (P&GA)

Hydrogen issues and advocacy

Hydrogen Emissions [if asked]

- **SMEs:** Bert De Backker (P&GA), Steve Kellogg (LCS)
- *An area of emerging attention is the effect that hydrogen emissions have on climate change.*
- *The primary mechanisms by which hydrogen indirectly affects climate are fairly well understood. For example, more hydrogen in the atmosphere prolongs the life of methane, as it*

³⁸ See Draghi report on ‘The future of European competitiveness’: [part A](#) / [part B](#)

³⁹ ‘Emerging trade corridors for hydrogen and its derivatives’ 13/5/24. Note: the IHTF is a forum of governments co-operating on international H2 and derivatives trades including key EU countries

reacts with molecules (hydroxyl radicals) that would otherwise breakdown methane, which is a potent greenhouse gas.

- *Most of the world's new hydrogen value chains have yet to be designed and built, which provides an opportunity to address hydrogen emissions from the outset.*
- *We support the development of infrastructure design standards and emissions detection technologies that would help identify, quantify, and address hydrogen emissions.*
- *We will continue to monitor the atmospheric science and the global warming potential ("GWP") estimates of hydrogen, and will work with academics and other stakeholders to develop technology solutions.*

EDF Hydrogen Study [if asked]

- **SME:** Bert De Backker (P&GA), Steve Kellogg (LCS)
- **Background (for internal use):** Establishing routine and accurate hydrogen emission measurements requires further research and development. Environmental Defense Fund (EDF) is collaborating with Aerodyne Research to develop a mobile hydrogen emissions measurement technology. ExxonMobil scientists are working with the EDF-Aerodyne team to learn more about their technology due to the limited information in the public domain. Many organizations - including the U.S. Department of Energy and ExxonMobil - have active hydrogen sensor research programs to advance emissions measurement technologies.
- **Response [if asked] (for external use):**
 - *We are aware of the Environmental Defense Fund's publication on hydrogen emissions [Feb. 21, 2024]⁴⁰.*
 - *We agree with EDF on the need for robust assessment methods and data to ensure that hydrogen's potential is achieved in practice, and that it is important to get emissions measurements and reporting "right."*
 - *ExxonMobil supports development of infrastructure design standards, emissions detection technologies and sound government policies that would help identify, quantify, and address hydrogen emissions.*
 - *Hydrogen emissions sensing is still a nascent technology. In contrast to methane, there are no current technologies for remote hydrogen emission detection over large areas (e.g., via satellite).*
 - *We look forward to working collaboratively with policymakers, and other interested parties to increase understanding of hydrogen emissions and to develop additional solutions to progress a safe, environmentally beneficial hydrogen economy.*

Hydrogen & ammonia alliances, coalitions, associations

- In November 2024, the **HyVelocity Hub** executed a cooperative agreement with the U.S. Department of Energy to receive a grant for up to \$1.2B to build and expand low-carbon hydrogen and hydrogen infrastructure across Texas and the Gulf Coast. These projects will integrate hydrogen with natural gas value chains and carbon capture, showcasing its potential to support regional economies, job creation, and energy dominance, security, and reliability. HyVelocity is sponsored by six companies, including ExxonMobil, and is administered by GTI Energy.⁴¹
- We are a member of the U.S. DOE **HyBlend** consortium, a collaborative R&D project designed to address the technical barriers of blending hydrogen into natural gas pipeline streams. The

⁴⁰ <https://www.edf.org/media/hydrogen-could-have-much-bigger-climate-impact-most-estimates-study-shows>

⁴¹ [Gulf Coast Hydrogen Hub Officially Launches](#) (November '24)

group includes U.S. national laboratories and more than 20 participants from industry and academia.

