

DOLPHIN
ENERGY



دولفين
للطاقة

**ALL IT TAKES IS
POSITIVE ENERGY**



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WHAT IS THE DOLPHIN GAS PROJECT?

Three GCC nations have come together to build a unique international gas project - using the world's largest single-build gas plant, the region's longest and largest export pipeline and a supply network that stretches over 700 kilometers.

Eight years in the making and now more than 15 years in operation, Dolphin Energy's Dolphin Gas Project is a unique energy initiative that delivers natural gas from Qatar to customers throughout the UAE and Oman.

It is the region's first and only international gas network that connects three countries in the Gulf region and is one of the largest energy related projects ever undertaken in the Middle East at a cost of US\$7 billion.

A unique aspect of the Dolphin Gas Project is that the company is active in the three key stages of the value chain – 'Upstream' (drilling, extracting and processing), 'Midstream' (transport and supply) and 'Downstream' (distribution to customers).

Dolphin Energy produces and transports the world's cleanest fossil fuel – a sweet high grade 97% methane gas from its 30 deep wells drilled in Qatar's offshore North Field. This gas is then processed onshore at the company's Gas Processing Plant in Qatar's Ras Laffan Industrial City. The plant is the largest single-build gas plant in the world and comprises the core element in the company's operations.

97% Methane gas from its 30 deep wells drilled in Qatar's offshore North Field

2 Billion standard cubic feet of natural gas per day (scf/day) is being delivered

Here, valuable by-products are extracted for sale in world markets; the processed methane gas is then transported through the 48 inch, 364 kilometer subsea export pipeline – the longest and largest high pressure subsea pipeline in the region – all the way to Dolphin Energy’s Taweelah Receiving Facilities in Abu Dhabi.

From there, the gas is heated, metered, monitored and delivered by a comprehensive gas pipeline network throughout the UAE and to Oman.

Today, 2 billion standard cubic feet of natural gas per day (scf/day) is being delivered in a safe, reliable and environmentally friendly manner to customers, for power generation, water desalination and industrial use.

Dolphin Energy Limited is owned 51 percent by Mubadala Investment Company – a wholly owned company by the Government of Abu Dhabi – and 24.5 percent each by TotalEnergies of France and Occidental Petroleum of the USA.



DOLPHIN ENERGY'S PROJECT MAP

RAS LAFFAN

The Gas Processing Plant at Qatar's Ras Laffan Industrial City, the largest single-build plant in the world, is central to Dolphin Energy's activities.

Taweelah

Dolphin Energy gas produced in Qatar arrives at the company's Taweelah Receiving Facilities in Abu Dhabi, UAE.

Taweelah Fujairah Pipeline (TFP)

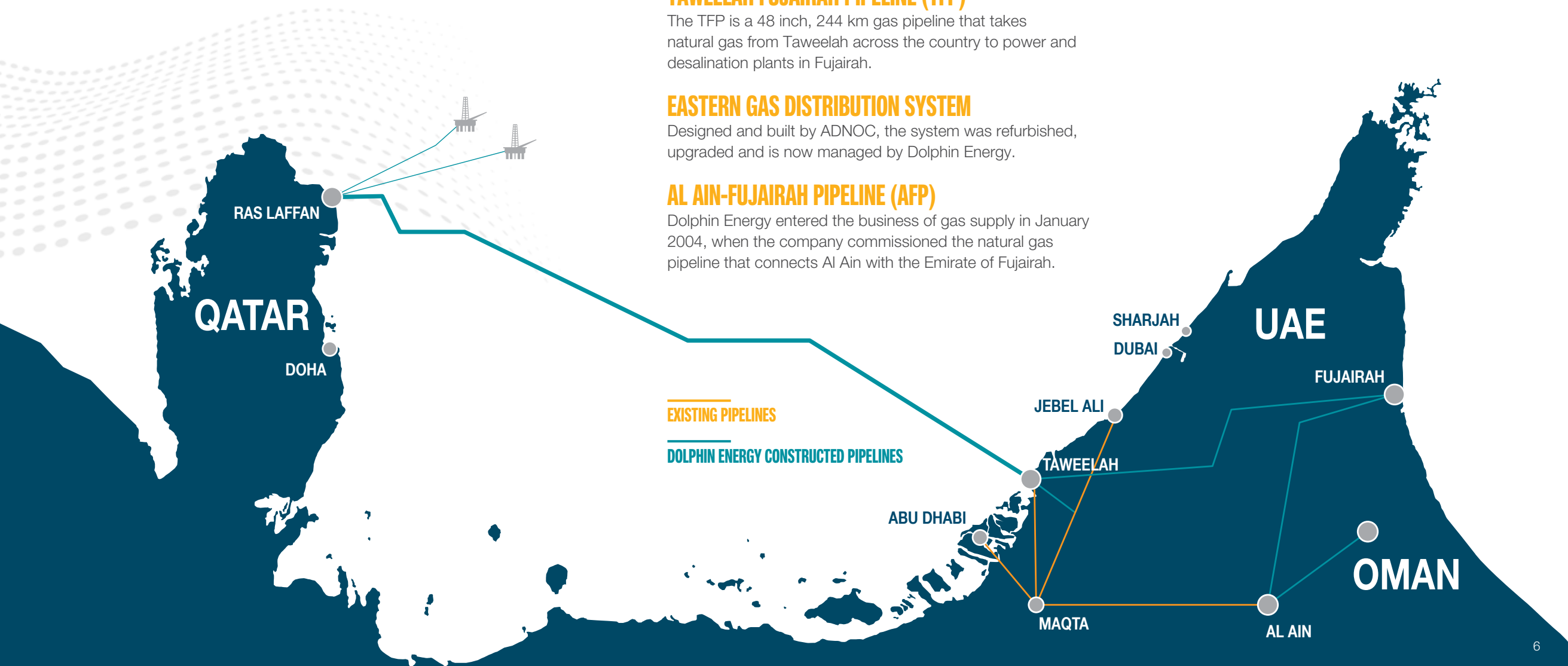
The TFP is a 48 inch, 244 km gas pipeline that takes natural gas from Taweelah across the country to power and desalination plants in Fujairah.

