EXPERIENCE THE BENEFITS OF TOMORROW'S FUEL, TODAY

Shell LNG TOMORROW'S FUEL TODAY
SHELL LNG represents... THE INNOVATIVE MARINE FUEL CHOICE FOR SHIPPING.

- Lower fuel costs - Shell LNG is a cost competitive fuel compared to marine distillates, thus offering you potential fuel cost savings during vessel operations in the Sulphur Emission Control Areas.
- Comply to environmental regulations - Shell LNG fuel adheres to stringent IMO guidelines for lower sulphur emissions in the Emission Control Areas. LNG fuel can also help address a broader range of environmental compliance requirements, such as reducing particulate matter and reducing NOx emissions.
- Experience, simplicity and safety in operational processes - LNG as a marine fuel is well established and based on proven process technology. It has been used by LNG carriers for two decades in deep sea shipping, as well as in ferries and platform supply vessels in coastline traffic in Norway. LNG bunkering can take place from terminals, bunkering vessels or trucks. The existing bunkering procedures are designed with simplicity and safety in mind. Shell brings additional safety rigor through decades of experience in operational safety.

Used for LNG transfers 2 decades 60,000

LNG can offer a compelling value proposition to marine customers...

- Cost competitive fuel
- Cleaner burning fuel
- Proven and reliable LNG engine technology availability
SHELL LNG DELIVERS VALUE TO YOUR BUSINESS

**Lower fuel costs** - Shell LNG is a cost competitive fuel compared to marine distillates, thus offering you potential fuel cost savings during vessel operations in the Sulphur Emission Control Areas.

**Comply to environmental regulations** - Shell LNG fuel adheres to stringent IMO guidelines for lower sulphur emissions in the Emission Control Areas. LNG fuel can also help address a broader range of environmental compliance requirements, such as reducing particulate matter and reducing NOx emissions.

**Experience, simplicity and safety in operational processes** -

**USED FOR**

2 DECADES

LNG as a marine fuel is well established and based on proven process technology. It has been used by LNG carriers for two decades in deep sea shipping, as well as in ferries and platform supply vessels in coastline traffic in Norway.

**LNG TRANSFERS**

60.000

LNG bunkering can take place from terminals, bunkering vessels or trucks. The existing bunkering procedures are designed with simplicity and safety in mind. Shell brings additional safety rigor through decades of experience in operational safety.
EXPANDING THE REACH OF SHELL LNG: A CLEANER BURNING MARINE FUEL

SHELL-PRODUCED LNG FOR TRANSPORT LEVERAGES MANY ASPECTS OF THE SHELL GLOBAL ORGANIZATION INCLUDING: GAS EXPLORATION AND PRODUCTION, SHIPPING, SMALL-SCALE LIQUEFACTION, EFFICIENT MANAGEMENT OF RETAIL SITES AND MARINE BUNKERING LOCATIONS.

GASNOR: A 100% SHELL SUBSIDIARY

GASNOR IS A SMALL SCALE LNG PIONEER AND A KEY SUPPLIER OF LNG FUEL TO SHIPS IN NORTHERN EUROPE.

Through its large distribution network, Gasnor offers bunkering for a growing fleet of LNG fuelled vessels. Gasnor pioneered the distribution and sales of natural gas in Norway and has embraced innovation to offer natural gas to ship operators and industry companies in Europe where piped gas is not feasible.

Gasnor now owns and operates three production plants for LNG located on the western coast of Norway. From these plants, Gasnor supplies industry companies and a growing fleet of LNG-powered ships with cleaner burning LNG. Gasnor currently delivers LNG to approximately 30 ships. Gasnor also sources LNG from import-terminals in Europe.

SHELL’S GLOBAL LNG PORTFOLIO

- LNG - OPERATION
- LNG - CONSTRUCTION
- LNG FOR TRANSPORT - CONSTRUCTION
- REGAS POSITION - OPERATION
- LNG ACQUISITIONS PENDING 2013

Shell is working to establish a robust network plan that can support LNG supply along the key shippings lanes globally.
**GASNOR: A 100% SHELL SUBSIDIARY**

GASNOR IS A SMALL SCALE LNG PIONEER AND A KEY SUPPLIER OF LNG FUEL TO SHIPS IN NORTHERN EUROPE.

Through its large distribution network, Gasnor offers bunkering for a growing fleet of LNG fuelled vessels. Gasnor pioneered the distribution and sales of natural gas in Norway and has embraced innovation to offer natural gas to ship operators and industry companies in Europe where piped gas is not feasible.

Gasnor now owns and operates three production plants for LNG located on the western coast of Norway. From these plants, Gasnor supplies industry companies and a growing fleet of LNG-powered ships with cleaner burning LNG. Gasnor currently delivers LNG to approximately 30 ships. Gasnor also sources LNG from Import Terminals in Europe.
EIDESVIK:  
10 YEARS OF EXPERIENCE WITH A CLEANER FUEL

“EIDESVIK HAS RECENTLY CELEBRATED THAT WE HAVE BEEN OPERATING LNG FUELLED PLATFORM SUPPLY VESSELS FOR MORE THAN A DECADE. WE ARE TODAY THE WORLD’S LARGEST OWNER AND OPERATOR OF LNG POWERED SUPPLY VESSELS.”

