

Energizing sustainable change

Spotlight on Progress

Biodiversity risk assessments

Business need

We have an obligation to limit the impact that our operations have on the wildlife and biodiversity around them. To accomplish this, we require assessments of all of our sites and processes to limit exposure to at-risk sites

Impact

In 2023, we started developing a comprehensive risk assessment program based on our current annual biodiversity survey. It will serve as the backbone for measuring the level of biodiversity and environmental risk at each of our locations. Laying the groundwork and defining these reporting parameters prepares the sites with the knowledge to assess and understand the requirements for upcoming biodiversity regulations accurately.

Project team

Health, Safety and Environment teams

Strategic outcome

Assess 100% of sites for biodiversity risk by 2030 and implement risk management programs for high-risk sites

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 15.4



Spotlight on Progress



Blue Marlin ‘rides the waves’ in Brazil

Business need

Dynamic positioning is a method by which a vessel remains stationary in the ocean without physically attaching itself to the oil rig or dropping anchor. Although this method provides more flexibility and efficiency in operations, it burns more fuel.

In our Pressure Pumping business, there is a high reliance on diesel to fuel the marine vessels utilized for operations. This high reliance on diesel heightened the need to improve the efficiency of our fuel usage related to marine vessels. Combined, our marine vessels produced ~26,275 MT CO₂e in 2023.

Impact

In Brazil, our assembly, maintenance and overhaul team led a project to decrease our emissions on our Blue Marlin vessel utilizing variable frequency. Variable frequency is a new technology designed to maximize fuel efficiency during dynamic position operations by rotating the propeller at a slower, variable rate, thereby burning less fuel.

The upgrade provided significant fuel savings and emissions reduction, leading to an approximately 30% reduction in fuel consumption and approximately 14% emissions reduction when the vessel was stationary to the rig.

Project team

Carbon Out – OFSE

Strategic outcome

Reduce scope 1 and 2 greenhouse gas emissions by 50% by 2030

Supporting the UN’s Sustainable Development Goals (SDGs)



In support of UN SDG **target 9.4**: upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies. Through our Carbon Out program, we have implemented new technology designed to maximize the fuel efficiency during vessel dynamic position operations.

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Spotlight on Progress

Circularity through additive manufacturing

Business need

At Baker Hughes, contributing to a circular economy means producing in a sustainable way from the early stages of product development through project completion or material disposal. We identified that many older or obsolete parts could have their service life extended or features enhanced through additive manufacturing. We evaluate environmental requirements in our additive products and processes and eco-design principles are applied from the beginning of development through a comprehensive approach to predict lifecycle impact.

Impact

We utilize additive manufacturing to reduce material consumption and shipping distances, improving the overall efficiency of production and the supply-chain process. Moreover, additive manufacturing gives us the possibility to extend the life of obsolete products and even to upgrade old products' features. A case study performed on a first stage gas turbine nozzle resulted in a ~26% reduction of energy consumption and a ~42% reduction in raw materials. This not only resulted in a decrease of waste to landfill, but it also improved efficiency and reduced scope 3 category 5 waste generated in operations.

Project team

Additive Manufacturing team

Strategic outcome

Reduce waste to landfill by 2030

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 12.5

Spotlight on Progress

Diesel fuel transformation to electrical grid – Saudi Arabia



Business need

A Baker Hughes manufacturing facility in Dammam, Saudi Arabia was utilizing three diesel-powered generators to power site operations.

Impact

A new high voltage electrical system was installed at our Dammam site in Saudi Arabia and connected to the electrical grid. The facility required a power supply of approximately 3,300 MWhs, which were previously provided by generators consuming approximately 365,000 gallons of diesel fuel.

Since making the switch, this power is now supplied by the electrical grid providing a significant emissions reduction for the facility as well as operational cost savings.

Project team

Carbon Out- OFSE

Strategic outcome

Reduce scope 1 and 2 greenhouse gas emissions by 50% by 2030

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 13.2: Integrate climate change measures into policy and planning, we have implemented projects at various sites through our Carbon Out program, thereby improving our energy efficiency and reducing our emissions.

Spotlight on Progress

Providing an employee shuttle service in Italy

Business need

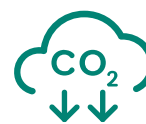
Italy is home to one of our largest centers of operations globally. Approximately 6,000 of our employees commute regularly between our sites in Avenza, Massa and Florence in Tuscany.