Eastern Gas Distribution System

Designed and built by ADNOC, the system was refurbished, upgraded and is now managed by Dolphin Energy.

Al Ain-Fujairah Pipeline (AFP)

Dolphin Energy entered the business of gas supply in January 2004, when the company commissioned the natural gas pipeline that connects Al Ain with the Emirate of Fujairah.



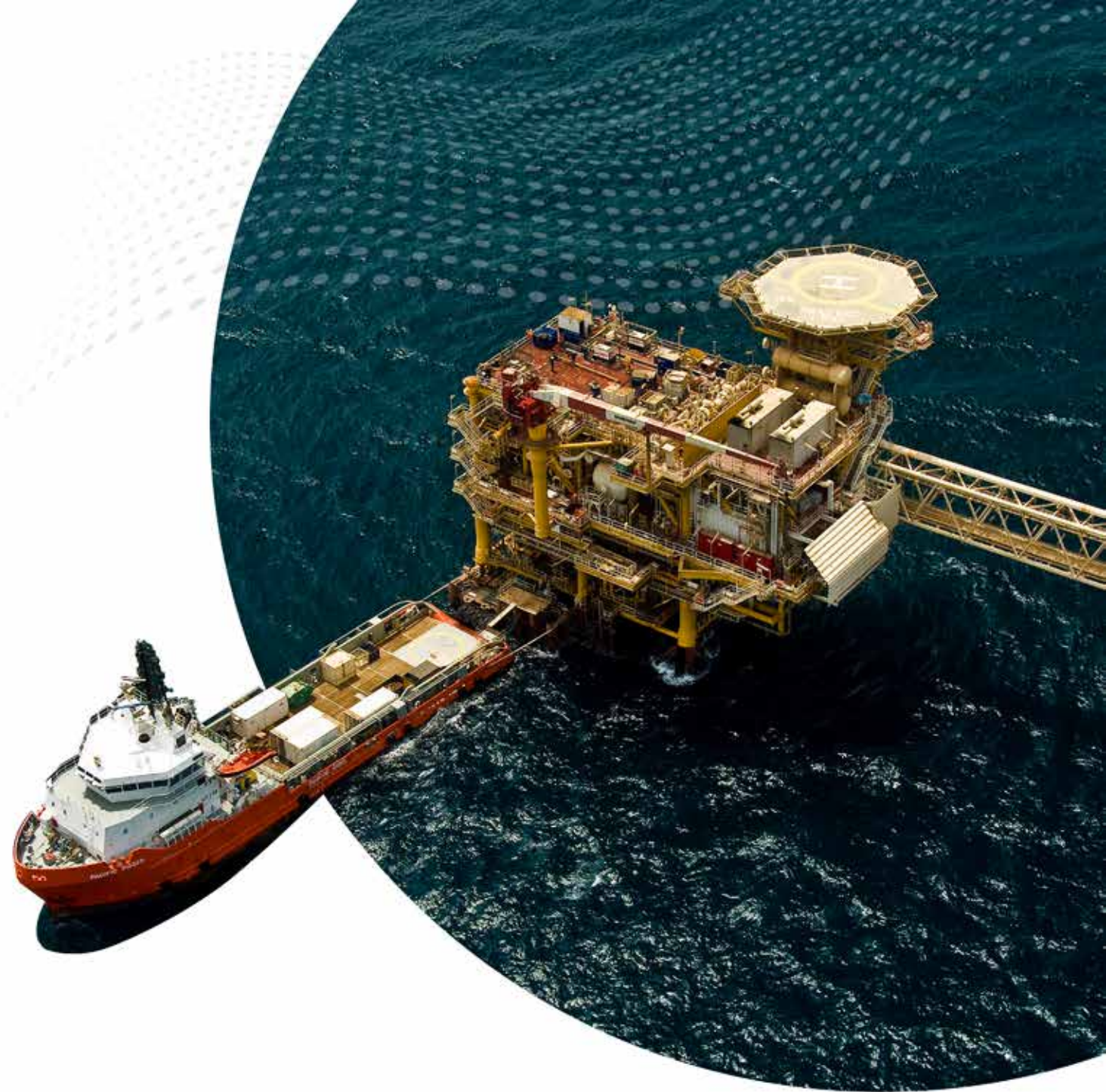
OUR VISION

Dolphin Energy's Dolphin Gas Project was greeted with astonishment when it was first announced by the Abu Dhabi Government in 1999. Why did the Emirate want, or need, to pay to import gas from another country? It was widely known that Abu Dhabi was rated fourth in world gas reserves at the time.

Everyone in the energy industry also knew that Abu Dhabi was selling substantial quantities of gas to world markets, with tankers arriving weekly to deliver its liquefied natural gas (LNG) bound for Southeast Asia and beyond.

When the full details of the project were duly unveiled, the flow of comment grew. Some 2 billion standard cubic feet of gas per day (scf/day) was to be imported from Qatar in eight years' time. The main question in the market was: "Who will be the customers for all this gas?"

That 2 billion scf/day of gas from Qatar is now being delivered to customers – and all available supplies have long since been allocated.



We have combined ambition with multinational capital and expertise to deliver energy security for the southern Gulf region, safely and reliably — two billion scf/day every day since February 2008.

The vision behind Dolphin Energy – a vision jointly shared between the governments of Abu Dhabi and Qatar – has been unique in its scope, its farsightedness and ultimately in its impact on the people and industries in both countries.

By the end of the last century, the leadership in Abu Dhabi had realized that the Emirate's gas reserves would be more expensive to develop and would require a longer timeline to meet the needs of the United Arab Emirates, 20 and more years into the future.

Much of Abu Dhabi's natural gas was indeed being exported – but those exports could not be trimmed back, when long-term 25-year supply contracts were in place.

Growing quantities of available gas were also needed for injection into older crude and condensate reservoirs to maintain reservoir pressure in order to sustain crude and condensate production.