“We are often asked why we are spending time and resources on this issue. To us in Eidesvik there is a simple answer to such questions. By using LNG as a fuel we reduce both fuel consumption and harmful emissions to the air. We regard that emissions of acid rain (Nitrogen oxides) is reduced by approximately 80% and emissions of CO2 by nearly 20%. Local navigation alone stands for some 40% of acid rain, and we have to show responsibility and take action. To us it is also a matter of course to economize with scarce resources like fuel for ships.”

SHELL DEEP WATER:  
IN THE GULF OF MEXICO

“SHELL HAS BEEN AT THE CUTTING EDGE OF DEEP-WATER DEVELOPMENTS FOR MORE THAN 30 YEARS AND HAS BEEN INVOLVED IN MORE THAN 20 SUCCESSFUL PROJECTS. SHELL DEEP WATER RECENTLY CHARTERED 3 LNG-POWERED PLATFORM SUPPORT VESSELS TO SUPPORT OPERATIONS IN THE GULF OF MEXICO.”

“We are at the forefront of advances in technology and innovation which enable the production of oil and gas from new deep-water frontiers, and our decision to charter LNG-powered supply vessels to support our operations in the Gulf of Mexico is a perfect example of how we think about our challenge and apply innovation.

With environmental regulations becoming increasingly stringent, these new vessels will allow Shell Deep Water to reduce our carbon footprint and demonstrate LNG’s ability to drastically reduce greenhouse gas emissions. Reducing the carbon footprint of our overall supply chain brings tremendous advantages to our ability to work in an environmentally responsible way.”

“We are also confident that the use of LNG vessels will, over time, offer significant savings that will offset conversion costs.”
SHELL LNG:
PROPELLING BARGES
ON THE RHINE

SHELL HAS CHARTERED TWO NEW LNG
POWERED BARGES, WHICH WILL
OPERATE ON THE RHINE.

The new barges will be Shell’s first to be fuelled solely
by LNG and demonstrate an industry first solution.
These LNG powered barges will be brand new
additions to the existing Shell fleet.

FJORD 1:
POWERING THE
“LNG HIGHWAY”

“FJORD 1 IS THE LARGEST FERRY COMPANY IN
NORWAY AND OPERATES CAR/PASSENGER
FERRIES AND EXPRESS BOATS ALONG THE
COASTLINE OF NORWAY. THE COMPANY IS
CONCERNED ABOUT THE ENVIRONMENTAL
IMPACT OF ITS OPERATIONS AND STARTED UP
FERRIES OPERATING ON LNG IN 2000. FJORD 1
NOW HAS 12 FERRIES OPERATING ON LNG –
AND THE LATEST ONE “MF BOKNAFJORD” IS
ALSO THE WORLD’S LARGEST OF ITS KIND.”

“We have compared traditional diesel fuelled ferries with LNG
fuelled ferries, and have experienced a significant reduction of
local emissions and virtually zero particulate matter. We have
also experienced that the noise level on board these ships is
significantly lower than on a traditional ferry. Fjord 1 has a
broad background experience with ships operating on LNG.

Introducing LNG as fuel is a pilot project and some adjustments
have been made, but the overall operational experiences have
been positive. The supply of LNG has not caused disturbance to
our operations, the bunkering operations have been efficient and
we have a good feeling of security for the procedures.”

“WE HAVE EXPERIENCED A SIGNIFICANT
REDUCTION OF LOCAL EMISSIONS AND
VIRTUALLY ZERO PARTICULATE MATTER.”
Shell Marine Products is an integrated supply chain provider supplying Marine Lubricants and related Technical Services to customer vessels. Whatever your needs and engine specifications, you can rely on us for peace of mind. Our worldwide Technical Services and Solutions include:

- **Ship Visits** - Shell Marine Technical representatives can help customers by conducting ship visits and providing expert lubricant advice such as technical enquiries, solution requests, product application and change-over advice.

- **Shell ANALEXAlert** - Provides “On Board” measurement of Iron (Fe) wear debris in any oil and grease, give early warnings of failing components and complements Shell RLA laboratory.

- **Shell Cylinder Condition Monitoring** - SMP can work with its customers to design a lubrication feed-rate that provides optimal value. Optimised Feed rates can reduce the cost of lubricants and maximize component’s life can reduce the cost of spare parts and downtime.

Shell Marine Products offers a complete range of marine lubricants and technical services through Shell Marine Products (SMP):

- Extensive portfolio of Marine Lubricants
- Products availability across 500 ports in 43 countries
- Currently supplying lubricants and services to more than 10,000 vessels globally

**Shell Rapid Lubricants Analysis**

Shell Rapid Lubricants Analysis (RLA) is an oil condition monitoring service which helps you to keep your vessels running smoothly by identifying potential oil or equipment failures before they become critical and will help your business to save money and time on maintenance caused by equipment failures.

RLA is today a worldwide service for our customers and we perform over 180,000 laboratory tests annually in our 6 zonal labs across the globe.