

# How the Ports Are Moving to an LNG Fuelled Future

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*Harmonization of the approach of ports towards developing **rules and regulations** regarding LNG as fuel **and** creating **LNG awareness**.*



***This is one of the crucial factors for the success of LNG as a fuel!***

## 1. Bunker checklists

- Create bunker checklists to reflect the [extra requirements of ports](#) with regards to LNG bunkering operations in a port environment.
- Some ports might choose the [method of accreditation](#) for LNG bunkering companies based on certain conditions. A guideline for the content of these conditions will be developed in this group.

## 2. Risk perimeters

- Create an [overview of the current situation](#) regarding LNG risk perimeters and provide [guidance on dealing with risks in connection to LNG](#) operations in or near a port environment

## 3. LNG Awareness

- Get ports moving towards an LNG fuelled future through [clear and unbiased information](#). Provide guidance for ports who could face issues with public awareness concerning LNG
- [Sharing knowledge between ports](#) will help to ensure that all ports start from a common ground, which is the earliest possible onset towards harmonization between ports.

# WPCI LNG Fuelled Vessels Working Group: Active & Consulting ports



## Active

Amsterdam

Antwerp

Bremen

Brunsbüttel

Fujairah

Gijón

Gothenburg

Hamburg

Le Havre

Long Beach

Los Angeles

Rotterdam

Stockholm

Wilhelmshaven

**Zeebrugge**

## Consulting

Broome

Flinderports

La Spezia

NY and NJ

Singapore

Taranaki

**Valencia**

**Leadport: Port of Antwerp**

*All ports are welcome to join!  
Industry partners are also be invited to join!*

*In **2015** pioneer shipping owners should be able to bunker **LNG as a fuel** for their vessels **in the same way** as conventional fuels are being **bunkered today**.*

## 1. Develop bunkering procedures and assess the safety aspects of LNG in the port environment

### Trajectory:

- Assignment awarded to DNV
- Start of assignment: February 2013
- Draft procedures: September 2013
- Finalization: Q4 2013
- Implementation: Q1 2014

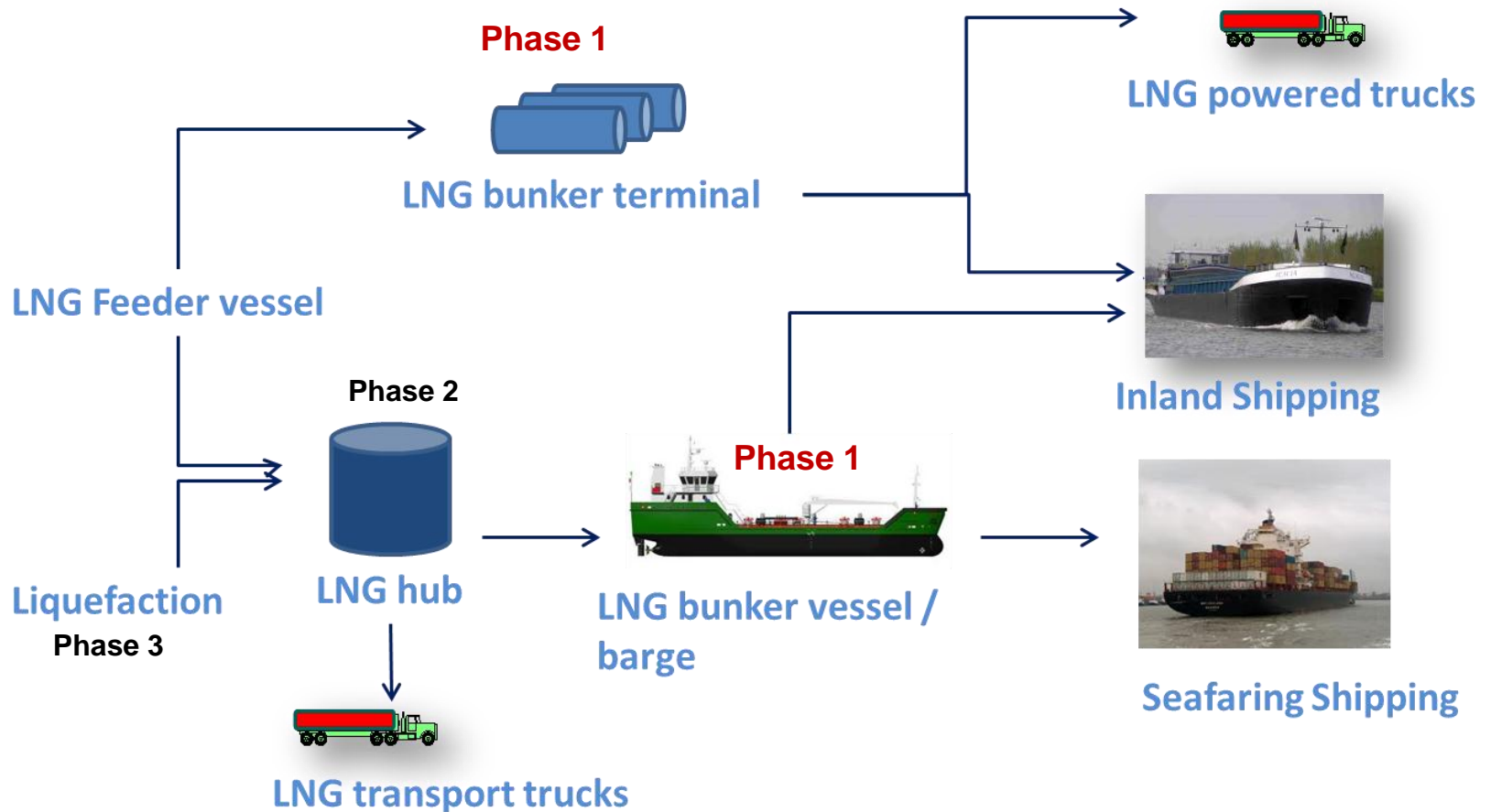
### Safety first!