It was also known that certain gas fields were sour: these contained a high percentage of hydrogen sulfide, which is highly toxic, dangerous to humans and pipelines alike and thus technically challenging.

The first approaches were duly made to Qatar, with the aim of securing a deal for gas export/import that would make economic and commercial sense to both parties.

After years of visionary planning, drilling, construction and engineering, the Dolphin Gas Project finally came to fruition. First gas arrived in the UAE in July 2007 and in February 2008, Dolphin Energy achieved its full production and supply rate of 2 billion standard cubic feet of gas per day (bscf/day) for the very first time.

Gas arrived in Oman in October 2008 while provision was made to expand throughput to 3.2 bscf/day, subject to a future agreement between the Qatari and Abu Dhabi governments.





THE IMPACT TO DATE

The impact of the Dolphin Gas Project on the communities, the people and industries in Qatar, the UAE and Oman is telling.

In the time it has been operational, the project has produced trillions of standard cubic feet of gas and met 30% of the UAE's gas requirements every single day – driving economic growth, development and diversification.

Today, a new energy landscape is emerging.



Emphasis has been placed on developing renewable and nuclear energy resources, to meet the challenges of a growing population, manage the transition to a low carbon future and combat the effects of climate change.

However, because it is the cleanest fossil fuel, demand for natural gas continues to rise and Dolphin Energy's gas will remain at the heart of the southern Gulf region's energy mix - acting as a bridge between old and new forms of energy.

Dolphin Energy's responsibilities to the environment and climate change are also reflected in its founding membership of the Abu Dhabi Sustainability Group, support for Qatar's sustainability commitments and the production of an annual sustainability report, which it has published every year since 2009. Today, the company is in the process of transitioning its sustainability strategy in line with wider environmental, social and governance (ESG) commitments.



