



ConocoPhillips

Liquefied Natural Gas

 **OPTIMIZED**
CASCADE[®] PROCESS

Our Technology and Expertise are Ready to Work Toward Your LNG Project Today

It's not just what we do. It's how we do it.

As worldwide energy demand continues to grow, the ConocoPhillips Optimized Cascade® process is well positioned to be your gas liquefaction technology of choice.

With more than five decades of proven LNG technology as its foundation, ConocoPhillips has licensed its innovative Optimized Cascade¹ process for use in 28 LNG trains around the world. By 2026, LNG plants utilizing the Optimized Cascade process expect to have a total global installed production capacity in excess of 118 million tonnes per annum (MTPA), making ConocoPhillips the world's second largest LNG liquefaction process technology provider.* From plant design to startup and ongoing operations support, our technology and expertise continue to deliver the highest standard of LNG facility performance. When LNG project owners select the Optimized Cascade process, ConocoPhillips' proven track record and experienced team provide management boards and financial lenders with the confidence that the right choice for liquefaction technology has been made.

Our Technology

The ConocoPhillips Optimized Cascade process includes proprietary technology necessary to efficiently and effectively liquefy natural gas, while recovering heavier hydrocarbons as a separate product to prevent freezing, and removing nitrogen, if required. The methods we use to integrate the technologies result in a lower cost and maximum efficiency of the overall LNG plant.

The Optimized Cascade process is based on three multi-staged, cascaded refrigerant circuits using pure refrigerants, brazed aluminum heat exchangers and insulated cold box modules. ConocoPhillips has optimized the heat integration to closely approach the natural gas and refrigerant cooling curves, resulting in a highly efficient process. Pure refrigerants of propane, ethylene and methane are utilized, due to their physical properties are ideal for heat integration. The refrigerant properties are also well known and predictable, contributing to unrivaled operating ease and flexibility.

Optimized Cascade Process LNG Plant Locations



*See Cautionary Statement on page 8.

Brazed aluminum heat exchangers and cold box modules allow for highly efficient heat transfer and can be scaled to accommodate a wide range of LNG plant sizes. Depending on the natural gas feed stream composition, the design of your LNG train can include an integrated heavies removal unit (HRU) and/or a nitrogen rejection unit (NRU) to achieve your LNG plant performance and economic targets.

When client requirements call for high reliability and availability, the process can be configured in a proven “two-trains-in-one” arrangement, where one train of highly reliable heat exchangers and related process equipment is served by two parallel refrigeration turbine/compressor trains. Pioneered by ConocoPhillips, this approach was first used in the Optimized Cascade process, and has become widely accepted as a design that provides the highest plant availability, along with the widest range of turndown capability in the LNG industry.

As a technology licensor that is also an owner and operator of plants using the Optimized Cascade technology,

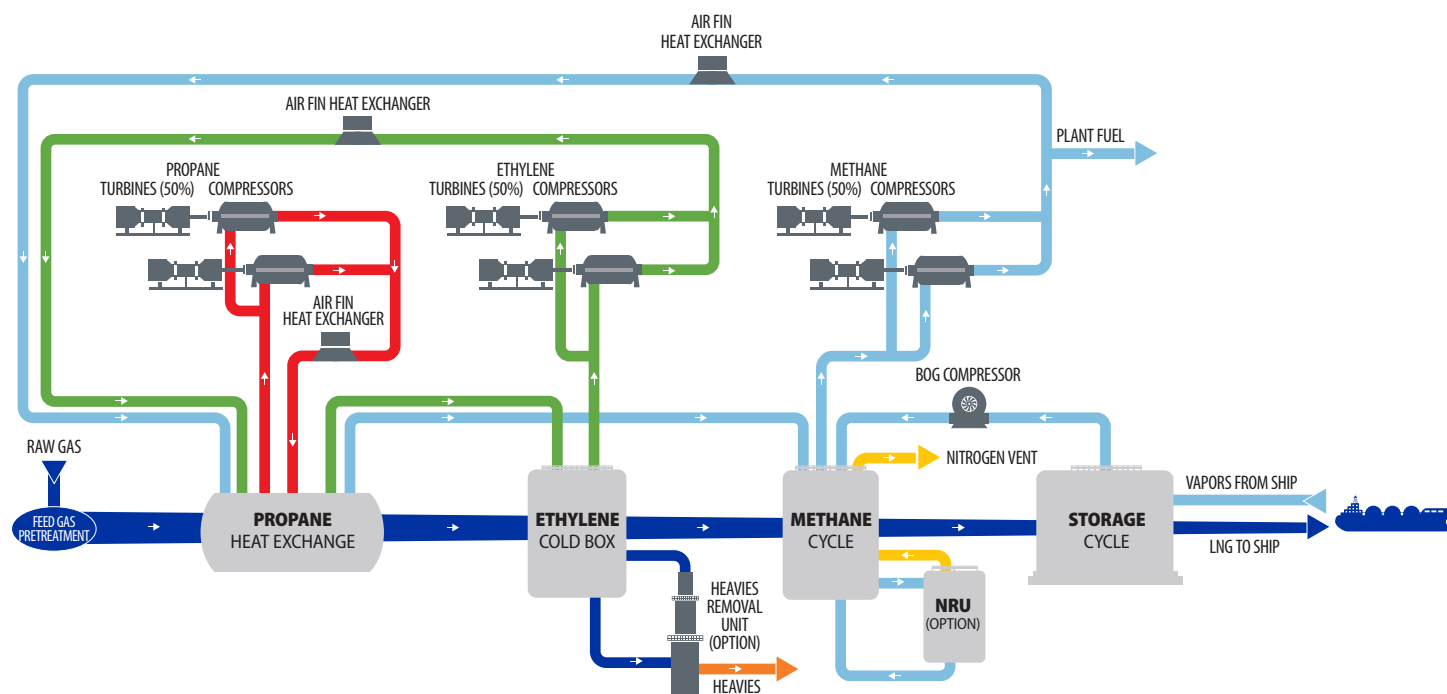
ConocoPhillips provides unique technical expertise and an in depth understanding of the operation of an LNG plant.

