

# GATE TERMINAL



# Gate swings wider

Editorial: Colin Chinery



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The opening four years ago of the Gate terminal in Rotterdam was a major step in supplying North West Europe with LNG. Now a further breakthrough is in sight with work starting on a new infrastructure that will add break bulk facilities to the expanding portfolio.

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Whether through climate issues or the push for energy diversification, natural gas is seen as the fossil fuel of the future. And LNG's increasing role in Europe's energy mix is underscored with the recent start on a new multi user LNG break bulk infrastructure adjoining the €800m Gate terminal on the Maasvlakte in Rotterdam.

Opened in 2011, Gate – 'Gas Access to Europe', the Netherland's first LNG

terminal, imports, stores, re-gasifies and delivers liquefied natural gas into northwest Europe's grid.

The new facilities, expected to be operational by mid-2016, are based on a multi-user service model. Open to all interested parties they will have a maximum capacity of 280 berthing slots a year.

Break-bulk infrastructure and services will increase LNG bunkering fuel capacity in Northern Europe – specialised

LNG bunkering vessels are being developed to enable ship-to-ship transfers - and ease the split up of large-scale LNG shipments into manageable portions for small off-take loads. A new jetty will make LNG more widely available as a transport fuel for vessels in northwest Europe.

It's a development that will accelerate the distribution and use of LNG as a cleaner fuel alternative for maritime

vessels, ferries, trucks and industrial applications throughout North West Europe.

### MOTORWAYS OF THE SEA

The project is financed with €38m from the European Investment Bank, with the remainder supplied by a syndicate of four banks under an agreement signed in late October last year. Besides that there is funding from the EU's 'Motorways of the Sea' concept, which is co-financed by the EU Trans European Transport Networks (TEN-T).

Shell, the launching customer for the expansion, has committed to buy capacity from Gate terminal, a move that effectively underwrote investment in the new project. "We are pleased to have reached this agreement," said

Maarten Wetselaar, Shell's executive vice president.

"LNG is a viable option for fuelling cleaner and more sustainable transport. We believe LNG will form a bigger part of the transport fuel mix in the future, and this project demonstrates our confidence in LNG as a fuel option."

With an initial throughput capacity of 12 billion cubic meters per year - and with the option to increase to 16 bcm - Gate was built by the state-owned gas infrastructure company Gasunie and Netherlands-based global independent tank storage provider, Vopak, and seen by the Dutch government as part of its strategy to hold on to the Netherlands' position as a key European gas hub.

Rotterdam is Europe's biggest port with an annual

turnover of €600m, used by 32,000 ocean-going vessels and 87,000 inland vessels a year and employing more than 90,000 people. With an easy entry route to and from the North Sea, Rotterdam was an obvious location for a super-sized LNG port and terminal.

Four years on, this latest development by Gasunie and Vopak is "an innovative LNG break bulk concept," says Gate terminal Managing Director Dick Meurs. "Upgrading the LNG hub capabilities of Gate terminal will enable our customers to supply LNG as cleaner fuel for transport, shipping and industrial applications."

And as Allard Castelein, CEO of Port of Rotterdam Authority says, it fits into a general strategy aimed at strengthening Rotterdam's



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position as the most important European LNG hub.

## ROTTERDAM'S ACE CARD

"Besides the pipeline connections, our logistical links for the European small scale market – whether by river, coastal shipping, trucks and in future perhaps by train are available and very competitive," says Mr Meurs. "Altogether it gives the Port of Rotterdam a very strong strategic position.

"Rotterdam is one of the main larger bunker markets in Europe - that's the starting

point. And we don't have to develop the infrastructure because it's already in place. So it's a very strong point to have this new terminal here and play a leading role in the distribution of LNG for the small scale market into Europe; a dedicated facility for small scale ships from say 500 to 20,000 cubic metres.

"In the end, if you want to distribute LNG then you must have reliability built into the supply system for the benefit of customers, and this is why we are setting up this dedicated facility."

The use of LNG as a fuel is expected to grow substantially following the introduction earlier this year of stringent new emission regulations (SECA) for the marine sector in the North Sea and the Baltic Sea.

By using LNG as a fuel, barges, coasters, ferries, as well as heavy duty trucks, can reduce their carbon dioxide (CO<sup>2</sup>) emissions by up to 20% and nitrogen oxide (NO<sub>x</sub>) emissions by up to 85%, while reducing sulphur and particle emissions to almost zero.

Reasons persuasive enough for the Dutch government and the European Union to encourage the development of liquefied natural gas.