OUR SUCCESS, OUR STORY

THE 3 STAGES OF THE VALUE CHAIN

Dolphin Energy is best described as a vertically integrated energy company – from the production and processing of natural gas from Qatar’s North Field, via transportation through subsea pipeline, to distribution and supply across the UAE and to Oman:

UPSTREAM

Two purpose-built, unmanned, production platforms (DOL-1 and DOL-2) extract quantities of ‘wet gas’ lying between 10,000 and 12,000 feet (3,000 – 3,600 meters) underground.

Using 30 wells located in the Khuff Zone in Qatar’s North Field, the ‘wet gas’ produced is piped more than 80 kilometers to shore at Qatar’s Ras Laffan, arriving at Dolphin Energy’s Gas Processing Plant.

Here, valuable commercial by-products (condensate, LPGs, ethane and sulfur) are stripped out, with the result that ‘lean and sweet’ processed natural gas is then ready for transport by subsea export pipeline to the UAE.

Meanwhile, the gas liquids and sulfur by-products are delivered from the Gas Processing Plant to various storage facilities, prior to export on a regular basis from exclusive loading berths.

Natural Gas By-Products	Product Description	Production/Day
Low Sulfur Condensate	An ultra-light form of oil used for feedstock in splitters, petrochemical industries or for blending with crude oil	87,000 – 110,000 barrels
Propane Butane	Both are used as fuels for industrial, domestic, automotive as well as petrochemicals production worldwide. Butane also has specialized uses in gasoline blending	2,100 – 2,800 tons 1,300 – 1,800 tons
Sulfur	Removed from natural gas at an early stage in processing, to comply with international health, safety and environmental standards	500 – 1,000 tons
Ethane	Extracted at an early stage in gas processing and used as feedstock for the ethane cracker within Qatar	3,500 – 4,000 tons



MIDSTREAM

The key midstream element is Dolphin Energy's 364 kilometer, subsea export pipeline that links Qatar to the UAE. Measuring 48 inches in diameter, the pipeline is designed to transport up to 3.2 billion standard cubic feet of natural gas per day.

DOWNSTREAM

Dolphin Energy's receiving facilities, located at Taweelah, lies at the heart of the project's downstream operations. Gas from Qatar arrives onshore before distribution to customers across the UAE and Oman.

Delivery of natural gas is made possible through the use of an extensive gas distribution network – the Eastern Gas Distribution System (EGDS) – which Dolphin Energy upgraded and now manages to ensure reliable, safe and efficient volumes of natural gas are delivered.

Other crucial elements of Dolphin Energy's presence downstream are two additional pipelines – the 24 inch, 182 kilometer Al Ain to Fujairah Pipeline and the 48 inch, 244 kilometer Taweelah to Fujairah Pipeline.

MATCHING AMBITION WITH PARTNERSHIPS

By supplying the UAE and Oman with clean natural gas from Qatar, the Dolphin Gas Project is a model for regional energy cooperation.

From the beginning, its founders conceived Dolphin Energy as a force for international energy cooperation that would unite the vision and resources of the region with multinational capital and expertise.

At the heart of the project's ambition lies the spirit of partnership that has enabled the national and international stakeholders in Dolphin Energy to assemble the skills, technologies and multidisciplinary teams essential for success.





Qatar's role is instrumental.

The Government of Qatar is the owner of the natural resource which enables Dolphin Energy to supply 2 billion standard cubic feet of natural gas per day (scf/day), every day, to the UAE and Oman for a period of 25 years.

From the early stages of the project, close cooperation between Dolphin Energy and QatarEnergy led to joint research and planning, and thereafter to the signing of the Field Development Plan in December 2003 – the final investment decision for the Dolphin Gas Project that confirmed all its investment parameters.

Shareholders

Dolphin Energy's shareholders – Mubadala Investment Company, TotalEnergies of France and Occidental Petroleum of the USA – have brought their own strengths to the project, building alliances and undertaking planning and execution to help create a unique and prestigious energy venture.

Each shareholder has a long, valued association beginning with Mubadala Investment Company which launched the project as UAE Offsets in 1999. In 2000, TotalEnergies was invited to become a founding shareholder. Occidental Petroleum became the second international partner in 2002.

Today, Dolphin Energy is consistently profitable, with delivery of financial results, ahead of target. It reached profitability within nine years of completion of the overall investment covering platforms, sealines, Gas Processing Plant, export pipeline, Receiving Facilities and the distribution and supply network.



