



## Bergermeer Gas Storage Flexibility at the TTF

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## A vital component of the Northwest European Gas Hub

Bergermeer Gas Storage is necessary for the Netherlands' security of supply and is an essential component of the Netherlands' plan to become the gas hub of Northwest Europe.

The flexibility offered by indigenous natural gas production in the Netherlands is decreasing and additional gas storage capacity will be needed to ensure sufficient gas supplies in the coming years.

The Bergermeer Gas Storage project will create Europe's largest open access gas storage facility. Bergermeer will provide the Northwest European gas market with 46 TWh of seasonal storage, thereby almost doubling the Netherlands' total storage capacity.

### Key facts

**46 TWh** 4.1 BCM  
Working gas volume

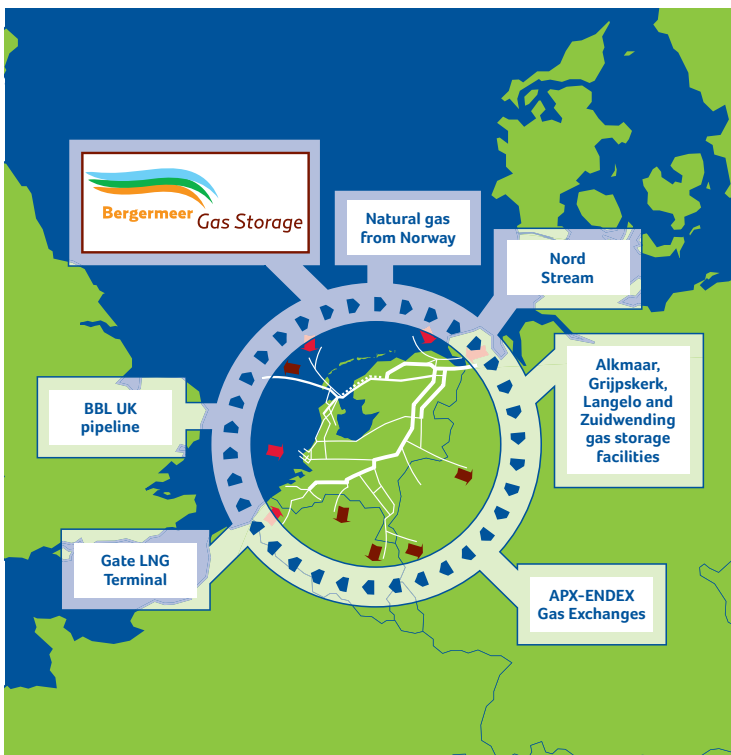
**19,750 MW** 42 MMCM/D  
Maximum injection capacity

**26,800 MW** 57 MMCM/D  
Maximum withdrawal capacity

**112 days**  
Injection period

**97 days**  
Withdrawal period

**€800 million**  
Construction and design



# Project description

There are five distinct elements to the Bergermeer Gas Storage project

# 1

## Bergermeer reservoir

Some of the infrastructure needed to transform the depleted Bergermeer reservoir into a gas storage facility is already in place. Six of the wells will be reused while a further 14 wells will be drilled to a depth of 2.5 km.

# 2

## Treatment facility

Natural gas stored in the Bergermeer reservoir requires drying and compression before being transferred into the GTS network. A zero emission gas treatment and compression facility is being built in Alkmaar.

# 3

## Pipeline network

Almost 40 km of high pressure pipeline will be laid to transport natural gas between the Bergermeer well site, the gas treatment and compression facility and the existing GTS pipelines.

# 4

## Transport capacity

To provide unrestricted and easy access to storage, Bergermeer Gas Storage products will be offered at the TTF. TAQA has already booked the necessary entry and exit capacity for the first 10 years.

# 5

## Cushion gas

Cushion gas is required to achieve an economical operating pressure. In return for delivering cushion gas to pressurise the reservoir, Gazprom will receive access to Bergermeer working volume.



# Commercial offering

## Gas Storage Capacity

A majority of the storage capacity available at Bergermeer Gas Storage will be made available to the market via Third Party Access. Bergermeer Gas Storage will provide all interested companies transparent and non-discriminatory access to a majority of the storage capacity. This will ensure the degree of supply flexibility required for a properly functioning market. TAQA Gas Storage will not reserve any capacity for its own use.



Courtesy of Trianel GmbH

## Available capacity is offered using three avenues:

### Longer-term capacity

- 1 A 2012 Open Season will provide customers an opportunity to bid for a limited amount of longer-term (4 – 10 years) capacity starting in April 2015.

### Annual auctions

- 2 Available storage capacity with one-year tenors will be auctioned on an annual basis with the first auction scheduled for the end of 2014.

### Secondary trading

- 3 The secondary trading platform will allow all customers that have signed the SSSA to trade bundles, unbundled capacity and gas-in-storage.

# Key benefits for traders

Longer-term capacity is offered in the open season in lots, each consisting of 1,000,000 standard bundles. The standard bundle is determined by the physical characteristics of the reservoir and facility.

## Indexed Standard Bundled Unit (SBU)

Bergermeer Gas Storage offers standard bundles on an indexed price basis. The indexed priced bundles are based on a market indexed average of the TTF summer – winter spread six months prior to each storage year times an agreed multiplier.

## Short renomination time (2.5 hours)

Initially the renomination lead time will be 150 minutes. The intention is to reduce the lead time to 30 minutes and allow customers to participate on the GTS balancing market using Bergermeer capacity. This will allow for intraday portfolio management changes. There will be no minimum flow, ramping or other technical restrictions.

## The standard bundle on offer consists of:

Injection Capacity	0.427 kW
Space	1,000 kWh
Withdrawal Capacity	0.579 kW

## Secondary trading

The secondary trading platform allows all customers that have signed the SSSA to trade bundles, unbundled capacity and gas-in-storage. TAQA will facilitate anonymous trading eliminating credit risk between customers. Day-ahead trading will be possible up to 18:00.

## Delivery at the TTF

Gas delivery and withdrawal will take place at the TTF. Customers will not be required to book or pay entry or exit fees with GTS. The entry and exit transport capacity from the Bergermeer Gas Storage flange to the TTF has already been secured and is integrated in the product; providing a real cost advantage.

## Bergermeer Gas Storage partners Long-term vision and commitment

**TAQA, with a 60% stake, is the operator of the storage facility and will also act as the marketing agent for all storage capacity that is available for third parties.**

EBN, an independent company with the Dutch State as its sole shareholder, holds a 40% stake in the Bergermeer Gas Storage project and will, together with TAQA, invest EUR 800 million in the construction and design of the gas storage facility.

As part of the realisation of this project, an agreement with Gazprom was made in 2009 for delivering cushion gas to pressurise the reservoir. Gazprom will receive storage capacity and an interest in the technical operatorship of the facility.



**TAQA**

Abu Dhabi National Energy Company PJSC

**ebn**  
best access to dutch gas



## TAQA

Abu Dhabi National Energy Company (TAQA) is a global energy company majority owned by the Abu Dhabi Government and listed on the Abu Dhabi Securities Exchange. TAQA's main activities include its oil and gas business, power generation and water desalination across four continents.

## Capacity enquiries

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