The round-trip distance of these commutes is approximately 150 miles, an emissions impact that compounds significantly when multiplied by the large employee base.

Impact

In September 2023, we began operating a shuttle service for our employees with professional drivers to transport employees more efficiently at these locations. The shuttle operates three times per day Monday through Thursday and twice on Friday.

Since the inception, there have been 1,000+ reservations made in the first 90+ days of operation. This service furthers our emissions reduction goals by consolidating emissions produced by daily commutes and elevates employee well-being by providing an efficient and comfortable option to safely return home from work each day.



ALL IN.
CARBON OUT.

Project team

Carbon Out - IET

Strategic outcome

Reduce scope 1 and 2 greenhouse gas emissions by 50% by 2030

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 13.2: Integrate climate change measures into policy and planning, we have implemented projects at various sites through our Carbon Out program, thereby improving our energy efficiency and reducing our emissions.

Spotlight on Progress

Energy conservation at United Arab Emirates (UAE) facilities

Business need

Training our employees in the processes of emission reduction is a huge part of our Carbon Out program. Our UAE HSE team and the real estate facilities team actively conducted Carbon Out training for UAE HSE and facility team members, empowering them to identify opportunities to eliminate energy waste.

Impact

One opportunity identified through this training was emissions reductions through minimization of compressed air leaks. A team in Dubai implemented a system to detect compressed air leaks and optimize compressors, reducing energy consumption. The knowledge and best practices have been shared across the region to further expand our energy reduction efforts.



Project team

Carbon Out - OFSE

Strategic outcome

Reduce scope 1 and 2 greenhouse gas emissions by 50% by 2030

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 13.2: Integrate climate change measures into policy and planning, we have implemented projects at various sites through our Carbon Out program, thereby improving our energy efficiency and reducing our emissions.



Spotlight on Progress

Partnering for a renewable future with Shell Energy Italia



Business need

In 2023, we continued our transition away from grid electricity powered by fossil fuels to renewable and non-emissive energy, where possible. We work across all regions, prioritizing sites based on the impact of renewable sourcing and the cost-effectiveness of the projects that are part of our 2030 roadmap.

Impact

In September 2023, Baker Hughes announced a new agreement with Shell Energy Italia – an eight-year power purchase agreement to supply seven of Baker Hughes’ Italian facilities with renewable energy. This energy is sourced from Shell’s solar photovoltaic farm currently under construction in the Apulia region in southern Italy.

Project team

Carbon Out – IET

Strategic outcome

Reduce scope 1 and 2 greenhouse gas emissions by 50% by 2030

Supporting the UN’s Sustainable Development Goals (SDGs)



In support of UN SDG target 13.2: Integrate climate change measures into policy and planning, we have implemented projects at various sites through our Carbon Out program, thereby improving our energy efficiency and reducing our emissions.

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Spotlight on Progress

Reducing spills at our sites

Business need

There is a need to reduce the number and volume of spills at our sites and operations to protect the health and safety of our employees, communities and the environment through routine inspections and maintenance.

Impact

In 2023, we inspected ~98% of the tanks at our sites and took action to repair all deficiencies found. We also performed preventative maintenance where necessary. These routine inspections serve a vital role as they protect our employees, sites and communities from possible water contamination and the release of hazardous substances. Through diligence in our commitment to inspect and repair tanks, we have seen a reduction in significant spills of 35.3% from 2022.

Project team

Health, Safety and Environment teams

Strategic outcome

Reducing spills at our sites by 2035

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 6.3

Spotlight on Progress

Reduction of Natural Gas for Heating - Argentina



Business need

A Baker Hughes site at Comodoro Rivadavia in Argentina was using high volumes of natural gas to heat the facility due to the poor state of the facility roof, liners and doors.

Impact

The OFSE assembly, maintenance and overhaul field activity team collaborated across their facility to implement projects to increase energy efficiency and reduce emissions. The team worked to repair the roof, liners and doors to better insulate the building and improve the overall facility.

As a result of this, natural gas consumption for the site was reduced by ~27% and emissions were reduced by ~28%.

Project team

Carbon Out - OFSE

Strategic outcome

Reduce scope 1 and 2 greenhouse gas emissions by 50% by 2030

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 13.2: Integrate climate change measures into policy and planning, we have implemented projects at various sites through our Carbon Out program, thereby improving our energy efficiency and reducing our emissions.