MUBADALA

51%



TotalEnergies

24.5%



24.5%



ENGINEERING & EXPERTISE

The initial engineering mandate given to Dolphin Energy was to construct a 48 inch, 370 kilometer plus gas pipeline between Qatar and the UAE – and then to produce, process and transport through this pipeline up to 2 billion standard cubic feet of natural gas (approximately equivalent to 333,000 barrels of oil) per day.



The subsequent task was to establish a gas receiving and distribution system that would deliver the necessary quantities of gas, at the right pressure, to all customers in the UAE and Oman.

And as the project has evolved, further milestones have been passed that reflect Dolphin Energy's unrelenting appetite to succeed: from delivering the maximum contracted amount of 730 billion scf per year, every year since 2008, undergoing annual shutdown programs, delivering enhancements to the compression facilities to ensure availability and reliability of natural gas to drilling new wells to maintain the production plateau and reservoir pressure.





HSE FOCUS

Dolphin Energy's health, safety and environment (HSE) goals are simply stated: no accidents, no harm to people and no damage to the social and natural environment.

The company endeavors to embody this in everything it does and measures performance and results to constantly improve in line with the best in the world.

Ensuring the highest levels of health and safety of its employees, the communities in which it operates and all of its assets is the single most important objective. Without this commitment, Dolphin Energy would not, could not operate.

We always focus on the health and safety of our people, our environment and our assets. Our actions are constantly monitored and reviewed. We are committed to HSE excellence at all times.

Health and safety management systems, strategies and plans follow best practice and in some cases provide benchmarks for others to follow. The company's actions and conduct – and those of its contractors and suppliers – are monitored and reviewed regularly.

Dolphin Energy's commitment to HSE is integral to its business objectives. Striving for excellence is a primary management objective and the responsibility of every employee.

At the heart of this lies the firm belief that collaboration can only deliver the best results. It underpins Dolphin Energy's conduct with all its stakeholders – from government ministries, communities, shareholders and strategic partners, to customers, contractors and employees alike.



DECARBONIZATION

Dolphin Energy's decarbonization commitments started in 2012 and today the company is pursuing a strategy and roadmap that will minimize its greenhouse gas (GHG) emissions well beyond 2030.



By focusing on developing a low carbon culture, lowering emissions on existing assets, ensuring new projects take a low carbon approach and utilizing new technologies, the company is aligning its efforts with government climate action plans and stakeholder expectations.

In addition, HSE&S, GHG and sustainability policies have been updated to ensure they capture requirements to reduce Dolphin Energy's carbon footprint, and a decarbonization taskforce, comprising a multi discipline team of employees across the company's operations in the UAE and Qatar has also been established.

The taskforce reviews projects already completed and tracks those in the pipeline or carry the potential for consideration in the future. The team also accounts for GHG savings, works to establish GHG emission targets and sets KPIs to monitor achievements.





MEETING THE REGION'S NEEDS

As regional demand for gas increases so does the need to ensure safe, reliable and available volumes. By meeting their requirements and delivering gas and by-products on a daily basis, Dolphin Energy demonstrates and maintains a strong focus on its customers.

As their needs have changed, Dolphin Energy has responded – whether by expanding the gas distribution network, allocating additional volumes of natural gas to meet seasonal demand, installing additional export gas compressors to enhance gas availability and plant reliability, or signing new, long term gas sales agreements.

To underpin and drive this commitment, the marketing activities of Dolphin Energy fall into two distinct categories. These are the sale of Dolphin Energy’s natural gas, under both long term and short term agreements to customers in the UAE and Oman, and term or spot sales of the valuable by-products produced at the company’s Gas Processing Plant in Ras Laffan Qatar.

Our growth and success are linked directly with our customers and their evolving requirements. A strength has been our flexibility and our ability to adjust to their needs.



LONG TERM AGREEMENTS

Between 2003-2005, Dolphin Energy signed three significant long term gas sales agreements with Emirates Water and Electricity Company (EWEC), the Dubai Supply Authority (DUSUP) and OQ Exploration & Production (OQEP).

In addition to those mentioned above, our customers include Emirates Global Aluminium (EGA), Sharjah Electricity, Water and Gas Authority (SEWA), and Ras Al Khaimah Gas LLC (RAK Gas).

The difference between this average total and the maximum throughput of 2 billion scf/day, allows Dolphin Energy to offer flexibility for peak requirements of customers.

CUSTOMERS

AVERAGE VOLUME SCF/DAY

EWEC

988 Million

DUSUP

730 Million

OQEP

200 Million

Total Allocation

1.918 Billion

INTERRUPTIBLE AGREEMENTS

Short term interruptible gas sales agreements are also currently in place with Sharjah Electricity & Water Authority (SEWA), Sharjah National Oil Corporation (SNOC), Emirates General Petroleum Corporation (Emarat) and Dubai Supply Authority (DUSUP).