- Since May 2023, ExxonMobil has been a member of the **Hydrogen Council**, a global CEO-led initiative that brings together leading companies with a united vision and long-term ambition for hydrogen to foster a lower-emission future.
- We are a member of the **Clean Hydrogen Future Coalition** (CHFC) in the U.S, a diverse group of stakeholders brought together to promote clean hydrogen as a critical pathway to achieve global decarbonization objectives while also increasing U.S. global competitiveness.
- We are a member of the **Texas Hydrogen Alliance**, an industry alliance to educate and advocate for effective policies, legislation, and rulemaking that will enable and incentivize the growth of a hydrogen economy and markets.
- We are a member of the **Ammonia Energy Association**, a global non-profit industry association whose mission includes the decarbonization of ammonia in existing sectors and the adoption of low-emission ammonia as a fuel and energy carrier to decarbonize other sectors.
- In Europe, we are members of the **European Clean Energy Hydrogen Alliance** and **Hydrogen UK**.

Hydrogen & ammonia projects

North America

Baytown low-carbon hydrogen and ammonia project

- **POC:** Chris Duffy (LCS)
- **Project:** In Baytown, Texas, we are developing what would be the world's largest low-carbon hydrogen production facility. This planned state-of-the-art facility could produce up to 1 billion cubic feet daily of low-carbon hydrogen, which represents approximately 10% of the U.S. National Clean Hydrogen Strategy's goal for clean hydrogen production by 2030 (10 million metric tons).⁴² We'll also produce more than 1 million tons of low-carbon ammonia per year.
- Final investment decision is contingent on supportive government policy, necessary regulatory permits, and market conditions. So we may say slip versus the original timing.
- **Customers:**
 - We're working to translate heads of agreements into firm sales contracts, including exports of ammonia to Asia and Europe and domestic hydrogen sales.
 - ExxonMobil will supply approximately 250,000 tonnes of low-carbon ammonia annually on a long-term basis to Marubeni. Marubeni will supply the ammonia mainly to Kobe Power Plant, a fully owned subsidiary of Kobe Steel, Ltd. (Kobe Steel).⁴³
 - The remainder of low-carbon hydrogen and ammonia offtake will be made available for third-party customers and used to reduce our own greenhouse gas emissions.
 - Agreements for potential low-carbon ammonia offtake with Mitsubishi Corporation⁴⁴ and Trammo⁴⁵ show confidence in our project and will help accelerate market

⁴² U.S. National Clean Hydrogen Strategy and Roadmap. <https://www.hydrogen.energy.gov/library/roadmaps-vision/clean-hydrogen-strategy-roadmap>

⁴³ Marubeni and ExxonMobil's low-carbon ammonia deal marks major step in unleashing new energy supply (May '25)

⁴⁴ Mitsubishi Corporation and ExxonMobil sign Project Framework Agreement to advance world's largest low-carbon hydrogen project (September '24)

⁴⁵ ExxonMobil and Trammo sign HOA for low-carbon ammonia offtake, advancing the world's largest low-carbon hydrogen project (January '25)

development. *[Internal note: we are no longer externally talking about the ExxonMobil and JERA Project Framework Agreement (PFA).⁴⁶]*

