



Unlocking the value of LNG for greening the corridors

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Port of Rotterdam Authority

The Port of Rotterdam firmly believes in LNG: Why?

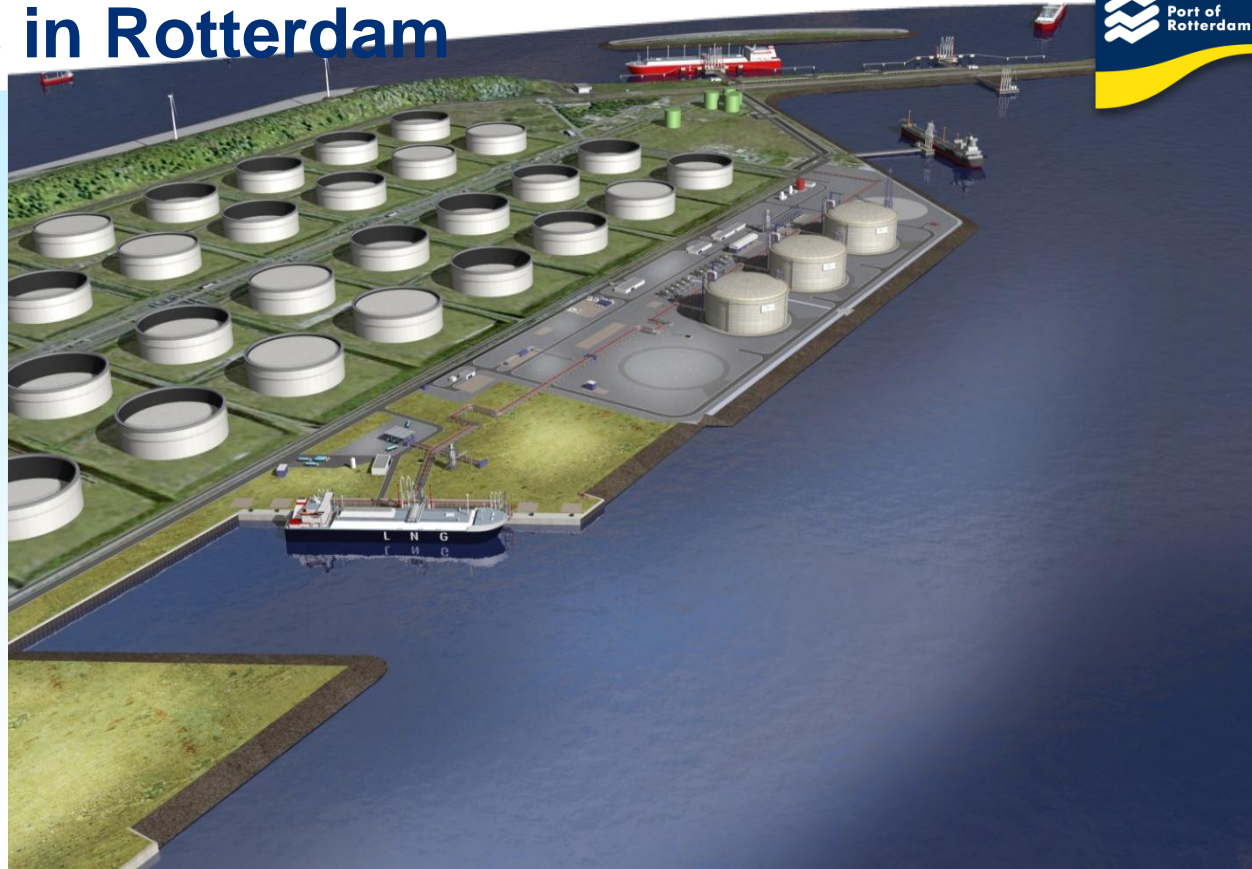
- Very high reduction of SOx, pm and NOx and significant reduction of CO2
- Expected price of LNG lower than of oil-products
- LNG is available in Europe via LNG import terminals
- Alternative gassupply for industry, powerplants and fuel-users (trucks, inland- and seagoing vessels)
- New business-opportunities for inland navigation