PIPELINE NETWORK

EGDS

The Eastern Gas Distribution System (EGDS) is the main delivery artery for Dolphin Energy's gas across the UAE.

The company manages the network – having reached an agreement with ADNOC to access its gas distribution network. Following some refurbishment and upgrades to the infrastructure, Dolphin Energy took over management of the system in 2008.

Three main pipelines comprise the EGDS which ensure gas supplies are delivered efficiently and safely. They are:

PIPELINE ROUTE

DISTANCE (IN KILOMETERS)

Maqta to Taweelah

52

Maqta to Jebel Ali

112

Maqta to Al Ain

149

To complement the EGDS, Dolphin Energy constructed two other major pipelines to enhance the gas grid.

AFP

The construction and commissioning of the 24 inch, 182 kilometer, Al Ain to Fujairah pipeline is significant because it meant gas began to flow from one GCC nation to another for the very first time.

This pipeline was the first project of Dolphin Energy to come on stream and between 2004-2007, up to 135 million scf/day was being supplied by Oman to Dolphin Energy for power and desalination plants in Fujairah, supporting thousands of residents, hundreds of farmers and scores in inland communities.

Once Dolphin Energy began receiving gas from Qatar, there was a reversal in roles and in October 2008, 200 million scf/day was sent to Oman to assist the Sultanate's own industrialization plans.

TFP

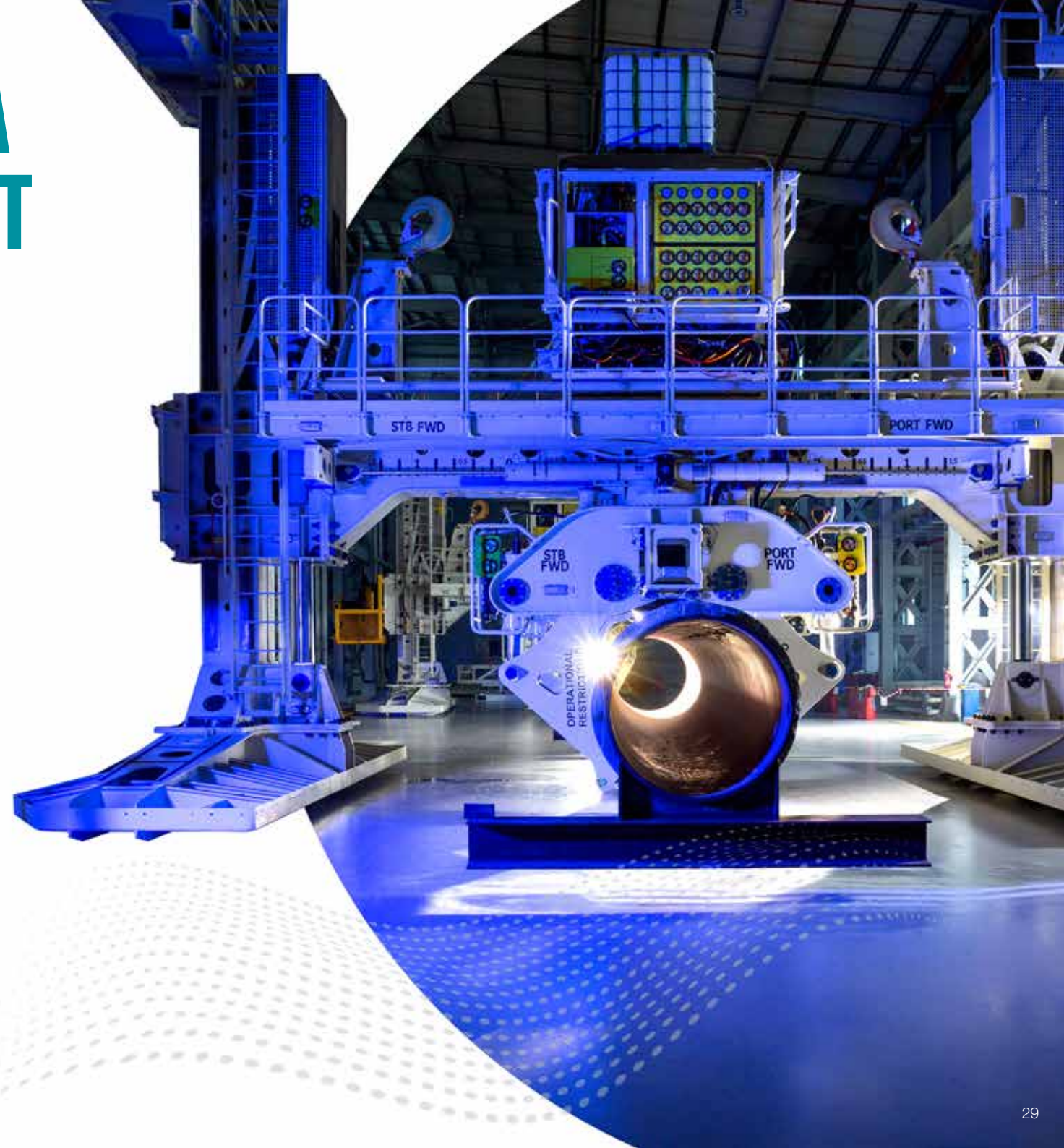
The Taweelah to Fujairah pipeline, constructed to meet the growing needs of its largest customer EWEC, was commissioned in 2010. The 48 inch, 244 kilometer pipeline stretches across the desert and mountains of the UAE supplying up to 1.6 billion scf/day.