- **Equity partners:**
 - ADNOC (Abu Dhabi National Oil Company) acquired a 35% equity stake in Baytown Hydrogen & Ammonia Company. Bringing on the right partners will help accelerate market development, and we're pleased to add ADNOC's proven experience and global market insights to our project.⁴⁷
 - Marubeni has also agreed to acquire an equity stake in ExxonMobil's low-carbon hydrogen and ammonia facility.⁴⁸
 - We've signed a project framework agreement with Mitsubishi Corporation to explore their participation in our low-carbon hydrogen and ammonia facility.⁴⁹
- **Environmental impact:** We anticipate about 98% of the CO₂ generated by the hydrogen facility will be captured and permanently stored – approximately 7.5 million metric tons annually. Using low-carbon hydrogen as an energy source instead of methane will significantly reduce greenhouse gas emissions for us and our customers. Using low-carbon hydrogen as a fuel at our Baytown facilities could significantly reduce the integrated complex's Scope 1 and 2 CO₂ emissions. It will also enable us to manufacture products with a lower carbon intensity.
- **Competitive advantages:** We have made advantaged investments, which enable access to low-cost, differentiated natural gas – a critical resource for hydrogen production. Baytown is a strategic location, a major demand center, where we're positioned to build at scale and meet the growing appetite for clean energy. Our facility benefits from the largest CO₂ pipeline network in the U.S. (and the world) and proximate pore space for safe and permanent storage of captured CO₂.
- **Other participants:**
 - Air Liquide [agreement](#) enables transportation of low-carbon hydrogen from ExxonMobil's facility through Air Liquide's existing pipeline network. Air Liquide will also supply oxygen and nitrogen needed to produce low-carbon hydrogen and ammonia.⁵⁰
 - *[See [hydrogen burners](#) for Zeeco alliance talking points].*
- **Economic impact:** The University of Texas Bureau of Economic Geology, in collaboration with ExxonMobil, conducted an economic impact assessment on the lower-carbon investments ExxonMobil has planned at its existing facilities in Baytown, Texas, including associated infrastructure in the region. That assessment concluded that this project would generate:
 - 2000+ direct jobs created during peak construction
 - \$1.7B in labor income generated through indirect and induced employment benefits during construction
 - \$5B total economic output during the five-year construction period
 - \$2.7B in contributions to the state GDP during construction

⁴⁶ [JERA and ExxonMobil to Develop Low Carbon Hydrogen and Ammonia Production Project](#) (March '24)

⁴⁷ [Khaled bin Mohamed bin Zayed Witnesses Signing Ceremony for ADNOC and ExxonMobil Partnering in World's Largest Low-Carbon Hydrogen Facility](#) (September '24)

⁴⁸ [Marubeni and ExxonMobil's low-carbon ammonia deal marks major step in unleashing new energy supply](#) (May '25)

⁴⁹ [Mitsubishi Corporation and ExxonMobil sign Project Framework Agreement to advance world's largest low-carbon hydrogen project](#) (September '24)

⁵⁰ [ExxonMobil adds Air Liquide to world's largest low-carbon hydrogen project](#) (June '24)

Europe

POC: Michael Foley (LCS)

- In January 2025, Trammo, Inc. and Exxon Mobil Corporation (NYSE: XOM) have signed a Heads of Agreement (HOA) to advance discussions for Trammo's long-term offtake of 300,000 to 500,000 tonnes of low-carbon ammonia per year from ExxonMobil's Baytown, Texas facility. Trammo, a leading international physical commodity trader, will leverage its market and logistical expertise to deliver and sell in Europe and worldwide this unique low-carbon ammonia for use as fertilizer feedstock and for other key industrial applications.⁵¹

Netherlands

- Porthos is developing a project in which CO₂ from industry in the port of Rotterdam will be transported and stored in empty gas fields under the North Sea. The system is expected to be operational in 2026.
- Applying CCS on existing (grey) hydrogen production facilities to (partially) abate GHG emissions should not be ruled out as an effective abatement option. ExxonMobil and its third party hydrogen suppliers are progressing such projects linked to the Porthos CCS project in the Netherlands.⁵²

United Kingdom

- Southampton is one of the largest industrial areas in the United Kingdom and is home to our Fawley complex.
- An early feasibility study estimated a low-carbon hydrogen facility in the area could produce approximately 4.3 TWh of hydrogen per year, while also initially capturing 2 million metric tons of CO₂ annually.
- Due to lack of policy certainty and timelines, we will not proceed with this project at this time. Still, we're committed to reducing emissions and progressing large-scale emission reduction projects when there is supportive policy in place.