ConocoPhillips’ subject matter experts in every critical discipline required to design, operate, and maintain liquefaction facilities are available to support Optimized Cascade process licensees.

How the Optimized Cascade Process Works

The schematic below illustrates how the Optimized Cascade process produces LNG. The raw gas is first treated to remove carbon dioxide (CO₂), Hydrogen Sulfide (H₂S) and other sulfur compounds, water (H₂O), organometallic mercury compounds, particulates, and other contaminants before it is routed to the liquefaction section of the plant. The treated gas is then chilled and condensed to approximately -162°C in successively colder heat exchangers, using pure propane, ethylene, and methane as refrigerants. The LNG product is then pumped into insulated storage tanks where it remains until shipment. Boil-off gas and ship return vapors are captured and recycled through the Optimized Cascade process for efficient reliquefaction.

The Optimized Cascade Process





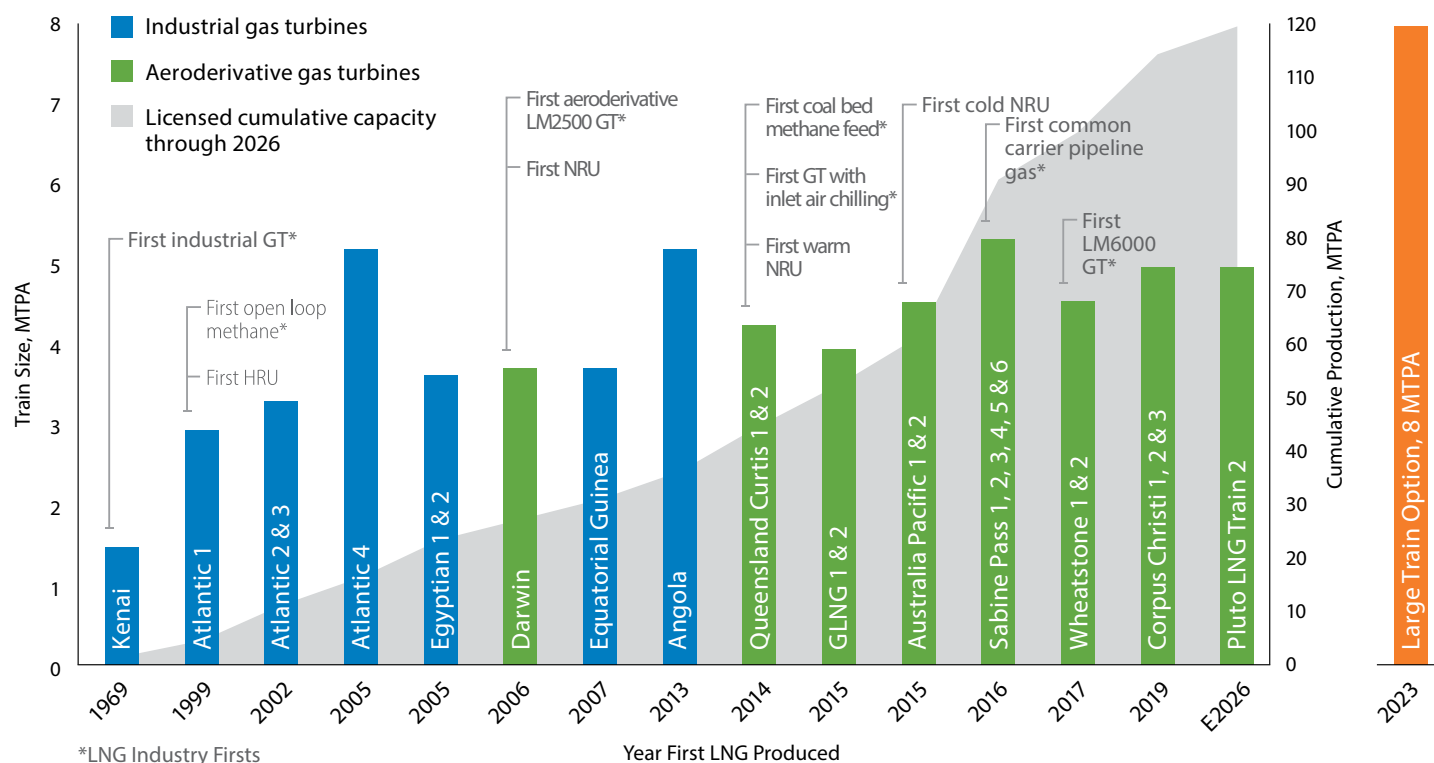
Six trains at Sabine Pass, Louisiana USA.

