Sustainable Solutions

Customers choose McDermott because we bring expertise and experience in executing complex projects through fully integrated design and delivery. We engage early in a project's lifecycle to have the greatest impact in influencing the design, and we offer innovative solutions that bridge the transition to a sustainable future. We strive to be the partner of choice for responsible and sustainable projects that create long-term value for our customers and stakeholders.

At each phase of the project, our solutions are fueled by the latest technologies, an unwavering commitment to quality and efficiency, and an innovative mindset to make the facilities of the future a reality today. We understand the challenges our customers and communities face as they navigate the global Energy Transition, and we aim to meet demand shifts while reducing emissions. Together, we will build a more sustainable future.

Climate Change

As we all adapt our behaviors to a changing world, McDermott actively seeks opportunities to engage in pioneering projects that revolutionize the energy industry, setting new benchmarks and paving the way for a more sustainable future. Utilizing our expertise in project delivery, innovative engineering, and owned and operated construction assets, we work with our customers to reduce emissions across the project lifecycle, thereby reducing our climate risk and exposure.

CLIMATE GOVERNANCE

We recently reviewed and transformed our governance practices to promote innovation, increase global collaboration across areas of expertise, and increase accountability for our climate and sustainability plans and targets. Our creative, passionate, and dedicated employees are also a core part of our climate risk accountability.

McDermott's leadership thoughtfully considers and incorporates climate risk assessment and mitigation planning across our organization. Our Executive Vice President of Sustainability and Governance, Rachel Clingman, is the Executive Enterprise Risk Management (ERM) Sponsor. The ERM Program Team is responsible for regularly reviewing risks, including climate and energy transition risks, at least quarterly.

Further confirming our commitment, our executive compensation plans incorporate sustainability performance metrics. In 2021, our executive compensation plan included a targeted reduction in carbon intensity. In 2022, demonstrating our commitment to the energy transition and decarbonization, our executive compensation plans include commitments to increase our use of renewable energy for McDermott offices and operations.

GHG AND CLIMATE RISKS

McDermott is committed to proactively investigating, developing, and implementing sustainable initiatives across our projects and assets. We are reducing energy use and emissions at our offices, project sites, and facilities and reducing waste generation from operations. To protect natural resources, we work to improve water stewardship and use innovative approaches to preserve marine and coastal ecosystems. We are supporting the conservation, restoration, and sustainable use of land. To achieve our goals, our sustainability and operations teams have developed creative and effective tools to support enhanced reporting and sustainable operations.

To track GHG emissions, we collect data from worksites where we have operational control, including our offices, facilities, and vessels, as well as joint ventures where we have at least 15 percent equity. Our marine, fabrication, and construction operation teams work to collect data on fuel, waste, electricity, and other emission sources and have begun using software tools to generate data on Scope 1, 2, and 3 GHG emissions.

There are unique challenges (and opportunities) to achieving low carbon solutions in the construction industry, including remoteness of many construction sites, temporary nature of construction work, and constraints for alternative power sources. We recently launched an internal EPC Decarbonization Taskforce made up of project, construction, fabrication, and environmental specialists to work collaboratively and identify our best opportunities to reduce carbon in operations.

We are actively working with key suppliers on approaches to measure and reduce their Scope 3 GHG emissions. This work identifies opportunities in our supply chain to leverage synergies for both short and mid-term emission reductions, which include steel products, logistics, and equipment.

For more information about McDermott's risk management practices, please visit our Corporate Governance section

Top 10 Supply Chain Categories

We are focused on ten high impact supply categories to reduce carbon footprint:

- **Steel Products**
- **Static equipment**
- **Logistics** (including marine / support vessels)
- **Civil Subcontractors**
- **Cable**
- **Fuel**
- **E&I equipment**
- **Valves**
- **Structural, mechanical, and piping subcontractors**
- **Rotating equipment**

Providing Sustainable Solutions

McDermott has many projects in energy transition and plans to consistently expand that portfolio for future growth. Our work in energy transition makes McDermott part of delivering energy that is sustainable, affordable, accessible, and safe.