Asia Pacific

POC: Egon Van Der Hoeven (LCS)

Singapore

- In April 2023, we announced an MOU with Keppel to develop low-carbon hydrogen and ammonia solutions for use in Singapore. Keppel is evaluating the direct use of ammonia in gas turbines and is one of the two consortia supported by the Singapore Energy Market Authority to conduct pre-FEED for an end-to-end ammonia power generation and bunkering value chain.
- They are also evaluating the use of low-carbon hydrogen as a co-firing fuel for a 600-megawatt Keppel Sakra Cogen plant in Jurong Island, which is expected to be completed in the first half of 2026.
- We continue to engage with the authorities and interested market participants to develop demand for hydrogen and the advantages of various production pathways.

⁵¹ [ExxonMobil and Trammo sign HOA for low-carbon ammonia offtake, advancing the world's largest low-carbon hydrogen project](#) (January '25)

⁵² Rotterdam project aims to capture ~60% of the direct CO₂ emissions from our own H₂ SMR plant for transport and storage in the Porthos CO₂ storage project. This project is supported by the SDE++ CFD funding scheme in The Netherlands. See [LinkedIn post](#).

Japan

- Japan's "Hydrogen Society Promotion Act" was enacted and came into effect in October 2024. It established a system for the government to support and promote the supply and use of low-carbon hydrogen and hydrogen carriers. The application period for value chains seeking this support opened in November 2024 and closes in March 2025.
- Demand continues to develop in Japan for ExxonMobil's proposed low-carbon hydrogen and ammonia project in Baytown, Texas.
- In September 2024, Mitsubishi Corporation and ExxonMobil signed a Project Framework Agreement (PFA) and are advancing discussions regarding ExxonMobil's proposed low-carbon hydrogen and ammonia production facility in Baytown, Texas. Mitsubishi Corporation intends to partner with Idemitsu Kosan Co., Ltd for joint equity and ammonia offtake from ExxonMobil's Baytown facility.
- In May 2025, ExxonMobil and Marubeni signed a long-term offtake agreement for approximately 250,000 tonnes of low-carbon ammonia per year from ExxonMobil's facility in Baytown, Texas. Marubeni will supply the ammonia mainly to Kobe Power Plant, a fully owned subsidiary of Kobe Steel, Ltd. (Kobe Steel). Marubeni has also agreed to acquire an equity stake in ExxonMobil's low-carbon hydrogen and ammonia facility.⁵³
- *[Internal note: we are no longer talking externally about the ExxonMobil and JERA PFA.⁵⁴]*

South Korea

- Korea has an annual plan to procure power from hydrogen and hydrogen carriers such as ammonia through the Clean Hydrogen Power Supply (CHPS) scheme. Due to continued interests from Korean power generation companies & potential importers for our low carbon ammonia from Baytown, we are exploring ways to meet their interests.

Hydrogen public content

News Releases

- [Marubeni and ExxonMobil's low-carbon ammonia deal marks major step in unleashing new energy supply](#) (May '25)
- [ExxonMobil and Trammo sign HOA for low-carbon ammonia offtake, advancing the world's largest low-carbon hydrogen project](#) (January '25)
- [Mitsubishi Corporation and ExxonMobil sign Project Framework Agreement to advance world's largest low-carbon hydrogen project](#) (September '24)
- [Khaled bin Mohamed bin Zayed Witnesses Signing Ceremony for ADNOC and ExxonMobil Partnering in World's Largest Low-Carbon Hydrogen Facility](#) (September '24)
- [ExxonMobil add Air Liquide to world's largest low-carbon hydrogen project](#) (June '24)
- [ExxonMobil awards FEED for world's largest low-carbon hydrogen facility](#) (January '23)
- [JERA and ExxonMobil to develop low carbon hydrogen and ammonia production project](#) (March '24) *[Internal note: we are no longer talking externally about the ExxonMobil and JERA PFA]*

⁵³ [Marubeni and ExxonMobil's low-carbon ammonia deal marks major step in unleashing new energy supply](#) (May '25)

⁵⁴ [JERA and ExxonMobil to Develop Low Carbon Hydrogen and Ammonia Production Project](#) (March '24)