A Rich History of Innovation

At ConocoPhillips, we are committed to our SPIRIT Values (Safety, People, Integrity, Responsibility, Innovation and Teamwork) to produce and deliver energy to the world. While all of these values are important, innovation has driven our performance in the Liquefied Natural Gas (LNG) industry. We have a rich, 50+ year history of innovating and

continue to improve the Optimized Cascade process with every project. We've played a significant role in advancing LNG's position in the global marketplace and are proud of our position as the world's second-largest provider of LNG liquefaction technology. Our global reach and our innovative and pioneering spirit are illustrated in the chart below.

Continuous Innovation and World-Class Performance



We began our Optimized Cascade process innovation journey over 50 years ago with the 1.5 MTPA Kenai LNG facility. We applied our design and operating experience involving cryogenic recovery of helium from natural gas to build and construct the world's largest and most efficient LNG plant at the time. The facility was the first to supply LNG into the Japanese market and helped demonstrate LNG could be produced and delivered reliably to meet the energy needs of our customers. For over half a century, we have been designing, constructing, and operating LNG facilities with the Optimized Cascade liquefaction process technology and advancing the technology to better meet our customers' needs in this constantly changing global marketplace.

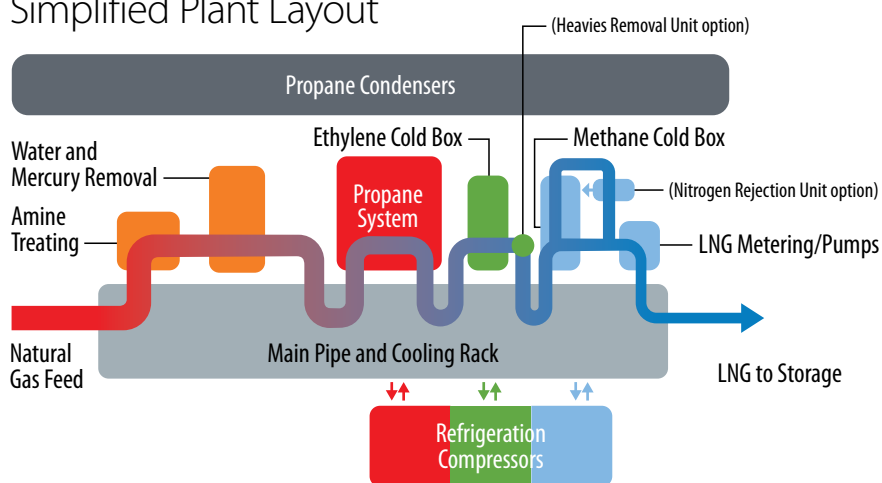
Our innovative spirit has resulted in a number of industry firsts. We were the first to use gas turbine technology to direct drive the refrigerant compressors required to make LNG more efficiently at Kenai. It was also the first to use the two trains in one arrangement. We continued to apply that pioneering spirit and innovative approach with the first aeroderivative gas turbine technology installed and used in 2006 at the Darwin LNG facility. This lighter and easier-to-change-out engine significantly improved the efficiency of producing LNG and reduced the environmental footprint. More recently, larger and more efficient aeroderivative gas turbines from GE's LM6000 product line were installed at the Wheatstone LNG facility, further reducing the environmental footprint for producing LNG.