McDermott believes a variety of solutions are necessary to decarbonize capital infrastructure at the scale and the pace required to support climate resiliency, while still maintaining accessibility and affordability. We actively partner with customers and other innovators in five areas where we believe we will have the most meaningful impact on providing low-carbon solutions. We look to leverage our decades-long expertise in delivering energy infrastructure to these key low-carbon areas:

NETZERO SOLUTIONS | HYDROGEN | CCUS | OFFSHORE WIND | CIRCULAR ECONOMY

NetZero SOLUTIONS

Our NetZero solutions transform traditional means of energy infrastructure, project engineering, and delivery. From the very beginning of a NetZero solution, we are prepared with design options to lower possible emissions through the construction, commissioning, and operating phases.

Low Carbon Delivery encompasses both sustainable engineering for our customers' operations and meaningfully reducing the footprint of our own fabrication, marine, and construction activities. Our phased approach has been developed to address the project's carbon footprint. This approach includes:

- Tracking emissions through our value chain and various geographies
- Integrating emissions estimates and tradeoffs for embedded carbon, construction related emissions, and operational emissions throughout the project lifecycle

SMART MODULARIZATION TO DECARBONIZE CONSTRUCTION AND IMPROVE PROJECT DELIVERY:

Our Gulf Coast Growth Ventures (GCGV) Mono-Ethylene Glycol (MEG) project was executed by a joint venture between McDermott and CTCI. Using our Qingdao McDermott Wuchuan (QMW) and Altimira fabrication yards, we brought our mega-modularization expertise to safely deliver over 14 million hours without a lost-time incident and 30,000 metric tons of modules for the customer. McDermott studies show that with efficient fabrication and smart engineering, modularization achieves a lower carbon footprint of approximately 20 percent.

Decarbonizing Construction One Project at a Time

McDermott's integrated project delivery enables us to proactively identify emission reduction opportunities from concept to completion. In 2021, we signed a memorandum of understanding (MOU) with Shell Eastern Petroleum Pte Ltd (Shell) to collaborate on decarbonizing construction through design decisions.

Focused on four workstreams - renewable power, low carbon fuels, marine decarbonization, digitalization and planning, Shell and McDermott intend to leverage our collective expertise and resources to develop solutions that reduce or eliminate emissions from McDermott's global operations.

Renewable Power | **Low Carbon Fuels** | **Marine Decarbonization** | **Digitalization and Planning**

Our desired outcome is to create a suite of solutions with an accompanying roadmap to decarbonize the industrial EPCI industry.

NetZero SUBSEA TIEBACK STUDY:

McDermott performed a study to adapt topside equipment to allow for CO_2 separation, capture, enabling the offshore post combustion capture of CO_2 with the potential to reduce GHG emissions by up to 90 percent.

A subsea factory means that the oil and gas processing occurs on the seabed, rather than on an offshore platform. Lower emissions could be enabled via subsea separation and processing of the produced CO_2 and gas which is then re-injected. The all-electric subsea equipment is powered by low carbon generation.

"The study really showed that even small improvements are meaningful. Right now, we can gather and share this data with customers and partners to empower the industry to improve emissions. Current technology can be used to implement subsea tiebacks, electrification of subsea equipment and carbon capture and storage."

Julie Ingram, Director of Engineering

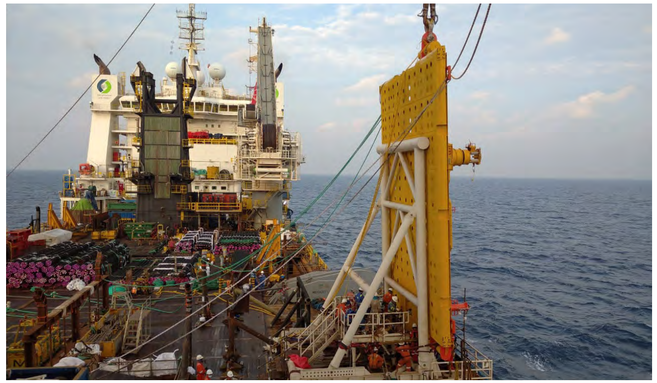
REDUCING OPERATING EMISSIONS

NetZero Upstream

Hydrocarbons will be required for decades, and we consider it our duty and challenge to assist in decarbonizing their production now. Our NetZero Upstream solutions combine the industry-leading expertise of McDermott, Schneider Electric, and io consulting to create an opportunity for customers to significantly reduce the impact of their upstream facilities. We have developed multiple pathways to decarbonize upstream oil and gas facilities considering carbon across the emissions lifecycle of a facility:

- Embedded carbon in the equipment and materials
- EPCI emissions
- Operational emissions

We apply a decision-making framework to identify credible and attainable methods for achieving decarbonization including: power import and electrification; renewable micro-grids; integration with hydrogen networks; integrated energy storage; reduction of fugitive emissions; removal of flare systems; facility de-manning and access method; facility monitoring and control (remote operation); engineered offsetting methods (excluding nature-based offsetting); and digital transformation of design and operations.



LNG

Responsibly produced natural gas is a key aspect of a successful transition to lower carbon energy. To support this transition, McDermott plans to deliver the lowest greenhouse gas emission baseload LNG facility in the world together with Woodfibre LNG. A rigorous baseline analysis of real-time baseload LNG projects allowed us to benchmark existing LNG facilities to develop a NetZero LNG concept using consistent metrics. These solutions are unique to the specific facility and are scalable and applicable to retrofits, expansions, and greenfield facilities, based on location-specific criteria and opportunities.

WOODFIBRE LNG – REALIZING THE LOW CARBON VISION:

Woodfibre LNG will be the lowest-emission liquefied natural gas (LNG) export facility on earth, achieved through the adoption of a low-emission philosophy across every element of engineering and design. The facility will use hydroelectricity for the main liquefaction process and includes state of the art technology that enables liquefaction machinery to restart without flaring, a recycling system for "boil-off" gas, and additional transformers, switchgear, and transmission lines. Altogether, this results in the most groundbreaking technical achievement in the world of LNG and sets a new standard for efficient plant design. This next-generation LNG production is in high demand.

McDermott's industry-leading NetZero Modular LNG strategy has been fully utilized during the design development of this advanced onshore gas processing and liquefaction facility with floating storage near Squamish, British Columbia, Canada. The strategy provides multiple pathways through design, execution, and construction to globally reduce operational and project emissions.

NetZero Small Scale LNG Peak Shaving

Lower emissions technology solutions will be key drivers in decarbonizing the natural gas sector. McDermott's storage business, CB&I, is a global leader in Small Scale LNG Peak Shaving plants, having delivered them throughout the world including the first facility in North America in 1965 that is still in operation today. CB&I bring deep experience and learnings from emissions reduction studies. Our emission reduction pathways focus on CO_2 Capture, Boil-Off Gas Recovery, Ambient Air Vaporizers, Liquefaction with Pre-Cooling, and On-demand Flaring. CB&I can reduce emissions up to 40 percent in Small Scale LNG facilities. Through innovation in technology, design, and construction, CB&I balances significant emissions reductions with minimal capital expenditure.

Implementing CB&I solutions across all LNG peak shaving facilities in the US alone could achieve up to an estimated half a million tonnes CO_2 equivalent reduction annually.

Green Hydrogen: CB&I, our storage business, was contracted to carry out EPCI for a power-to-gas facility in Howell, New Jersey. The facility will use solar power to produce green hydrogen for injection into an existing natural gas distribution network for home and commercial use.