ExxonMobil Articles

- [Low-carbon ammonia: Reducing emissions, energizing industry](#) (May '25)
- [Baytown breakthrough: Our next-generation hydrogen burner can help decarbonize a key industry](#) (January '25)
- [Got 2 minutes? Learn why a new hydrogen burner could be a game-changer for industry](#) (November '24)
- [The heat is on: Getting industry hydrogen-ready](#) (February '24)
- [The hydrogen highway](#) (October '23)

NPC Hydrogen Study

- **SMEs:** Mike Kerby (CSP) or Steve Kellogg (LCS)
- Link to [Executive Summary](#)
- [Link to Full Report](#)
- [Newsroom](#) story on ExxonMobil corporate website regarding our involvement

PART 5: Lithium

- **SME:** Patrick Howarth (LCS)
- See [Lithium FAQ](#) for additional Q&A
- [Lithium Fact Sheet](#) (handout)
- *[Contact LCS marketing for Mobil™ Lithium brand guidance]*

Lithium markets

- The global lithium market is established and growing rapidly as demand for EVs and energy storage rises. For example, AI data centers use battery energy storage systems to deliver continuous power.
- Lithium demand is forecast to triple between 2023 and 2030 and keep rising through 2050.⁵⁵
- Today, U.S. production of lithium is very low [$<1\%$] compared to the rest of the world.⁵⁶ The vast majority of the world's lithium comes from China, Western Australia, and South America.⁵⁷
- All markets experience price volatility and lithium is no exception. Although the lithium market is currently soft, we take a long-term view when we invest in a project. Given that today, only a small percentage of the world's cars are electric, the EV market represents a big opportunity for long-term growth. But we'll only get there if we have enough lithium.
- The U.S. Geological Survey (USGS) study confirms the known lithium potential in the Smackover Formation, which spans 6 states (AR, TX, LA, MS, AL, FL).⁵⁸ There is theoretical potential for substantial lithium resources but only a small fraction is currently developable (similar to oil and gas resources).
- Key hurdles must be overcome to unlock the economically developable potential of the Smackover Formation (DLE technology, exploration, production, fiscal aspects).
- For these reasons, Arkansas is one of several locations we are considering for our global lithium portfolio.

Lithium at ExxonMobil

- We're focused on opportunities where we can apply our skills and capabilities to create a competitive advantage. That's why lithium makes sense: it combines our upstream skills like geoscience and reservoir management, plus our downstream skills like chemical processing, and relationships with automakers from fuels and automotive business.
- In the first half of the 2030s, ExxonMobil aims to be producing enough lithium to supply the manufacturing needs of about a million EVs per year.
- Our planned project in the Smackover formation [Arkansas] will help expand domestic supplies of a critical mineral and support the expansion of EV and battery manufacturing industries in the U.S.
- We'll also use a modern manufacturing process which in simplistic terms is three-step process:
 - First, we'll use conventional drilling methods to extract lithium-rich brine from deep underground – about 10,000 feet down, far below any drinking water supplies.
 - Above ground, we'll use a process called Direct Lithium Extraction, or "DLE", to separate the lithium ions from the brine. This lithium will be converted onsite to battery-grade materials that can be shipped to customers.

⁵⁵ IEA. [Global Critical Minerals Outlook 2024](#) (pgs. 125-127). May 2024.

⁵⁶ Energy Institute. [2024 Statistical Review of World Energy](#) (pg. 67).

⁵⁷ USGS. [Mineral Commodity Summaries 2025](#) (pg. 111). January 31, 2025.

⁵⁸ USGS. [Unlocking Arkansas's Hidden Treasure: USGS Uses Machine Learning to Show Large Lithium Potential in the Smackover Formation](#). October 21, 2024.

- Lastly, the leftover brine is safely injected back underground.
- Today, the vast majority of raw lithium ore produced from hard rock mining is shipped to China, which holds nearly all the world's lithium ore refining capacity. Our process is designed to yield lithium carbonate on-site that can be sold straight to customers, eliminating the need for refining in China.

