



European Shortsea Network

Your navigator
from highway
to **waterway**

Environmental challenges and opportunities

Hans Kristian Haram
SPC Norway



Our biggest challenge

SECA 2015!

Act now!



Agenda

11.30 Introduction

11.40 Round table Introduction

MDO/MGO, LNG and scrubbers

12.10 Debate and Q & A – Open-floor

12.30 End



Speakers - Panel

- ✓ **SPC Norway** - Hans Kristian Haram
- ✓ **Bureau Veritas** - Martial Claudepierre
- ✓ **UFIP** - Dominique Bouchez
- ✓ MAN - Jean-François Chapuy
- ✓ Total - Thierry Chanteraud/Jean-Paul Sarrio
- ✓ Wärtsilä - Andrzej Buczkowski

Our Biggest Challenge



- **5 000 ships in SECA on average**
 - 2 200 ships 100 % of time
 - 2 700 ships 50-100%
 - 9 100 ships 0-50%
- **12 mill. tonnes of fuel/year**
- **Investment LNG: Euro 10 billion**





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Retrofit repayment time: 1-3 yrs*

| Ship Retrofit | Container 800 TEU | RoPax | Tank |
|-------------------------------|----------------------|-------|-------|
| Dwt | 9,000 | | 16000 |
| kW | 8,000 | 5400 | 8500 |
| HFO t/yr | 5,200 | 3,100 | 3,700 |
| MGO t/yr | 5,500 | 3,300 | 3,900 |
| LNG t/yr | 4,500 | 2,700 | 3,200 |
| MGO Invest Eur'000 | 700 | 400 | 700 |
| LNG Invest Eur'000 | 4,800 | 3,240 | 5,100 |
| Fuel Saving Eur'000 | 2,123 | 1,274 | 1,500 |
| Repayment time LNG vs MGO yrs | 1.9 | 2.2 | 2.9 |

* Source: Danish Maritime Authority – North-European LNG Infrastructure Project



Ship owners – Wait and See

| | |
|-------------------|-------|
| ✓ LS MGO | 100 % |
| ✓ LNG Newbuilding | 18 % |
| ✓ Scrubber | 18 % |
| ✓ Moving ships | 14 % |
| ✓ LNG Retrofit | 6 % |



Ports are more pro-active

- ✓ LS MGO 78 %
- ✓ LNG 48 %
- ✓ Scrubber residue reception 22 %

- ✓ Shore power 52 %



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Slow LNG uptake*

- ✓ 37 existing vessels
- ✓ 31 newbuildings
- ✓ 1 retrofit
- ✓ Mainly Norwegian
- ✓ Few cargo vessels
- ✓ Bunkering with passengers on board is not allowed

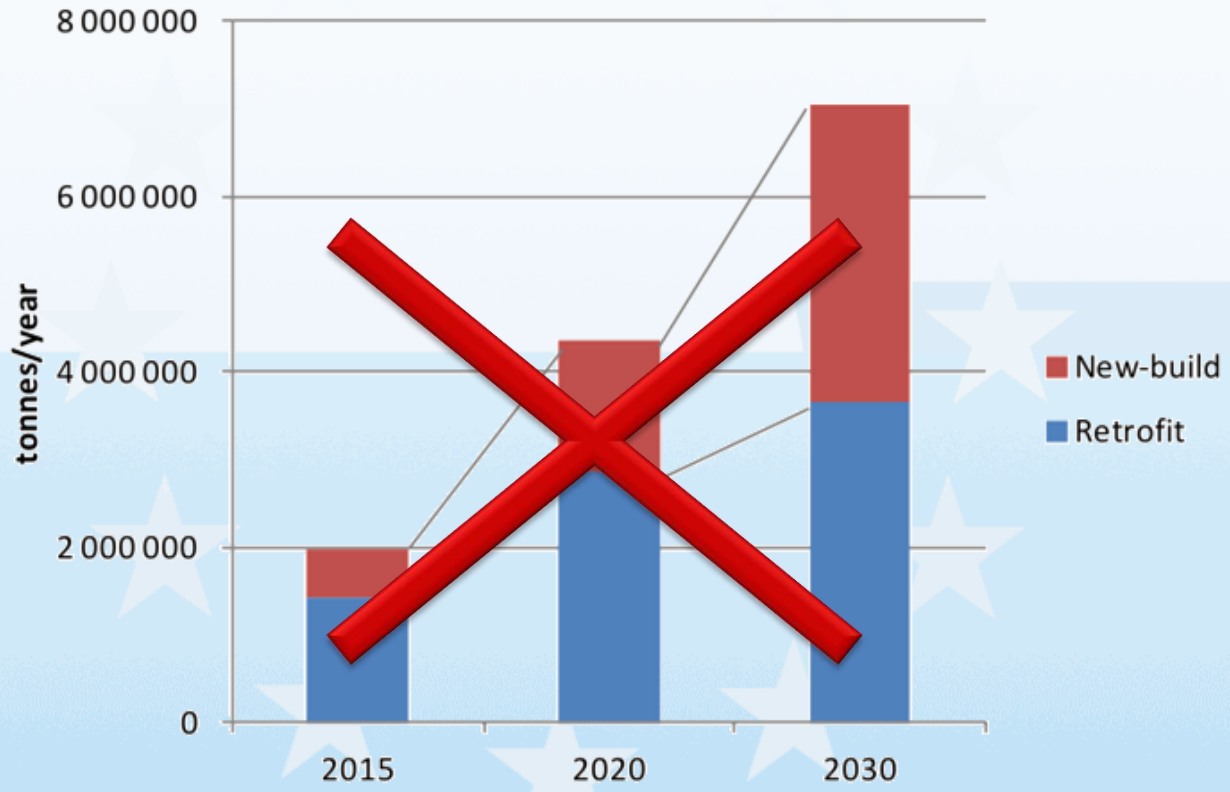
* Jan 1st 2013



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LNG demand



* Source: Danish Maritime Authority – North-European LNG Infrastructure Project



Concerns about scrubber

- ✓ Trail installations by DFDS and Containerships
- ✓ New solutions are coming
- ✓ Waste management



Enough LSMGO?

- ✓ 12 million tonnes (mt) LS MGO
- ✓ Current EU bunkering
 - MGO 7 mt
 - HFO 50 mt
- ✓ Gas Oil / Diesel
 - 300 mt



Backshift

- ✓ Example: Rotterdam-Oslo
- ✓ 8-10 % increase in container gate-gate price
- ✓ 5 % back-shift in import to Norway



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State Aid

- ✓ Norway
- ✓ Finland



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News, newsletter, events, infobank, best practices, projects, links and....