HYDROGEN

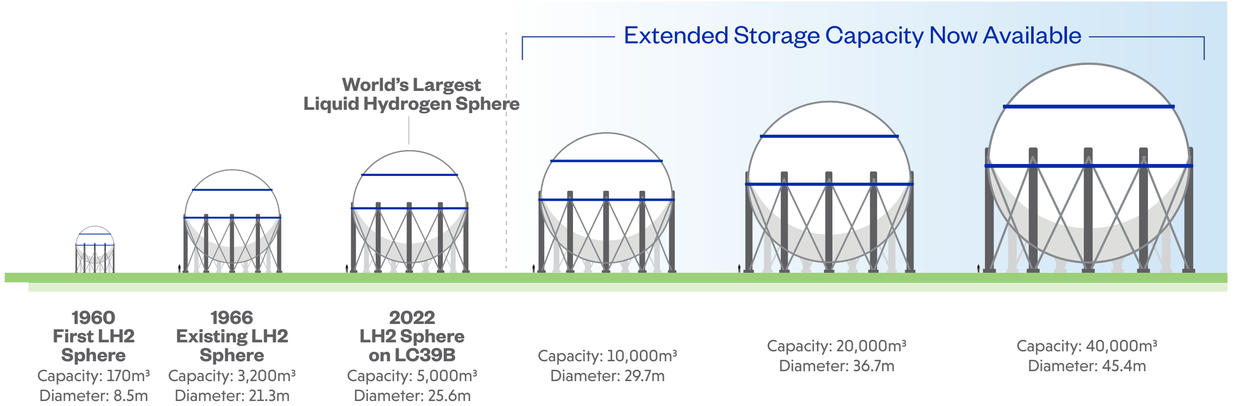
With more than 300 hydrogen projects executed across multiple industries, McDermott is a proven leader in renewable and low-carbon hydrogen with experience across the hydrogen value chain in production, liquefaction, and storage. We advance hydrogen development globally through key initiatives and partnerships.

Key Initiatives:

- Water Electrolysis Manufacturers for Renewable Hydrogen Production
- Methane Reforming Licensors
- Carbon Capture Technology to produce low-carbon Hydrogen
- H2@Scale Texas and Beyond
- Center for Future Energy
- Renewable and Low-Carbon Hydrogen Hubs H2Houston and Bacton Energy Hub
- Member of Hydrogen Council

Key Partnerships:

- U.S. Department of Energy (DOE)
- Massachusetts Institute of Technology (MIT)
- University of Texas at Austin (UT)



CB&I built the first liquid hydrogen sphere in 1960 with the capacity to store 170 cubic meters. Now, we are building the world's largest liquid hydrogen sphere for NASA in Cape Canaveral, FL. With the capacity to store 5,000 cubic meters of liquid hydrogen, the completed sphere will support NASA's Moon to Mars Exploration Program.

CB&I continues to unlock even greater potential in this field with the completion of the conceptual design for a double-wall sphere with a storage capacity of 40,000 cubic meters (m^3), approximately eight times larger than the one currently under construction for NASA.

Additionally, the U.S. Department of Energy (DOE) has selected a Shell-led consortium—whose member companies include CB&I, NASA's Kennedy Space Center, GenH2, and the University of Houston—to demonstrate the feasibility of large-scale liquid hydrogen storage in ranges upwards of 100,000 cubic meters. This public, private, and academic endeavor will support the goals of the DOE H2@Scale and Hydrogen Shot initiatives, bringing stakeholders together to reduce the cost of clean hydrogen and advance its role in the energy transition.

LIQUID HYDROGEN AT SCALE:

CB&I continues to advance our cryogenic storage technology to safely scale-up capacity thresholds in order to meet the increasing demand for liquid hydrogen storage—which will play a critical role in supporting a large-scale hydrogen economy.

CIRCULAR ECONOMY

Circular economy supports the enhancement of sustainability in the construction industry through systems, tools, and materials that work to eliminate waste. We use our industrial project experience to bring focus on advancing recycling and renewable fuel projects that align with our core expertise and growing customer needs. The world is demanding that better use is made of the resources we have available to us. This includes the re-use of many products that we utilize in our day-to-day lives. This requires new chemistries, processing techniques, and the ability to build these facilities in both pilot plant size and at scale. We offer a range of services from feasibility and concept studies to integrated EPCI, including smart modularization and low-carbon EPCI for biochemicals, renewable fuels, waste to value (eg., fuel, energy), and advanced recycling, helping our customers accelerate their energy transition goals.

CARBON CAPTURE

McDermott brings extensive experience in carbon dioxide (CO_2) capture, utilization, and storage (CCUS) applications. We have delivered more than 200 projects with carbon separation and capture and completed approximately 50 liquid CO_2 storage projects. Our technological experience coupled with smart partnerships and over 40 years of experience in CCUS uniquely positions us to support carbon capture projects. A focus on innovation and research and development enables us to identify ways to develop capture, treatment, and compression modules. These efforts can find new applications for carbon dioxide and use modular carbon capture for greenfield retrofit applications.

