



WPCI LNG Working Group

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World Ports Climate Initiative of IAPH

WPCI Mission Statement

- Raise awareness in the port community of need for action
- Initiate studies, strategies and actions to reduce GHG emissions and improve air quality
- Provide a platform for the maritime port sector for the exchange of information thereon
- Make available information on the effects of climate change on the maritime port environment and measures for its mitigation

**“A working group on LNG is needed!”
(IAPH meeting, Busan 2011)**





LNG as shipping fuel

Main Drivers

LNG

LNG as a ship fuel would comply with all new regulations

- NOx: 85-90%
- SOx: 100%
- CO2: 25-30%
- Soot/particles: 100%

LNG is at the present the only cost-efficient complete short to medium term viable solution

Scrubber

- Residues to be delivered at port reception facilities
- Extra CO2 emissions
- Cools down exhaust gasses

SCR

- Extra CO2 emissions
- Sensitive to SOx

Other options

- Exhaust gas recirculation
- ...



LNG as shipping fuel

Main Hurdles

Safety concerns

- Onboard vessels and in relation to port operations
- Regulations are still under development (IMO and ISO)
- Public awareness

Vessel application

- 20-25% added cost for a new build
- Retro-fit is expensive and a suboptimal solution
- Loss of cargo space

LNG price

- Delta with MGO and HFO
- Chicken-and-egg cycle

LNG bunkering

- Time in port
- Simultaneous with cargo handling
- Influence of location of LNG tank
- LNG availability
- Coordination of procedures between ports

Infrastructure

- Development of a supply chain
- Sizing
- LNG as an energy source?

Uncertainty concerning timing of actual lift-off of LNG as a fuel.



WPCI LNG Workinggroup

Mission Statements

- By working together in an early stage the first steps towards standardization can be made.
- The WPCI LNG workinggroup endeavors to be THE forum for this early standardization process between ports.
- The workinggroup is divided in several parallel subworkinggroups each with their specific focus.
- To avoid overlap with other LNG initiatives involvement is key (e.g. via reference groups)

Standardization of the approach towards LNG as fuel for shipping between ports is one of the crucial factors for the success of LNG!