Lithium technology

- The DLE process is expected to have significantly less environmental impact, including approximately 2/3 less carbon intensity than hard rock mining – the predominant source of lithium supply today.⁵⁹
 - While we're still in the early stage of project design, we're confident our operations will require significantly less land than current sources. We'll build a facility – about the size of a warehouse – for the DLE operations, and a limited number of satellite brine well locations interconnected with a gathering pipeline system. Each well pad might range from 1 to 3 acres – the size of a small warehouse – to accommodate the well itself, storage tanks, separation equipment, etc.⁶⁰
- *[If asked about which company we've selected as our DLE provider:]*
 - *We're actively evaluating multiple tech providers for projects across our portfolio.*
 - *That said, the team is learning a lot about the overall process flow and brine chemistry.*
 - *At the end of the day, it's less about one specific technology. What's most important is how you build a scalable end-to-end process that maximizes lithium recovery and delivers a consistent, high-quality product.*
- ExxonMobil also has a deep connection to lithium-ion battery technology. Our own Dr. Stanley Whittingham led groundbreaking research in an ExxonMobil lab in the 1970s that paved the way for the world's first lithium-ion battery. In 2019, he won a Nobel Prize in chemistry for this work.⁶¹

Lithium projects

North America

Smackover Formation

- We are pleased with the progress and speed at which we've been able to advance our business.
- We have successfully produced battery-grade lithium carbonate at our Texas pilot facility (Friendswood Lab) from brine extracted in Arkansas.⁶²
- We've completed our appraisal well drilling program, which has confirmed that we have a very attractive resource.
 - We're now evaluating the cost to build the plant and ensuring that we're best positioned and cost competitive consistent with our return expectations. This will help inform our investment decision in our first project in the Smackover and to ensure that it has a real advantage compared to other investment opportunities.
 - Furthermore, making a final investment decision is contingent on supportive regulatory frameworks and other factors.

⁵⁹ See ExxonMobil [substantiation deck](#)

⁶⁰ See ExxonMobil [substantiation deck](#)

⁶¹ [Making History: Lithium and a Nobel Laureate](#) (December 2023)

⁶² https://www.linkedin.com/posts/danammann_lithium-energytransition-ev-activity-7193957866972549120-Wj3d?utm_source=share&utm_medium=member_desktop

- We've signed MOUs with SK On and LG Chem. Each MOU opens the door to secure a multiyear offtake agreement of up to 100,000 metric tons of Mobil™ Lithium from our planned project in the U.S.^{63, 64}
 - These agreements signal demand for domestically sourced Mobil™ Lithium and support our goal of being a leading lithium supplier.
 - They also support the build out of U.S. electric vehicle and battery supply chains, which contribute to energy security.
 - **SK On**, a leading global battery maker, plans to use the lithium in its EV battery manufacturing operations in the U.S. SK On currently operates two battery plants in Commerce, Georgia, and is building four more plants through joint ventures with Ford Motor Co and Hyundai Motor Group.
 - **LG Chem** expects to use our lithium for its new cathode plant in Tennessee, set to become the largest of its kind in the U.S.
- We are not constrained by schedules as we build our new businesses. We are hard at work to deliver a competitive first lithium project which will affirm our capabilities and, currently, we estimate start-up timing in 2028. We will have a better estimate as we progress project definition.

Canada

- *[Note: we are no longer talking about E3 alliance externally⁶⁵]*
- *[If asked about E3 press release⁶⁶]:*
 - *Imperial's successful collaboration with E3 Lithium has been instrumental in advancing E3's lithium extraction pilot and progressing opportunities from the Leduc reservoir.*
 - *Both companies have agreed to a Project Completion Agreement (February 2025) for mineral lease agreements going forward.*
 - *Imperial's contribution of its freehold land leases positions E3 Lithium's Clearwater Project and E3's plans for lithium development in Alberta.*
 - *Imperial continues to look at future opportunities in the lithium space, as part of its Low Carbon Solutions business.*

Europe

Germany

- We applied for exploration licenses in Lower Saxony, an early step to evaluate lithium concentrations in the reservoirs. As part of the evaluation, we will consider technologies such as Direct Lithium Extraction (DLE), which is expected to have substantially lower environmental impacts than traditional mining.