NET POWER:

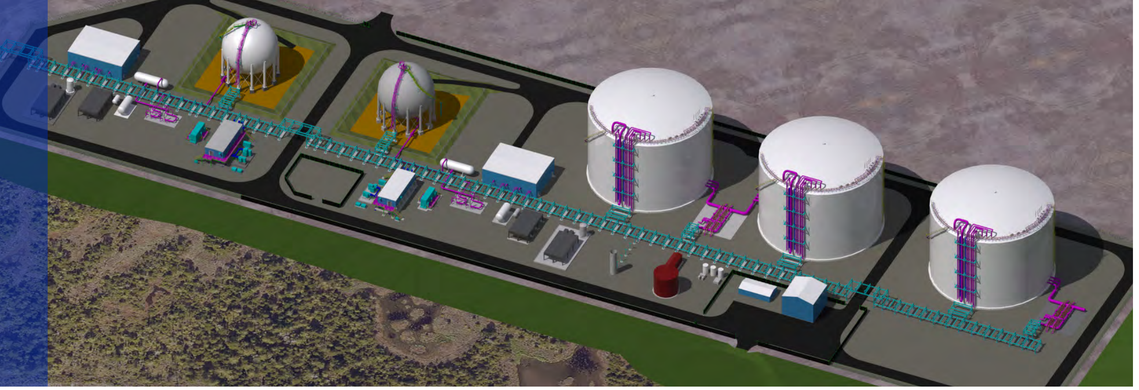
NET Power developed a novel power system that produces low-cost, reliable, and flexible electricity from natural gas, with no atmospheric emissions. This includes carbon dioxide capture with no nitrous oxide production. NET Power has the potential to provide carbon-free, affordable, and flexible power from natural gas. McDermott was an owner of NET Power along with Exelon Generation, 8 Rivers Capital, and Oxy Low Carbon Ventures until April 2022.

OFFSHORE WIND

McDermott is strongly positioned to support offshore wind projects from concept to completion and is focused on high-voltage direct current (HVDC) and the large-scale high-voltage alternating current (HVAC) substations. Our integrated EPCI delivery model, combined with nearly a century of experience executing some of the most challenging offshore projects in the world, make us ideally suited to support this growing market.

AQUAVENTUS CONSORTIUM TO ADVANCE OFFSHORE WIND-TO-HYDROGEN PRODUCTION:

In 2021, we joined AquaVentus, a growing consortium of more than 70 companies, organizations, and research institutions collaborating toward green hydrogen energy production in the North Sea. AquaVentus unites international industry leaders with a shared vision for advancing hydrogen's role as a low-carbon, affordable energy solution, combining their unique expertise to make that future a reality. We will bring our long history of thinking differently about energy delivery and unrivaled expertise in offshore infrastructure to this collaborative group of industry leaders pushing forward the energy transition.



Innovation and Digitalization

At McDermott, we are continuously innovating with the objective to be a recognized industry leader in cutting-edge and complex project delivery. We pride ourselves on fostering and maintaining a culture of innovation that leads the industry while improving safety, reliability, and performance.

We are reimagining traditional engineering design to incorporate leading edge technologies. McDermott's digital project delivery initiative includes artificial intelligence (AI) and machine learning to identify risks and opportunities, and reduce environmental and social impact of our projects globally. Through the development and implementation of these tools, McDermott enables our people to increase efficiency and processes that support project delivery.