THE ADVANCED SUBSEA INTERVENTION SUPPORT & TECHNOLOGY (ASSIST) SYSTEM

Featuring unique diverless subsea technology, Dolphin Energy's state of the art Advanced Subsea Intervention Support & Technology (ASSIST) pipeline repair system can restore pipelines to their original condition in just months, rather than years.

The ASSIST system has been designed to minimize disruption from any accidental damage sustained to the company's offshore pipelines – the 36 inch twin sea lines and the 48 inch subsea export pipeline. To ensure this, Dolphin Energy collaborated with international specialized companies to develop the latest proven designs for subsea repair.

ASSIST includes equipment, systems and processes to decommission the pipeline, isolation of the pipeline to create a safe working environment, and repair and recommission the pipeline to resume gas supply services.



This is first-of-its-kind technology for the region. ASSIST offers economic and strategic value by protecting asset integrity, driving technical innovation and ensuring skills and competencies continue to develop.

This includes large bespoke subsea repair equipment to handle the pipeline on the seabed and carry out several repair welds in a hyperbaric condition, allowing the pipeline to be welded back to its original condition.

While ASSIST covers Dolphin Energy's pipeline system, it can be utilized on other pipelines ranging from 8-48 inches. Furthermore, the equipment can be used for a wide range of subsea works carried out by contractors and other pipeline operators, such as pipeline repair, subsea tie-ins and tie-backs, hot tap and major inspections. Most equipment is designed to work remotely without the use of divers, helping maximize safety and minimize cost.

To support ASSIST, Dolphin Energy has entered into a strategic agreement with KEZAD and Khalifa Port and constructed a custom made 45,000m² Marine Base at KEZAD's facilities that serves as a hub for the subsea repair equipment and offshore mobilization.





**TO THE
FUTURE**

OUR PEOPLE

Dolphin Energy is committed to hiring and investing in the best people available and to offering them the necessary training and support they require for long term career development.

With an emphasis on providing opportunities for Emiratis and Qataris, the company is an employer of choice, as a result of programs that focus on recruitment, retention and offering equal opportunities for all.

As a result, Dolphin Energy enjoys high employee satisfaction, achieved through human resource policies that combine the best practices from Qatar and the UAE.