As shown in the Simplified Plant Layout, the Optimized Cascade process is simple. It is also flexible and easy to startup. This helps to minimize the risks of lost LNG production from unplanned downtime.

Optimized Cascade process's two trains in one arrangement appealed to operators seeking to convert coal seam gas to LNG in Queensland, Australia where good facility turnaround and high availability were key. We further improved the performance of the aeroderivative gas turbine engine in LNG service on Curtis Island by incorporating inlet air chilling, which significantly improved LNG production by minimizing the impact of ambient temperature swings — another first for the industry.

Our technology has also proven advantageous for a wide range of feed gas compositions. For feed gas supplies containing heavy hydrocarbon components that may freeze at the temperatures required for liquefaction of methane or higher concentrations of unwanted nitrogen, our innovative approach for removal has resulted in various patents. Each provides a solution with a high thermal efficiency and an integrated design to remove the contaminants and withstand upstream upsets. With more than twenty years of operating experience, our low cost integrated HRU efficiently and

Simplified Plant Layout



stably removes heavy hydrocarbons from a wide range of gas compositions that vary from associated gas to lean gases sourced from interstate pipelines. Our first NRU was installed at the then ConocoPhillips owned Darwin facility in 2006, and has been improved for our later applications in Australia. Our lessons learned have been captured in design templates and help reduce Front End Engineering Design (FEED) and detailed engineering time for future projects while maintaining the high reliability required by our clients.

Sustainable Development

At ConocoPhillips, sustainable development is about conducting our business to promote economic growth, healthy environments and vibrant communities, now and into the future. We recognize that LNG connects natural gas producers and end users in multiple areas of the world, brings the benefits of natural gas to more end users, and spurs economic growth in producing and consuming regions. ConocoPhillips works closely with customers and contractors to ensure the Optimized Cascade process meets each LNG plant's efficiency and economic targets, while minimizing the plant's environmental footprint.



Operations specialist at APLNG

An Owner's Perspective

We approach all instances of applying new, innovative solutions to LNG facilities as an owner, which truly differentiates us from other technology providers. Every aspect of our Optimized Cascade technology and services offering draws from our experience of designing, building and most importantly, operating our own LNG plants.

Our Expertise

We have owned and operated LNG facilities based on the Optimized Cascade process for more than fifty years. Our technical capability and experience enables us to uniquely support our clients. They depend on our proven Optimized Cascade process and expertise, so we treat their LNG facilities around the world the same way we own and operate ours.

When you choose the Optimized Cascade process, you get more than just a technology license. You get peace of mind from working with an international operator of major energy facilities and a leader in every aspect of the LNG value chain, from exploration and production to liquefaction, shipping, regasification and marketing. ConocoPhillips LNG licensing and engineering teams work side by side with you to ensure successful project development and implementation. And, our relationship does not stop there. After plant handover, ConocoPhillips' subject matter experts are available to assist you with your needs in process optimization, troubleshooting,

debottlenecking, or consulting on day to day operational and technical issues.

Technical Services

In addition to providing world-class performance and continually innovating to provide you with the best liquefaction technology, we bring value to you even after startup of an operating plant. Our technical capability and depth of experience in operating and supporting our own facilities enables us to provide experienced engineers and operators to assist in meeting your plant's most challenging technical and operational needs to improve plant performance. As an Owner/Operator, we understand how important the commissioning, startup and early operations phases can be to your value proposition.

As well as providing technical and operations advisory services, we host technology conferences where we bring together licensees and our subject matter experts to exchange best practices and stay abreast of new developments regarding the Optimized Cascade process. As part of each new plant build, we offer our licensees operations and engineering training by our subject matter experts covering the key aspects of their LNG plant operation.

EPC Contractor Options

ConocoPhillips has a flexible multi-contractor licensing approach, offering our clients strong technical support and their selected experienced LNG project contractor(s) a comprehensive Licensing Design Package tailored to our clients' requirements. Our team of engineers, operators and subject matter experts can help both operators and contractors solve problems and maximize value over the lifetime of the facility.

At ConocoPhillips, we know that getting involved early in the life of a project plays an important role in driving a project's success. Being there at the start helps us to proactively collaborate with you and your EPC contractor through all the project phases to help you meet your requirements. As in any good relationship, communication is very important. The results can lower costs, shorten schedules, and assist you in achieving everything you set out to do with your project, with the quality you expect.