Background (For Internal Use)

- *In 2024, ESSO Deutschland GmbH (EDG) applied for lithium exploration licenses in the German state of Lower Saxony.*
- *On December 17, 2024, the Lower Saxony Mining Authority issued a press release announcing to grant the first four licenses.⁶⁷ The press release also includes a reference to 19 more licenses*

⁶³ ExxonMobil and EV battery maker SK On sign MOU regarding U.S. produced Mobil Lithium (June '24)

⁶⁴ LG Chem and ExxonMobil sign MOU for lithium offtake (November '24)

⁶⁵ Imperial and E3 Lithium form strategic agreement on lithium pilot project in Alberta (June '23)

⁶⁶ E3 Lithium and Imperial Finalize Freehold Mineral Land for E3's Clearwater Project (March 3, 2025)

⁶⁷ State Office for Mining, Energy and Geology (LBEG). Esso Deutschland GmbH receives four license fields: LBEG approves lithium exploration. Contact P&GA for access to [English version](#).

applied for by EDG and clarifies that if EDG were to pursue extraction, the lithium would be extracted by borehole mining (extracting deep water, separating the lithium and reinjecting the water).

- *On April 10, 2025, the Lower Saxony Mining Authority issued a press release announcing ten additional license areas were allocated to Esso Deutschland GmbH.⁶⁸*

Other countries

- We have collaborations and investments all over the world and constantly evaluate opportunities to help meet society's evolving energy needs.

Lithium policy

United States

- **SMEs:** Jim Dunlap, Toby Short (P&GA)
- Today, China dominates battery materials supply chains. As global market demand continues to grow for critical minerals (graphite and lithium), new sources of supply need to come online, including from the U.S.
- The newly [February '25] created National Energy Dominance Council (NEDC) is a step in the right direction, as it recognizes the importance of critical minerals and innovation to enhance domestic energy supplies.
- The recent [March '25] White House executive order requiring federal agencies to make recommendations to the NEDC Chair, Secretary Burgum, and an upcoming request for information from the U.S. government to solicit industry feedback on regulatory bottlenecks and other recommended strategies for expediting U.S. mineral production is a good start to leveling the playing field of global battery and critical mineral supply chains.
 - This strategy should consider a comprehensive approach to build out the entire supply chain - critical minerals, cathodes, anodes, gigafactories, and end-use applications, like EVs and grid energy storage.
- The U.S. has a tremendous opportunity to boost domestic supply of critical minerals, resulting in significant economic development, increased jobs, and the ability to create a regional supply chain.
- ExxonMobil has capabilities that could support delivering on this national security imperative – we have expertise in project development, subsurface, chemicals processing.

45X credit

- 45X, the Advanced Manufacturing Production Credit, is important to incentivize domestic lithium production by providing a 10% credit on the production of lithium.
- We are pleased to see that the IRS and the Department of Treasury have considered the production and associated material costs of extraction, conversion and purification in its final rule on the 45X advanced manufacturing production credit. The durability of this tax credit is critical to jump start domestic critical mineral projects and meet national security goals.

Other country lithium policies

- Contact Laura Logan (P&GA Manager, LCS) and the regional LCS Policy Manager: Yelda Guven (EAME), James Dunlap (Americas), Kenneth Freeman (AP)

⁶⁸ State Office for Mining, Energy and Geology (LBEG). [Ten more licenses granted for lithium exploration - LBEG President Carsten Mühlenmeier: "Lower Saxony in a pioneering role". English version.](#)

