Where energies make tomorrow

Fixed Platforms

A leader in fixed platform design and delivery

T.EN TECHNIP ENERGIES

Best partner for full offshore field development

Technip Energies has been delivering upstream projects for more than 60 years. With a recognized track record in fixed platform delivery, we offer our clients cutting-edge expertise from early conceptual studies to EPCI for all phases of offshore field development.

Best-in-class expertise to support our clients' needs

Our experience ranges from small wellhead platforms to very large facilities including manned and unmanned production complexes. We can provide expertise in cost-optimized solutions for fixed platforms, including conventional jackets (lifted or launched), gravity-based substructures, self-installing platforms and artificial islands.

We adapt to our clients' needs, employing global processes while deploying local teams to successfully complete projects. Our most recent references include large, complex production platforms such as Umm Lulu in the UAE, SK316 in Malaysia and the detailed engineering of Wheatstone's Offshore Platform, one the world's heaviest single module integrated topsides.

Accelerating the journey to a low carbon society

We combine our EPC capabilities with our technological know-how to develop new solutions that support the world's energy transition. We offer a range of design, construction and industrial applications that are key to the global transition to a less carbon intensive economy.

Innovative sustainable solutions

We enable our clients to achieve their energy transition targets through new environmentally friendly solutions such as offshore windfarms, offshore hydrogen solutions, HVAC/DC platforms, CO_2 reinjection platforms and other dedicated offshore energy transition developments.

Reducing the carbon footprint of traditional developments

We improve the energy efficiency of our clients' facilities through unique technologies and service offerings. By providing innovative solutions and optimized processes, we help them to reduce the carbon footprint of traditional complex platform developments. For the Martin Linge project, we have improved the project carbon footprint through initiatives including reduced carbon emissions, shore-based power, remote operations and reduced offshore manning.

Full range of services: Studies to project completion and operation assistance

With a strong track record on fixed platforms, we offer our clients advanced expertise from early conceptual studies to EPCI for all phases of offshore field development.

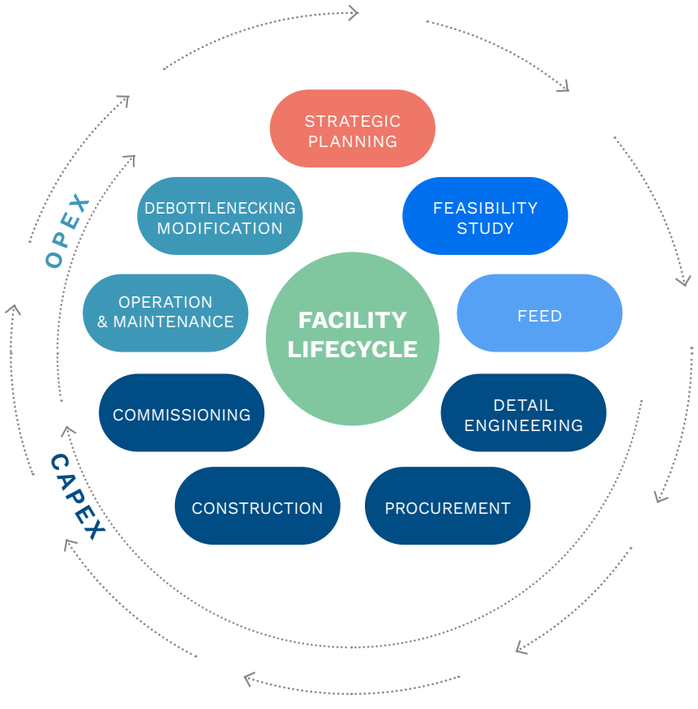
Excellence in project execution

We provide our clients unrivaled project management expertise for all types of offshore fixed platforms. This excellence stems from:

- Experienced front end study development teams.
- Strong project delivery model; engineering, procurement, logistics, construction and installation that enables the cost-effective delivery of the world's largest megaprojects.
- Multi-centre delivery in offshore fixed platform development translating into cost-effective, efficient localization of projects.
- A network of global fabrication partners that offers economical solutions to meet our clients' needs.
- An EPC phase that delivers value adding solutions that improve both CAPEX and OPEX performance.

Where national content is a strong driver, our regional offices often perform major projects autonomously or by transferring specialized knowledge and technologies from other centers.