Advantages of the Optimized Cascade Process Technology

High Availability	<ul style="list-style-type: none"> • “Two-trains-in-one” configuration yields approximately 95% plant availability, with high efficiency during turndown
Proven Technology	<ul style="list-style-type: none"> • Over 50 years of operation • 28 trains producing more than 118 MTPA at 12 plants by 2026 • Designed and built plants with broad range of ambient temperatures and feed compositions
Flexible Operations	<ul style="list-style-type: none"> • Easy to start up, shut down, operate and maintain, with fast startup cycles and wide operating range • Cold boxes retain cold temperatures during extended outages, which translate into faster startup cycles • Widest range of plant turndown capability (from 100% to 10% of nameplate capacity) • Shifting load between refrigeration circuits allows for quick response to changing operating conditions
High Thermal Efficiency and Low Emissions	<ul style="list-style-type: none"> • Use of brazed aluminum heat exchangers, aeroderivative gas turbines, and waste heat recovery unit integration, yields up to 96% LNG facility thermal efficiency and lower emissions • Refrigerants retained in process and not flared during shutdowns
Integrated Design Options	<ul style="list-style-type: none"> • Improve overall LNG plant thermal efficiency and economics with integrated heavies removal and/or nitrogen rejection units • Increase LNG production and efficiency with: <ul style="list-style-type: none"> – gas turbine power augmentation (inlet air chilling or humidification, water injection, etc.) – gas and flashing liquid expanders – combined cycle/cogeneration

Add ConocoPhillips to Your Team

Reputable Licensor and EPC Contractor — “One Team”	<ul style="list-style-type: none"> • ConocoPhillips, with experience as an owner, licensor and operator of LNG facilities, offers: <ul style="list-style-type: none"> – consistent development and application of best practices from more than 50 years of operation – experience working with many different EPC contractors around the world brings additional credibility to LNG developers and their financial institutions
Predictable Outcomes	<ul style="list-style-type: none"> • Competitive capital and operating costs • Simple and flexible operations: easy to startup and operate
Owner’s Perspective	<ul style="list-style-type: none"> • Broad experience in all aspects of the LNG value chain • Shares valuable design and operational insight with licensees
Services and Support Expertise	<ul style="list-style-type: none"> • Experienced subject matter experts to: <ul style="list-style-type: none"> – provide engineering and operations services during all project phases – provide quality assurance of key process equipment – ensure safe, successful commissioning and startups – train operators and engineers – provide post-startup technical and operations support

Optimized Cascade Process Reference List

Kenai LNG (retired)	1 train	1.5 MTPA	Kenai, Alaska, USA
Atlantic LNG	4 trains	14.8 MTPA	Point Fortin, Trinidad and Tobago
Egyptian LNG	2 trains	7.2 MTPA	Idku, Egypt
Darwin LNG	1 train	3.7 MTPA	Darwin, Australia
Equatorial Guinea LNG	1 train	3.7 MTPA	Malabo, Equatorial Guinea
Angola LNG	1 train	5.2 MTPA	Soyo, Angola
Queensland Curtis LNG	2 trains	8.5 MTPA	Curtis Island, Australia
GLNG	2 trains	7.8 MTPA	Curtis Island, Australia
Australia Pacific LNG	2 trains	9.0 MTPA	Curtis Island, Australia
Sabine Pass Liquefaction	6 trains	30.0 MTPA	Cameron Parish, Louisiana, USA
Wheatstone LNG	2 trains	8.9 MTPA	Ashburton North, Australia
Corpus Christi Liquefaction	3 trains	15.0 MTPA	San Patricio County, Texas, USA
Pluto LNG Train 2	1 train	5.0 MTPA	Burrup, Australia
TOTAL	28 trains	120.3 MTPA	



Web: lnglicensing.conocophillips.com
Email: lngprocess@conocophillips.com
Phone: +1 281-293-1000

¹Optimized Cascade® is a registered trademark of ConocoPhillips Company in the United States and certain other countries.

CAUTIONARY STATEMENT

These materials contain forward-looking statements. We based the forward-looking statements on our current expectations, estimates and projections about ourselves and the industries in which we operate in general. We caution you these statements are not guarantees of future performance as they involve assumptions that, while made in good faith, may prove to be incorrect, and involve risks and uncertainties we cannot predict. In addition, we based the forward-looking statements on assumptions about future events that may prove to be inaccurate. Our actual outcomes and results may differ materially from what we have expressed or forecast in the forward-looking statements. Economic, business, competitive and regulatory factors that may affect ConocoPhillips' business are set forth in ConocoPhillips' filings with the Securities and Exchange Commission, which may be accessed at the SEC's website at www.sec.gov.