- Start from existing procedures and industry best practices
- Includes assessment of risk profile of the Port of Antwerp
- Opened up for feedback from stakeholders before finalization and publication
  - Industry consultation ongoing



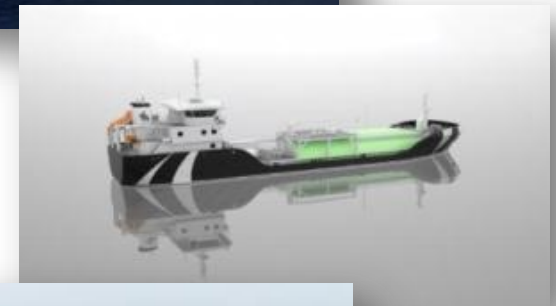
# Role of the Port of Antwerp

## 2. Develop required supply chain and needed infrastructure



## Phase 1: LNG bunker vessel

- Kick-start market development
  - *Share the risks*
  - *Break the chicken-and-egg cycle*
  - *Non-discriminatory exploitation*
- Call for tender: Conceptualizing, build and operation of an LNG bunker vessel
  - **With** participation of the Port of Antwerp
  - Awarded to Exmar Marine NV



## Phase 1: Truck-To-Ship bunkering

- November 2012: LNG truck-to-ship bunkering is allowed in the Port of Antwerp
  - *Port rules and requirements*
  - *Informative bunker checklist*
  - *Operational bunker checklist*
- 05/12/'12 first LNG truck-to-ship bunkering in the Port of Antwerp by the Argonon
- 17/06/'13: Greenstream and Greenrhine are permitted to bunker LNG in the Port of Antwerp



## Phase 1: LNG Masterplan for Rhine-Main-Danube

- Focus on LNG for inland shipping
- Consortium of 33 European Partners
  - *TEN-T Subsidies*
  - *Construct a Masterplan for Europe*
  - *Dissemination of results & liaison with relevant organizations*
  - *“Rhine Ports”: Antwerp, Basel, Mannheim, Rotterdam, Strasbourg*

**LNG Masterplan:  
Basic data**  
Budget (mill. EUR)

**41,2**  
Rhine pilots



**11,3**  
Studies  
& trials

**28**  
Danube  
pilots



Co-financed by the European Union  
Trans-European Transport Network (TEN-T)

The Port of Antwerp endeavors to play a proactive role in the development of LNG as a fuel for shipping

But: certain issues still need to be addressed

- Infrastructure
  - *Development of supply chain*
- Safety concerns
  - *Onboard vessels and in relation to port operations*
- Financial aspects
  - *Vessel application*
  - *Chicken-and-egg cycle*
- Regulatory uncertainty
  - *Technical standards*
  - *Bunkering standards*



What can be done by ESSF?

**Thank you**  
**for your attention**

FWTSER



**Port of  
Antwerp**

[www.portofantwerp.com](http://www.portofantwerp.com)