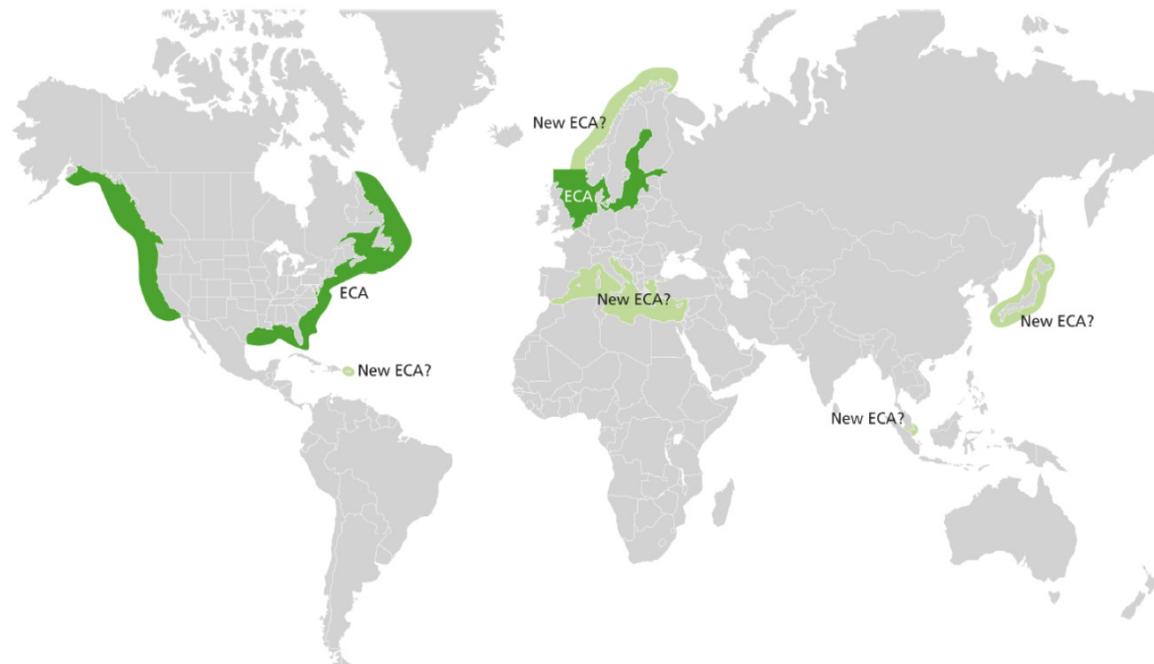


WPCI LNG Working Group

Main Objectives

Standardization of the approach towards LNG as fuel for shipping between ports is one of the crucial factors for the success of LNG!

By working together in an early stage the first steps towards standardization can be made.





WPCI LNG Working Group

scopes and focus

The working group is divided in several sub-working groups each with their specific scope and focus:

- SWG 1: development of a standardized LNG-bunker checklists and guidance towards a potential accreditation system
- SWG 2: safety issues of LNG fuelled vessels and bunkering LNG in relation to port operations: assessment of the risk perimeters
- SWG 3: guidance for ports on how to deal with public awareness and the onset of creating this awareness
- SWG 4: developing an independent website containing all actual information for all stakeholders about LNG as a shipping fuel



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SWG 1: bunker checklist

Scope:

- 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 bunker companies based on certain conditions. A guideline for the content of these conditions will be developed in this SWG.



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SWG 1: bunker checklist

Indicative timing:

- Truck-to-ship
 - First draft by September 2012
 - Final deliverable by December 2012
- Ship-to-ship (inland & seagoing)
 - First draft by February 2013
 - Final deliverable by June 2013
- Accreditation guidance
 - First draft by December 2012
 - Final deliverable by May 2013



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SWG 2: risk perimeters

Scope:

- Create guidance to harmonized approach of risk perimeters of the different possible LNG bunkering scenarios within a port environment.
- 2 phased approach
 1. Bunkering sensu stricto
 2. Bunkering sensu lato



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SWG 2: risk perimeters

Indicative timing:

- Questionnaire to all ports about current national and local regulations
- Bunkering SS
 - First draft by December 2012
 - Final deliverable by May 2013
- Bunkering SL
 - Timing tba



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SWG 3: public awareness

Scope:

- Create clear and unbiased information brochures/leaflets per target group
- Provide guidance for ports who could face issues with public awareness concerning LNG



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SWG 3: public awareness

Target groups:

Port operators, citizens living near ports, policy makers, emergency response organizations, environmental organizations, NGO's, ...

Indicative timing:

- Timing dependent on other SWG
 - Estimated start-up December 2012



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SWG 4: LNG website

Scope:

•Developing website containing all actual information about LNG as a shipping fuel for all stakeholders:

- port authorities,
- local authorities,
- civilians,
- shipping-owners,
- emergency response organizations
- environmental organizations
- ...

Indicative timing:

- Launching website
 - August 2013



WPCI LNG Workinggroup Timeframe

2012				2013				2014			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

SWG 1: bunkerchecklist
truck-to-ship

SWG 1: accreditation
guideline

SWG 2: risk perimeters LNG-
bunkering, sensu stricto

SWG 1: bunkerchecklist ship-to-
ship (inland&sea-going

SWG 4: launching LNG website

IMO 0,1% Sulfur
Regulation within
SECA



WPCI LNG Workinggroup

Participating Ports

Amsterdam
Bremen/Bremerhaven
Brunsbüttel
Gothenburg
Hamburg
Le Havre
Los Angeles
Rotterdam
Stockholm
Zeebrugge

Leadport:
Antwerp

Supported by ESPO and EMSA



All ports are welcome to join!

**Industry partners are invited in the
reference group!**

Contact: chairman Tessa Major
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