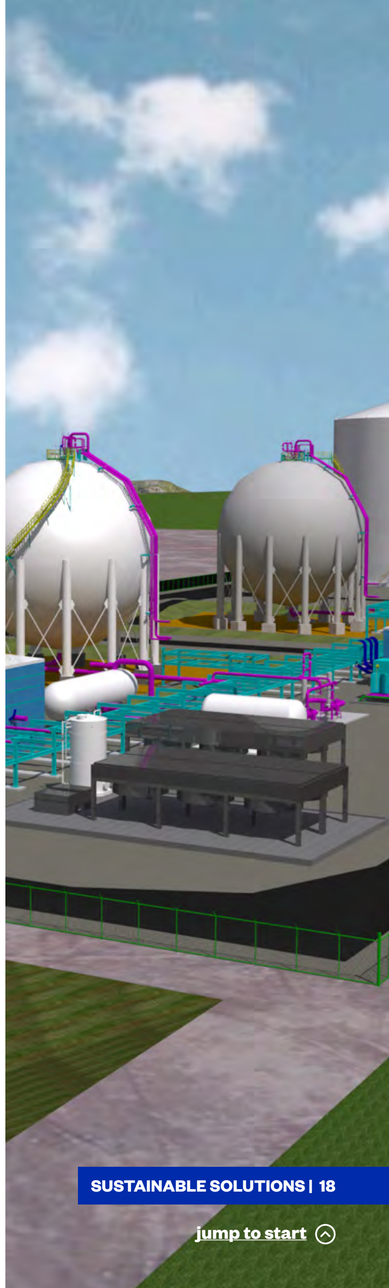
FOSTERING INNOVATION IN THE WORKPLACE

We empower our people to innovate and identify new solutions that solve market and sustainability challenges by evolving our digital-ready culture through education, upskilling, and engagement.

> Energy transition is part of the future of our industry, and it's amazing how the momentum to greener projects and products has accelerated within a relatively short span. Digital technologies are foundational in the development of Energy Solutions and facility operations, and the confluence of digital and energy transition will be a major part of McDermott's business in the coming years.
>
> *—Vaseem Khan, SVP Global Operations*

Innovation in the Workplace

1. Our Digital Culture Program raises awareness of digitalization and equips our workforce with the knowledge to use digital tools more effectively.
2. Our Center for Knowledge Management, Innovation & Research (KMIR) focuses on developing innovative, digital, and differentiating technologies to deliver world-class projects.
3. We use our Global Expert Network (GEN) to identify technical authorities (TAs) and subject matter experts (SMEs) across the company. In 2021, our 15 TAs and 114 SMEs worked together to conduct knowledge sharing sessions on each active Community of Practice (CoP) to provide training and develop awareness of new trends.
4. We hold an annual External Design Competition in partnership with European Young Engineers (EYE). It is focused on using Artificial Intelligence (AI) for matters related to sustainability and corporate social responsibility. When an innovative design is identified by our External Design Competition, we work to further develop the design.
5. Started in 2018, our Non-Metallic Initiative supports the development of new non-metallic products, to replace traditional metallic products, that are commonly installed in our projects. Examples include storage tanks, J-tubes, or subsea valve manifolds. The adoption of non-metallic alternatives enables optimization of lifecycle carbon footprint and NetZero offering for our clients.
6. Our Internal Design Competition enables innovation and sustainable solutions for our customers and end users. The design teams represent diverse people, offices, and geographies that independently produce unique outputs and possibilities that form a pipeline for innovation and use cases that serve all aspects of business. We incorporate the best ideas into our sustainable solutions for our customers to reduce their carbon footprint, optimize marine construction, and improve energy efficiency. In 2021, the winning design came from our team in Gurgaon, which developed an innovative design for an electrolysis plant with a capacity range between 200 to 300 megawatts. The design adapts various electrolysis technologies available in the market to be standardized, scalable, and modularized in order to improve the competitiveness of renewable Hydrogen.
7. McDermott is also committed to driving a culture of innovation within the communities where we work. In 2021, we supported 12 academic projects in partnership with 5 universities across 10 countries on a range of topics including subsea equipment design, AI, machine learning, and material science.



UNIVERSITY COLLABORATION - TU DELFT

Since its inception in 2019, The Delft University of Technology (TUDelft) Business Challenge has facilitated the exchange of ideas between students and McDermott employees in a quest to find innovative, sustainable solutions for the challenges faced in our industry. The theme of this year's event was The Facility of the Future with a focus on onshore downstream facilities. Students were invited to explore solutions that could lower McDermott's overall carbon footprint when developing a new facility.