But it has not been a smooth journey. Six months before Gate came on stream, a tsunami triggered by an earthquake off the coast of Japan, took the lives of tens of thousands, and causing a catastrophic failure at the Fukushima 2 nuclear power plant.

Three of its six reactors melted down in the biggest nuclear disaster since Chernobyl in 1986, leaving the world's third largest economy reliant on LNG to fill its energy gap.

Since then plans to phase out nuclear power in the next few decades have made the role and importance of LNG increasingly important in Japan's energy strategy.

## FUKUSHIMA – AND AFTER

"Fukushima changed the global energy market a lot," says Mr Meurs, who joined Gate in 2012 shortly after the

project was delivered, a home return after ten years working in Latin America with P&O Nedlloyd, Maersk and Vopak.

“With Japan buying into LNG, energy prices went up significantly, and for Europe in general this brought a change in the market dynamics.”

For Gate and other European terminals it has meant a high level of unutilised storage. But now the dynamics are changing again, with LNG prices on the world’s largest market, the USA, collapsing following the development of indigenous shale gas.

“Although we always had LNG in the tanks, re-gasification became less attractive, and so we decided to encourage customers to

develop more optionalities in the terminal. This is what we have been doing since 2011, and we are still in that process.”


Re-positioning began with adaptation to jetties and a shift to a hub terminal concept. “For this we had to add some services, starting with facilities enabling the berthing of smaller ships at our two main jetties and increasing our flexibility there. We can now have ships of around 6,000 cubic metres and up to 15,000 cubic metres for LNG distribution by sea to North West Europe.

“This was implemented in 2013, and in 2014 we opened a truck loading bay, operational now for just over

a year. Early this year we decided to make a further investment in trans-shipping services to enable LNG transfers from ship-to-ship without going through the terminal and our tanks, and this will become available in the second half of this year.”

With LNG powered shipping and road transport projects getting financial backing in the ‘TEN-T Programme’, the latest Gate project is also seen as an important step in achieving the goals of the ‘Green Deal Rhine and Wadden’, a partnership between the Dutch government, business and knowledge institutes aimed at promoting green growth.



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Managing Director | Dick Meurs

“The market is subject to environmental pressure and emission restrictions and LNG is a very viable alternative both in terms of competitiveness and availability and of course environmental impact. So it has all the elements to be a very good alternative, especially for the shipping sector.”

### THE BIG CHANGE

The big change says Mr Meurs, will come if the global shipping sector changes to LNG. International co-ordination is increasing, and last month came the news that Rotterdam and Singapore are

bunkering as part of an initial deal covering information exchange on marine services.

Singapore, the world’s largest bunkering port, has stepped up similar co-operation arrangements, including a 2013 deal with Belgium’s Antwerp Port Authority and the Port of Zeebrugge to standardise LNG bunkering standards.

“You need LNG available for bunkering in many ports, and the Port of Rotterdam has an important role in general, liaising with other main ports in the world and assisting in terms of sharing experience and practices to enable them

to co-operate on LNG

to offer similar services in the medium term and help the global shipping sector make the required transitions.”

Europe imported just 33 million tonnes of LNG in 2014, far below its import capacity of 100 million tonnes per annum as trader’s diverted cargoes to higher-paying Asian markets.

But a recent slump in Asian demand has raised hopes that Europe may attract more cargoes into its under-used import terminals. “After four years of flat supply we are entering a period of supply growth,” says Andrew Walker, BG Group Vice President of Global LNG

“2014 marked the start-up of a new wave of supply from Australia, and this will be joined by the first volumes from the US Gulf of Mexico around the end of 2015.”

### POST OPERATIONAL

Forward six months to mid-2016, and Gate’s new multi user LNG break bulk infrastructure should be operational. What then? “As a hub we have now more or less completed our whole portfolio of services, so we will first have to focus on growth, and in the first years managing operations in a highly professional way,” says Mr Meur :

# Fluor Congratulates Gate terminal

Congratulations to Gate terminal B.V. and its shareholders N.V. Nederlandse Gasunie and Koninklijke Vopak N.V. for being at the forefront of providing environmentally friendly and safe LNG as fuel for north-western Europe.

Fluor is proud to provide engineering, procurement and construction management services for the LNG break bulk terminal that exemplifies this capability. We look forward to working on this and future projects that support Gate terminal and its shareholders leading energy infrastructure and transfer.

Please contact us whatever your needs along the gas and LNG chain.

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