OFFERING A WIDE RANGE OF SERVICES



Addressing our clients' needs

We act as a single, integrated supplier and offer our clients cost optimized solutions in a range of offshore fixed developments, including lifted or launched conventional jackets, gravity-based substructures, self-installing platforms and artificial islands.

Cost optimized solutions

- Proven experience and expertise worldwide that understands international standards and the best local content delivery.
- Single, integrated supplier limiting interfaces and improving project performance.
- Full coverage of all phases of offshore field development from conceptual to decommissioning, improving future phase understanding and reducing project rollover costs.
- Schedule and budget optimization from historical project perspective and engineering excellence
- Agility and flexibility through multiple strategic partnerships enabling the completion of projects initially considered economically borderline.
- Leading-edge technologies such as floatovers for topside installations or robotics for maintenance that provide a unique grasp of the project's engineering requirements.

Supporting the world's energy transition

We are a leader in delivering offshore energy transition projects. Some of our leading projects include:

- CO_2 sequestration: We develop specific offshore platforms or redeployed offshore platforms for CO_2 sequestration.
- CO_2 capture modules: We develop CO_2 capture modules for offshore installations of various sizes.
- Engineering for future regulations
- Biodiversity protection: Our Birds Invigilator is an innovative and proactive software to reduce the effect of offshore platform lighting on migratory birds.
- Carbon footprint expertise: Our carbon assessment tool (Gen-CAT™) provides carbon footprint contributors through engineering design, helping clients reduce carbon emissions.

Leading offshore's technological evolution

Innovative floatover technology

- Our floatover technology for installation of topsides is recognized as an industry differentiator. It enables installation of fully integrated and commissioned topsides with weight beyond current offshore heavy-lift crane capacities.
- We have developed the jack-assisted UNIDECK active floatover to enable installation of topsides onto fixed substructures in challenging and lengthy swell environments such as West Africa.
- We offer extensive experience in topside mating onto floating structures such as semi-submersible hulls (e.g., Petrobras P52, P51 and P56) and a spar hull using catamaran barges (e.g., Murphy Kikeh).

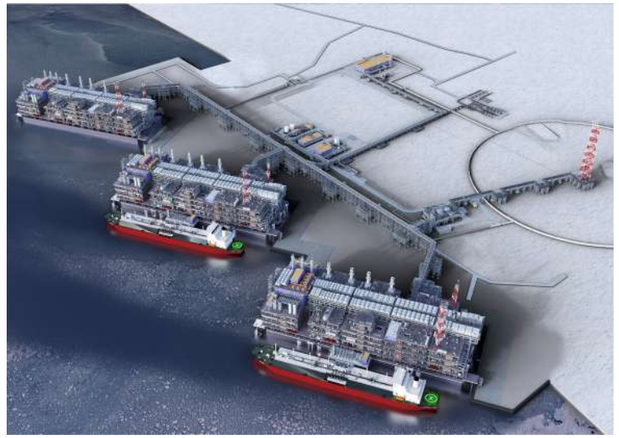
RECOGNIZED TRACK RECORD USING FLOATOVER TECHNOLOGY

- Mobil Producing Nigeria-East Area Additional Oil Recovery (AOR) Gas Compression platform (Nigeria)
- Elf Petroleum – Nigeria Amenan AMP2 Platform (Nigeria)
- ADMA-OPCO – Zakum Gas Processing Facility (GPF) extansion (UAE)
- Petronas Carigali – Turkmenistan Block 1 Gas field development Topsides (Turkmenistan)
- Elf Petroleum Nigeria – Topsides T&I Ofon Phase 2 (Nigeria)
- ONGC – HRD Process Platform Project (India)
- Petronas Carigali – Block SK316 NC3 Gas Development CPP Platform (Malaysia)
- ADMA-OPCO – Umm Lulu Phase 2 Topsides (UAE)

Cutting-edge topsides technologies

We offer our clients a broad range of fixed offshore facilities including:

- Large, steel legged processing platforms
- Wellhead platforms including conductor support platforms
- Self-elevating platforms including TPG-500, a Technip Energies proprietary technology
- Gravity-based structures
- Artificial islands



OUR EXPERTISE INCLUDES:

- In-house offshore structural and naval expertise
- Deep-water and shallow-water jacket design
- Complex process design (HP/ HT, CO_2, H_2S)
- Unmanned and low-manned platform design, including:
  - Remote operations
  - Shore power
  - Low maintenance designs
  - Robotics
  - Drone operations
- Modularization cost and design modeling expertise
- Process modeling for reduced offshore flaring
- Standardization know-how to improve project economics

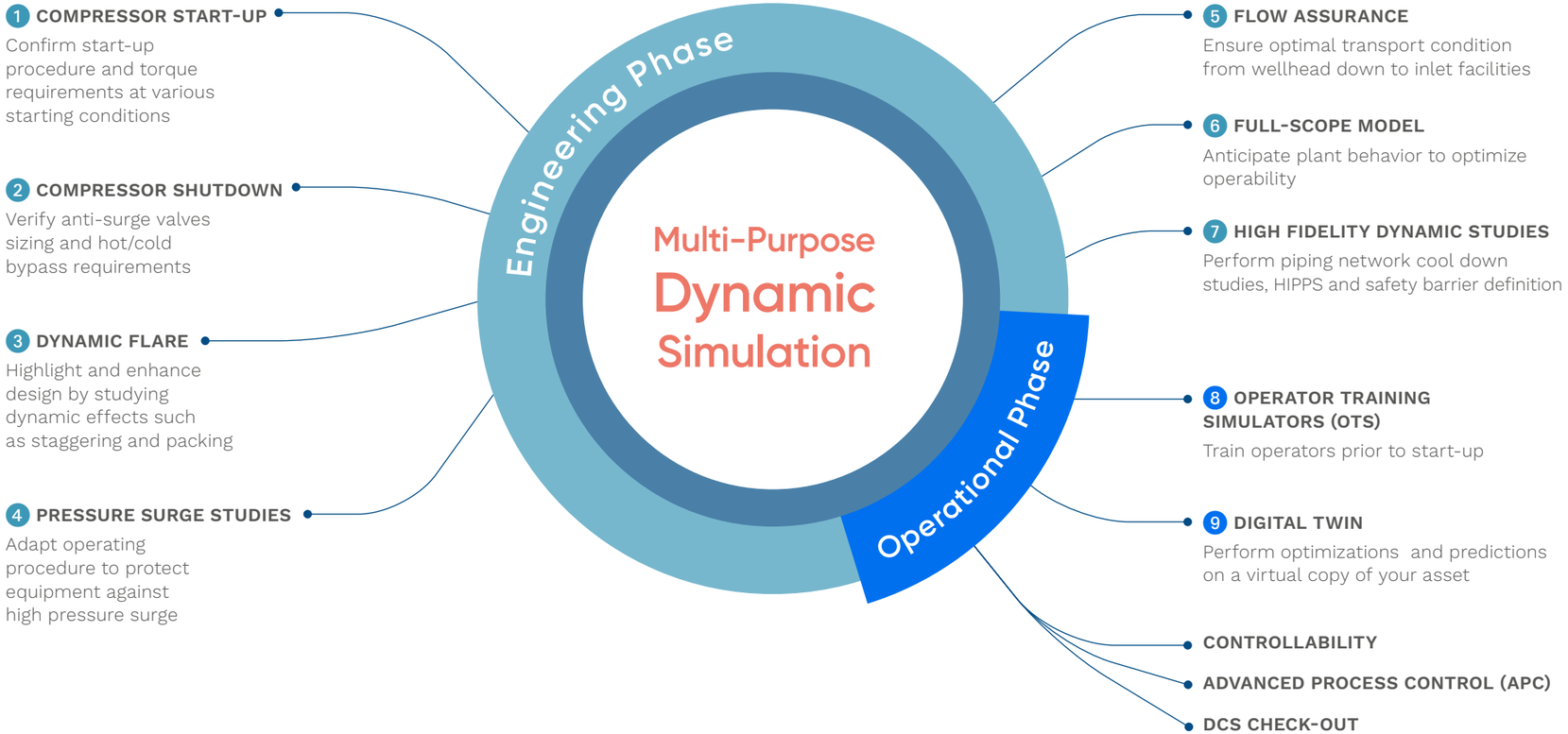
Optimizing our clients' assets

Dynamic simulations

Technip Energies provides the best technological solutions and optimizations from conceptual design to detailed engineering and operations.