TEAM	2021 IDEAS
Team 1	Methanol production facilitated by CO_2 hydrogenation. CO_2 is to be recovered from a CCUS facility while H_2 is obtained from an electrolyser. Unreacted CO_2 is to be re-captured and re-used or stored.
Team 2	A CCUS facility offering multiple applications for captured CO_2. Primary application to be production of cured concrete with CO_2 in partnership with specialized firms such as Carbicrete.
Team 3	A carbon-based take on the novelty of the subscriber society. A carbon capture service aimed at light industry and large office complexes or warehouses. A monthly subscription yields an installed, maintained, and remotely operated container-sized CCS system, which reduces carbon footprint.

> Each year I am amazed at the creativity and originality we see in this competition. The format of the event may have been different this year, but that did not hinder the quality of the ideas. I was extremely encouraged by the commitment from both the students and employees alike. Thank you to everyone involved in making this such a great success.
>
> *– Joris Haesaerts, Senior Director Engineering*

SMART INVENTORY SYSTEMS TO REDUCE CARBON FOOTPRINT:

In collaboration with the European Young Engineers (EYE), we sponsored a global 'AI in Sustainability' competition. The winning project involved the implementation of AI in inventory control. The Smart Inventory system can eliminate the over purchase of consumables to reduce material waste and emissions generated in process output. The AI is being considered to predict consumables use based on fabrication schedules as well as items that are seldom used. This process has potential to reduce warehouse space, material waste, and supply chain inefficiencies, thereby reducing emissions.

DIGITAL PROCESSES AND TOOLS

We are strategically investing in collaborative work processes and systems via integrated end-to-end toolsets. This includes selectively using virtual reality and augmented reality for 3D model reviews and supplier inspections, respectively. By exploring opportunities in AI to maximize efficiency in repetitive tasks, we are gaining insights and continuously improving process through the use of large sets of data.

In 2018, we launched our first Digital Innovation Center in Pune, India, to develop and utilize innovative digital solutions to lead the transformation in energy industry capital projects. The center serves as a technology epicenter to foster and support McDermott's global digital initiatives.

Summary of Digital Tools and Processes

INITIATIVE	CAPABILITIES
GeminiXD	Project digital twin enables more efficient cross-functional collaboration between project sites, stakeholders, and suppliers. GeminiXD increases visibility of the status of items throughout project execution, reduces travel through increased collaboration, and provides a central digital thread for the project and its assets.
SubseaXD	SubseaXD supports more efficient installation of subsea fields with lower risk. It also allows for optimization of field layouts, reducing both materials and corresponding emissions, subsequently increasing energy efficiency and reducing the carbon footprint of vessels and marine works via optimized planning.
ArborXD	ArborXD is a web-based tool that supports carbon-conscious decision making for energy customers seeking pathways to net-zero operations through reducing carbon emissions across the project lifecycle. It provides data collection, estimation, and reporting on the potential carbon impact of energy facilities before construction begins.
ReCo tool	This AI tool is used to identify engineering errors, subsequently improving overall industrial plant design safety and project costs by reducing engineering manual work. ReCo is a developed AI solution that assists engineers and designers by highlighting graphical design errors and facilitating manual checks

The energy industry of today is a complex integrated set of operations and value streams. McDermott has supported the energy industry transformation over decades of successful project delivery. Based on our journey, McDermott has deep acumen and understanding of the complexities of the energy industry value chain. We use this expertise to enable carbon conscious decision making at the earliest stages of a project.

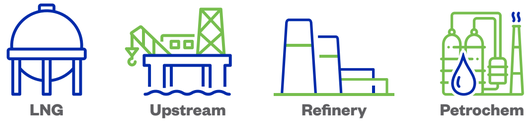
ArborXD™

ArborXD:

In 2021, McDermott launched the ArborXD tool to further our vision to digitalize the energy industry while driving towards decarbonization goals. ArborXD is a web-based platform that supports net-zero project delivery at every stage from concept to completion by consolidating our years of engineering know-how and relevant standards for carbon footprint estimation at each stage across the project lifecycle.