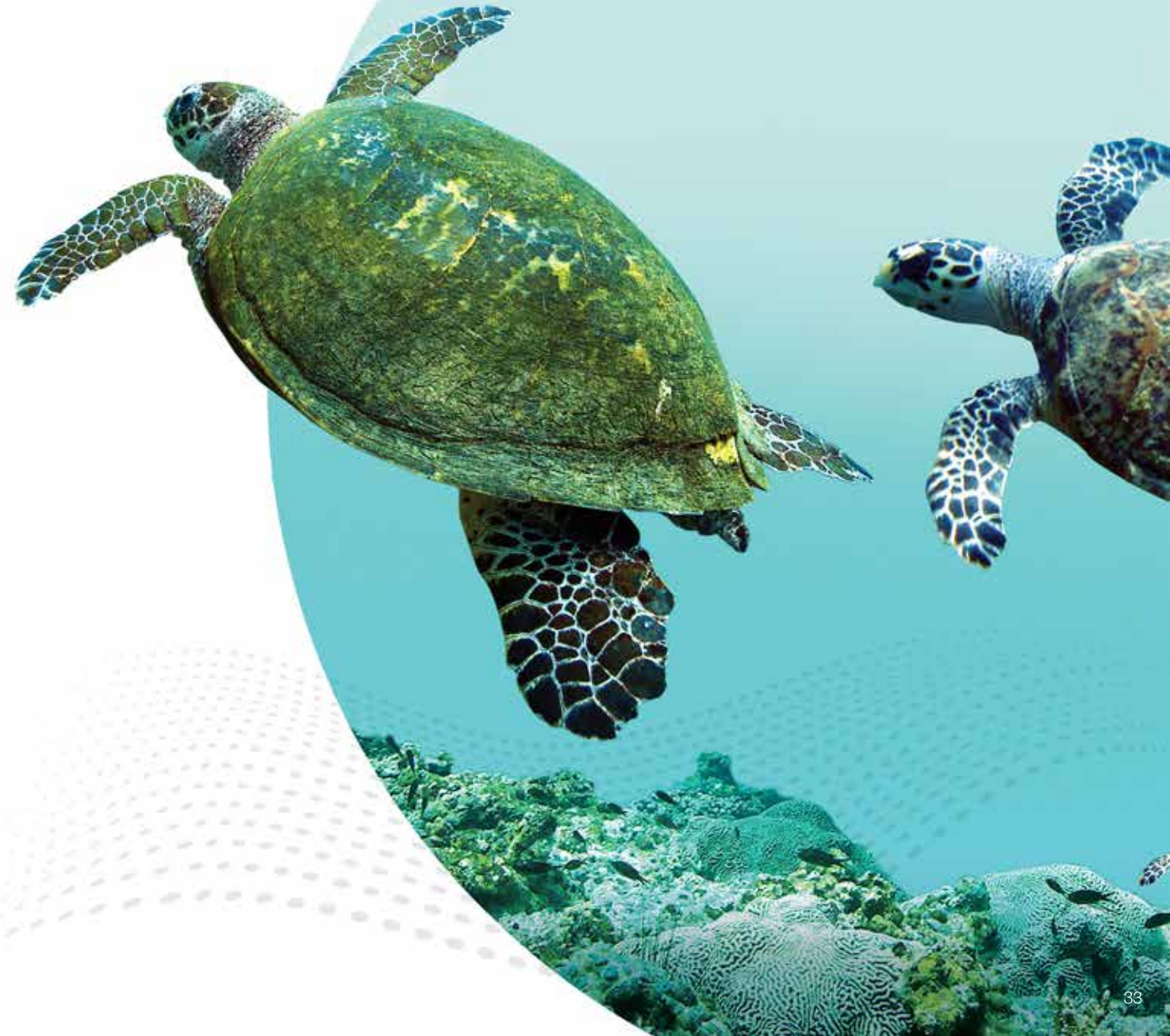
SUSTAINABILITY

The sustainability agenda has been at the forefront of regional policymaking for more than a decade. Dolphin Energy has been proud to play its part and is committed to implementing an effective strategy that drives key Environmental, Social, and Governance (ESG) objectives across its entire business.

To deliver this commitment, the company has implemented a clear sustainability strategy that reflects national and international standards and best practices, relevant regional visions, and global initiatives including the UN Sustainable Development Goals (SDGs).

Dolphin Energy undertakes regular and meaningful engagement with its stakeholders to identify the key issues that most impact them, and ultimately impact its business. The company also identifies risks and opportunities that prioritize and focus resources on matters most pertinent to its business.

As part of the company's approach to leadership in sustainability management, Dolphin Energy has assigned five key sustainability pillars which provide the framework for developing a prioritized list of actions and implementing key ESG measures and Key Performance Indicators (KPIs) across all areas of the business.





To ensure adequate oversight and accountability, all management levels within Dolphin Energy must have knowledge of and responsibility for the company's sustainability initiatives and performance. Goals and KPIs are continually added to the business plan and monitored to ensure that sustainability is managed on a day-to-day basis, by everyone within the organization.

Sustainability performance against year-to-year goals is published in an annual sustainability report which is made available to all. The report, which adopts an effective and unique framework to communicate company performance on sustainability issues that are material to its internal and external stakeholders, illustrates Dolphin Energy's commitment to drive and deliver positive social, environmental, and economic impacts.

We are strongly committed to managing our business in a way that will lead to long term growth while managing the needs of present and future generations.

DIGITALIZATION

The digital era is bringing unprecedented opportunities to unlock higher efficiencies across the energy industry, while providing increased value to all stakeholders.

Dolphin Energy's digital transformation program, strategy and roadmap was developed and launched in 2018. Since then, a multitude of projects have been implemented to deliver tangible business outcomes across three pillars – operational safety and security, asset reliability and efficiency and productivity across the supply chain.

Many more projects are planned and by adopting new transformative technologies, the company is changing the way it works.