LNG propelled vessels

Project initiatives in Rotterdam

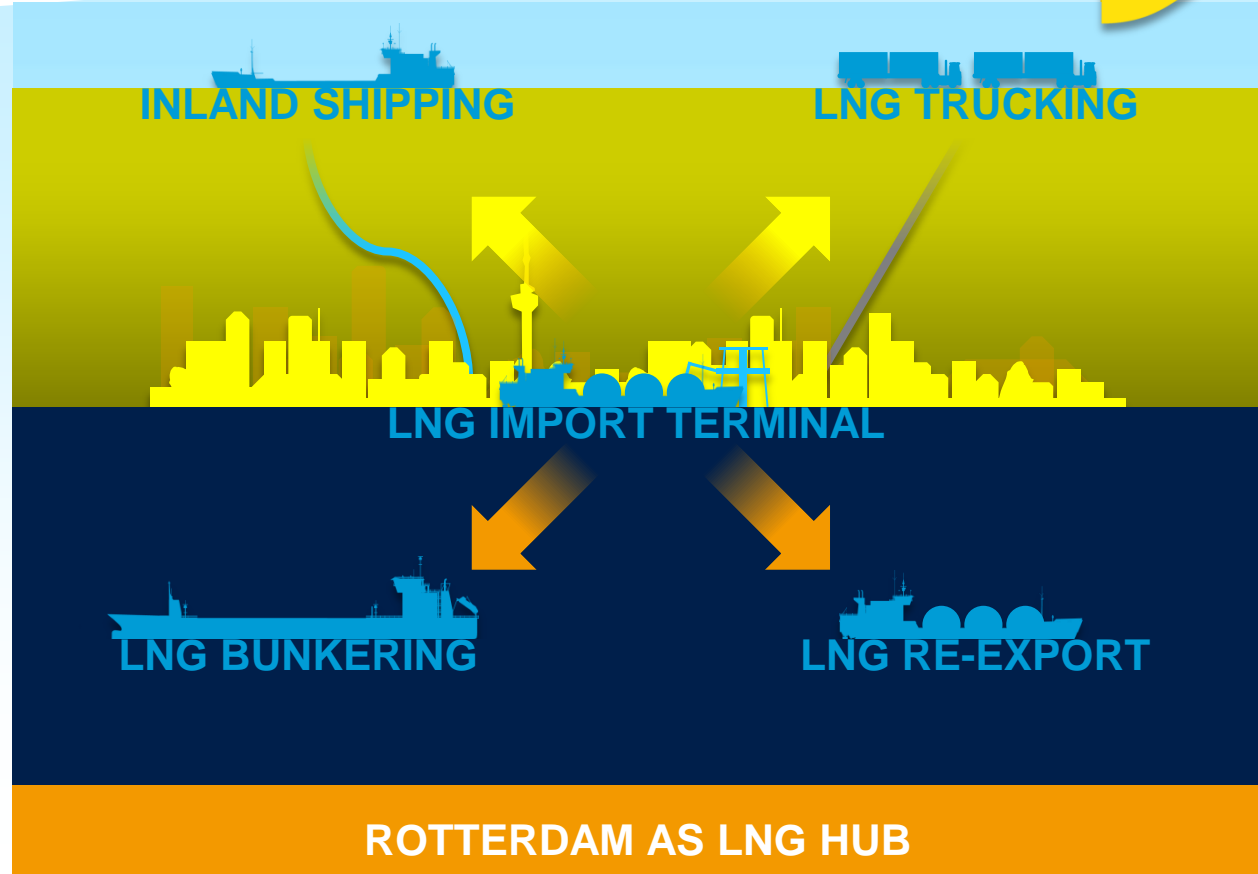
- **Since 2011:**
 - Bunkering of Argonon -1st inland vessel on LNG- in Rotterdam as pilot
 - Bunkering of Interstream-first 2 single fuel vessels- as of April 2013 as pilot
- **Breakbulk terminal:**
 - 2014: Start up truckfilling station
 - 2015: Start-up LNG BB terminal
- **LNG small scale infrastructure:**
 - 2014: Commercial LNG Bunker station for inland vessels operational
 - 2013: 2 LNG fillingstations for trucks
- **Ambition:**
 - 2015: LNG bunkerbarge operational in Rotterdam