ArborXD is deployed prior to construction to analyze potential carbon impacts. Available across all project lines, greenfield, and brownfield project phases, ArborXD empowers our customers and McDermott to engage on sustainability from the outset and make informed choices about opportunities to reduce carbon emissions, seek alternative solutions, and measure reductions against sustainability targets.

Reducing emissions across four product lines: LNG, upstream, refinery, and petrochemicals.

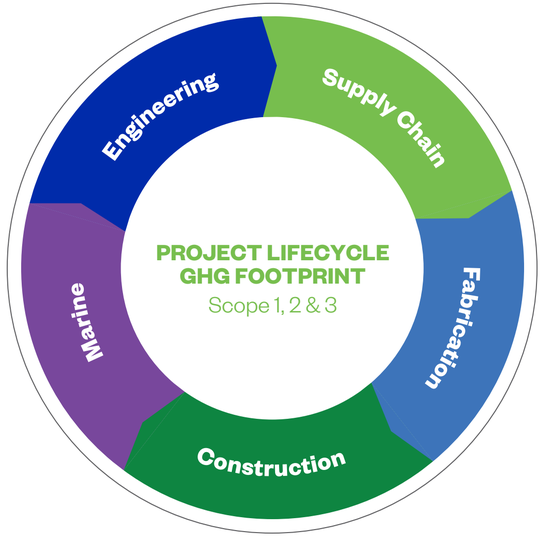


Estimating Emissions Across the Project Lifecycle

Establish baseline for the engineered facility operating emissions, with comparison of carbon intensity using benchmarking functionality

Optioneering function enables early identification of decarbonization pathways and supports customers in reducing their carbon footprint

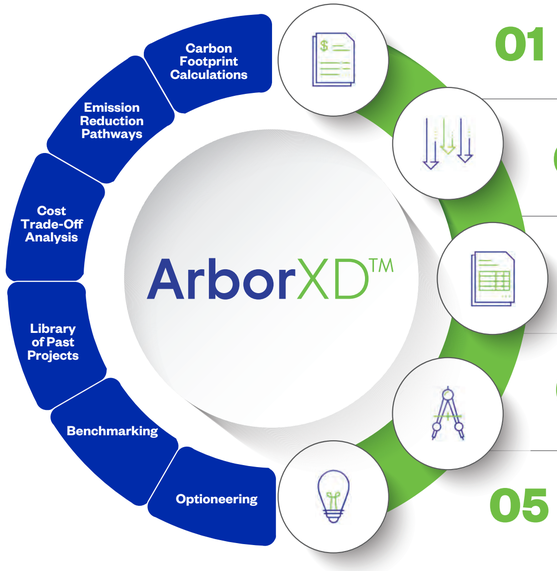
Estimate the emissions of the marine execution phase using McDermott and third-party vessel specific fuel consumption rates



Reduced embodied carbon footprint through material and equipment selection based on supplier specific data

Reduce the carbon intensity of the EPCI execution phase through selection of low emissions pathways

Estimate the Fabrication and Construction execution emissions using site specific data



01 Establishing baseline and measuring reductions for estimated carbon footprint of customer facilities

02 Ensuring accurate and timely response to engineering carbon footprint inquiries and requirements

03 Informing McDermott's annual sustainability report to stakeholders and benchmarking internal performance

04 Measuring progress on sustainability goals and achieving our 2025 target to reduce customer footprint by product line

05 Supporting customers to reduce their carbon footprint and achieve net zero operations

The Pivot Point

McDermott not only offers expertise in project delivery downstream to new energy projects, but we also pivot our focus upstream to our suppliers and offer our optimization expertise to minimize emissions across the value chain.

PARTNERSHIP WITH UPSTREAM STEEL SUPPLIERS:

In 2020, we conducted a survey to assess our suppliers' awareness of sustainable solutions. We learned that carbon reduction initiatives had not yet surfaced as a priority for many. We invited key steel suppliers together in 2021 to discuss collaborating on carbon reduction strategies to provide full circle sustainable solutions to our customers.

Moving forward, we will work in partnership with 50 suppliers to learn about their sustainability goals and how they measure carbon reduction, in absence of a uniform measurement system. This will provide McDermott a consistent way to compare suppliers, ultimately helping us deliver the lowest carbon suppliers for our customers.