Lithium public content

News releases

- [LG Chem and ExxonMobil sign MOU for lithium offtake](#) (November '24)
- [ExxonMobil and EV battery maker SK On sign MOU regarding U.S. produced Mobil Lithium](#) (June '24)
- [ExxonMobil drilling first lithium well in Arkansas, aims to be a leading supplier for electric vehicles by 2030](#) (November '23)
- [Imperial and E3 Lithium form strategic agreement on lithium pilot project in Alberta](#) (June '23)
[Note: we are no longer talking about E3 alliance externally]

ExxonMobil articles

- [Driving the automobile evolution for EVs and beyond](#) (February '25)
- [Got 2 minutes? See how we're turning brine into battery-grade lithium](#) (January '25)
- [Sneak preview: our new lithium business](#) (March '24)
- [Rock on, Jen! How a geoscientist looks for lithium](#) (February '24)
- [Making progress on lithium ... and making a difference](#) (February '24)
- [Our first lithium well – but “not our first rodeo”](#) (January '24)
- [Making history: lithium and a Nobel laureate](#) (December '23)

Carbon Materials (CM)

- **SME:** Samantha Rene (P&GA)
- **Key message:** Carbon Materials, launched by ExxonMobil in 2022, is a business venture that leverages ExxonMobil's scale and core technology capabilities to explore new markets for carbon products.
- Carbon Materials will leverage ExxonMobil's existing refineries and assets, including carbon-rich feedstock available in its current businesses, to create high-performance, high-value carbon products.
- Carbon Materials aims to supply high-performance carbon products to multiple growing market sectors, including synthetic graphite for stationary energy storage and electric vehicle applications. Other opportunities include carbon nanotubes that can enable higher cathode conductivity and anode durability in EV batteries and hard carbon for grid-scale energy storage applications.
- Using proprietary technology, Carbon Materials operations modify the molecular structure of low-value carbon feedstocks to produce advanced synthetic graphite that can deliver superior battery performance. The result is a battery with up to 30% higher capacity, 30% faster charging time, and extended battery life.
- Carbon Materials is currently working with global automotive OEMs and cellular manufacturers to validate the performance attributes of our graphite, targeting 2029 market entry, with work well underway to gain regulatory approvals and long-term commercial contracts.

PART 6: Additional content

Corporate news releases

- [ExxonMobil announces plans to 2030 that build on its unique advantages](#) (December '24)
- [Delivering unmatched value in a league of our own](#) (December '24)

Corporate articles

- [Delivering a big idea at COP29 to tackle climate change](#) (November '24)

Websites

- [Low Carbon Solutions](#) external home page
- [Inside ExxonMobil Resource Hub](#) (earnings, corporate strategy, key issues, culture, etc.)
- [Sustainability Communications Resources \(internal\)](#)

Investor Events

- **SME:** Tyler-Kate Honore (LCS)
- [2025 Annual Shareholder Meeting](#) (May '25)
- [Quarterly Earnings](#)
- [2024 Corporate Plan Update & Upstream Spotlight](#) (December '24)
- [ExxonMobil Product Solutions Spotlight](#) (September '23)
- [Low Carbon Solutions Spotlight](#) (April '23)

LCS Pitch Deck

- **SME:** Rachel Pickett (P&GA)
- [LCS Pitch Deck](#)

2025 Advancing Climate Solutions Report

- **SME:** Loan Tran (CSP)
- [2025 Advancing Climate Solutions Progress Report](#) (pp. 13-22 Growing Low Carbon Solutions)

2025 Sustainability Report

- **SME:** Kate Gilbert (GO&S)
- [2025 Sustainability Report](#) (April '25)
- [Supporting a Just Transition](#) (April '25)
- [2024 Investing in people report](#) (February '25)

2024 ExxonMobil Global Outlook

- **SME:** Nicholas Austin (CSP)
- [2024 Global Outlook – Executive Summary](#) – PDF report
- [2024 Global Outlook – external presentation materials – slides](#)

2023 ExxonMobil Advocacy Report

- **SME:** Lindsee Towers (P&GA)
- [2023 Advocacy Report](#) (December '24)