ARTIST IMPRESSION BREAKBULK TERMINAL

Role of Port of Rotterdam

- Co-investor in nautical infrastructure
- Port Bye Laws and (inter)national Safety & Regulations
- Incentive-program for clean fuels in inland navigation
- Strategic Alliances
- (Inter)national lobby



Hurdles for market-introduction

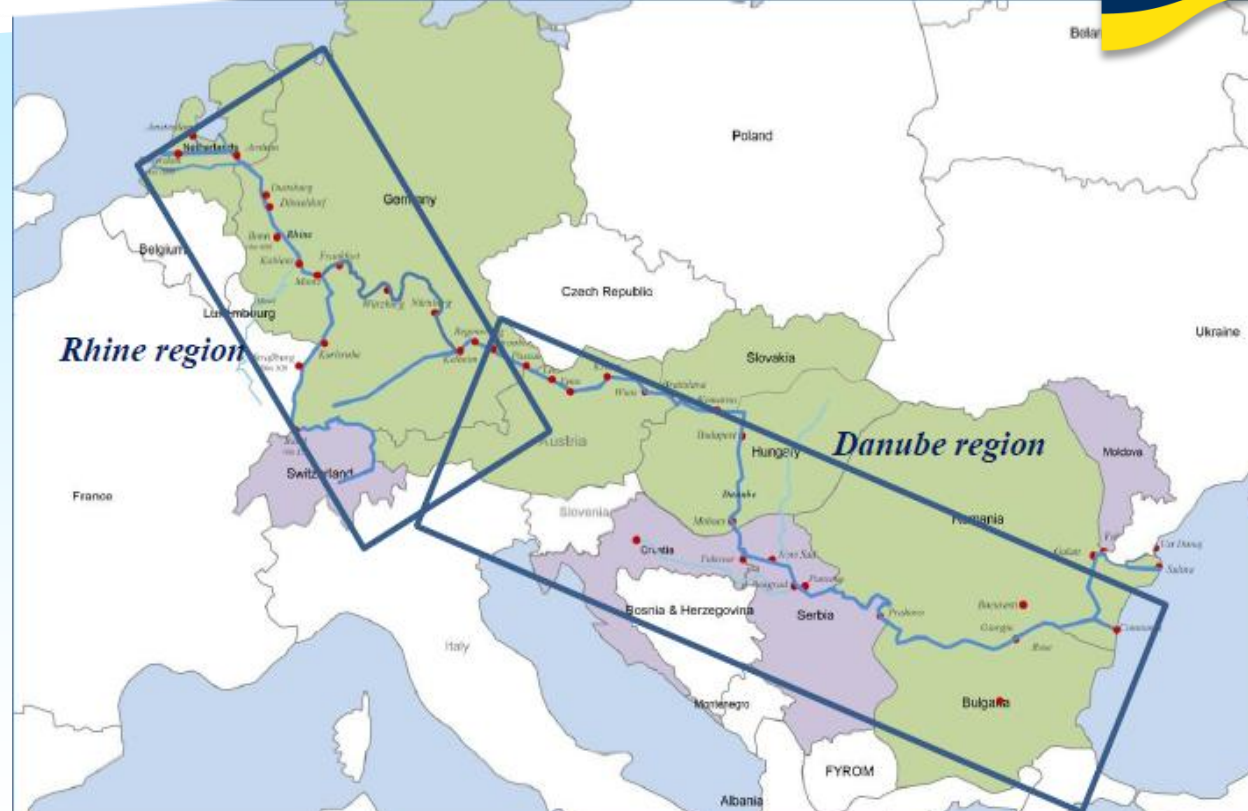
- Availability of LNG bunker-
infrastructure in Europe
- Internationally harmonized Safety
regulation & procedures for LNG-
vessels and LNG bunkering
- Financing



The bunkering of the Argonon

• EU- support necessary for development of LNG Infrastructure

- A consortium for the Rhine Corridor participates in the Masterplan
- Cooperation of Ports (Rotterdam, Antwerp, Mannheim, Strasbourg, Basel) in LNG infrastructure and regulation - studies
- Cooperation with 4 private companies for pilot deployment for LNG bunkering- and distribution – projects



LNG MASTERPLAN DANUBE-MAIN-RHINE

THANK YOU FOR YOUR ATTENTION!

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