We provide enhanced real-time solutions aimed at better understanding the processes and dynamic responses of key parameters such as flow rate, temperature, pressure, composition variation, etc. Our simulation team, project integrated or as an external resource, focuses on modeling the process scope with the optimum accuracy to meet client expectations from the engineering to the operational phase. With our extensive experience in dynamic simulations, we offer integrated solutions from the wellhead to the final product.

> Design, connect, monitor, maintain and optimize client assets.



Project References

RUSSIA

Arctic LNG 2
- **Contract: EPC**
- **Project timeline: 2019 – 2026**
- **Client: Novatek**
- **Topsides weight: 460,000T**

• In 2019, Technip Energies, in consortium with Nipigas and Saipem, was awarded a contract for a fully modularized LNG facility located in the Russian Arctic and consisting of three trains each on a concrete gravity-based structure incorporating LNG storage. The three trains will produce a total of 20 Mtpa of LNG.

NORVAY

Martin Linge
- **Contract: EPC**
- **Award: 2020 planned delivery**
- **Client: Equinor**
- **Topside weight: 26,000T**

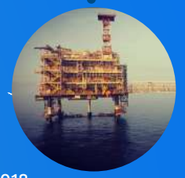
Technip Energies, leading a consortium with Samsung Heavy Industries (SHI), was awarded a contract for the Martin Linge development project located approximately 180 kilometers west of Bergen, Norway in a water depth of 115 meters.

AZERBAIJAN

Shah Deniz (TPG 500)
- **Contract: EPC**
- **Project timeline: 1999 – 2006**
- **Client: BP**
- **Topside weight: 22,000T**

The Shah Deniz development is based on our proprietary jack-up platform technology: TPG 500. It has been successfully deployed and installed at its permanent location in the Shah Deniz gas condensate field in the Caspian Sea about 100 kilometers south of Baku.

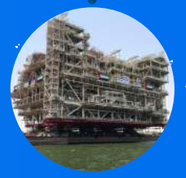
QATAR



FMB
- **Contract: EPIC**
- **Award: 2015 – 2018**
- **Client: Qatar Petroleum**
- **Topside weight: 4,000 + 4,600T**

This project involves the engineering, procurement, construction and installation of jackets with floatover of the topsides and subsea cables for the FMB platforms offshore Qatar. Our floatover technique is designed for installation of large integrated topsides in one piece, minimizing offshore hookup and commissioning without the need for large crane vessels.

UAE



Umm Lulu Phase II
- **Contract: EPC**
- **Project timeline: 2013 – 2019**
- **Client: ADNOC**
- **Topsides weight: 108,000T**

Delivered in association with NPCC, the project comprises of a large offshore complex of six bridge linked platforms including gathering, separation gas treatment and water disposal facilities, utilities and accommodation modules using floatover methods developed by Technip Energies.

SK316
- **Contract: FEED and EPCIC**
- **Project timeline: 2013 – 2015**
- **Client: Petronas**
- **Topside weight: 12,000T**

Technip Energies, in joint venture with MMHE, was awarded the development of two gas fields in Block SK316 located at water depth of 104 meters. The contract included a central processing platform and a bridge-linked wellhead platform.

Kasawari
- **Contract: EPC**
- **Project timeline: 2019 – 2023**
- **Client: Petronas**
- **Location:**
- **Topsides weight: 25,000T**

Technip Energies with Malaysia Marine Heavy Engineering (MMHE) was awarded a contract for the engineering, procurement, construction and commissioning of the Petronas' Kasawari natural gas development in Block SK 316 off Sarawak. Production is projected at between 500 MMcfd and 750 MMcfd of gas.

MALAYSIA

AUSTRALIA

WHEATSTONE
- **Contract: FEED + Detailed design**
- **Project timeline: 2012 – 2015**
- **Client: Chevron**
- **Topsides weight: 37,000T**

In partnership with DSME, the project included the detailed design of Chevron's Wheatstone offshore gas processing platform located 200 kilometers off Western Australia's coast.

INDIA

HRD
- **Contract: EPCIC**
- **Project timeline: 2012 – 2015**
- **Client: ONGC**
- **Topside weight: 8,000T**

Further to Technip Energies designing and developing the 8,000T platform for ONGC, the platform was installed using Technip Energies's proprietary Unideck integrated topside floatover installation system.

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