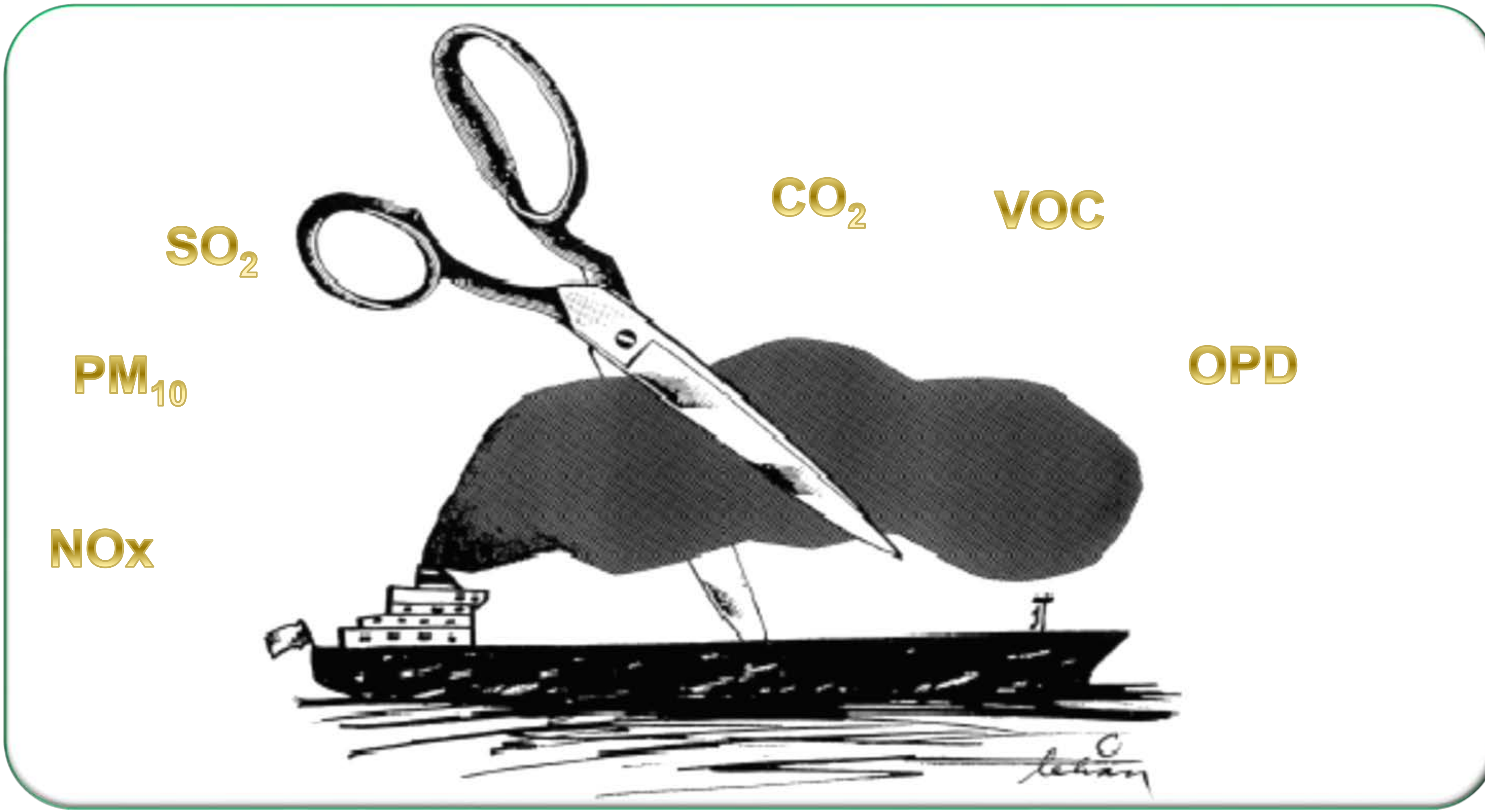
SULPHUR REGULATION IMPACT TO NATIONAL ECONOMY

Gintautas Kutka

Executive director, Lithuanian Shipowners Association

11 March, 2013

AIR EMISSIONS: NO COMPLACENCY



MARPOL VI ENFORCED EMISSION CONTROL AREAS (ECA)

- On 19/05/2005

Baltic sea declared as ECA

- On 11/08/2007

North Sea and English Canal declared as ECA.

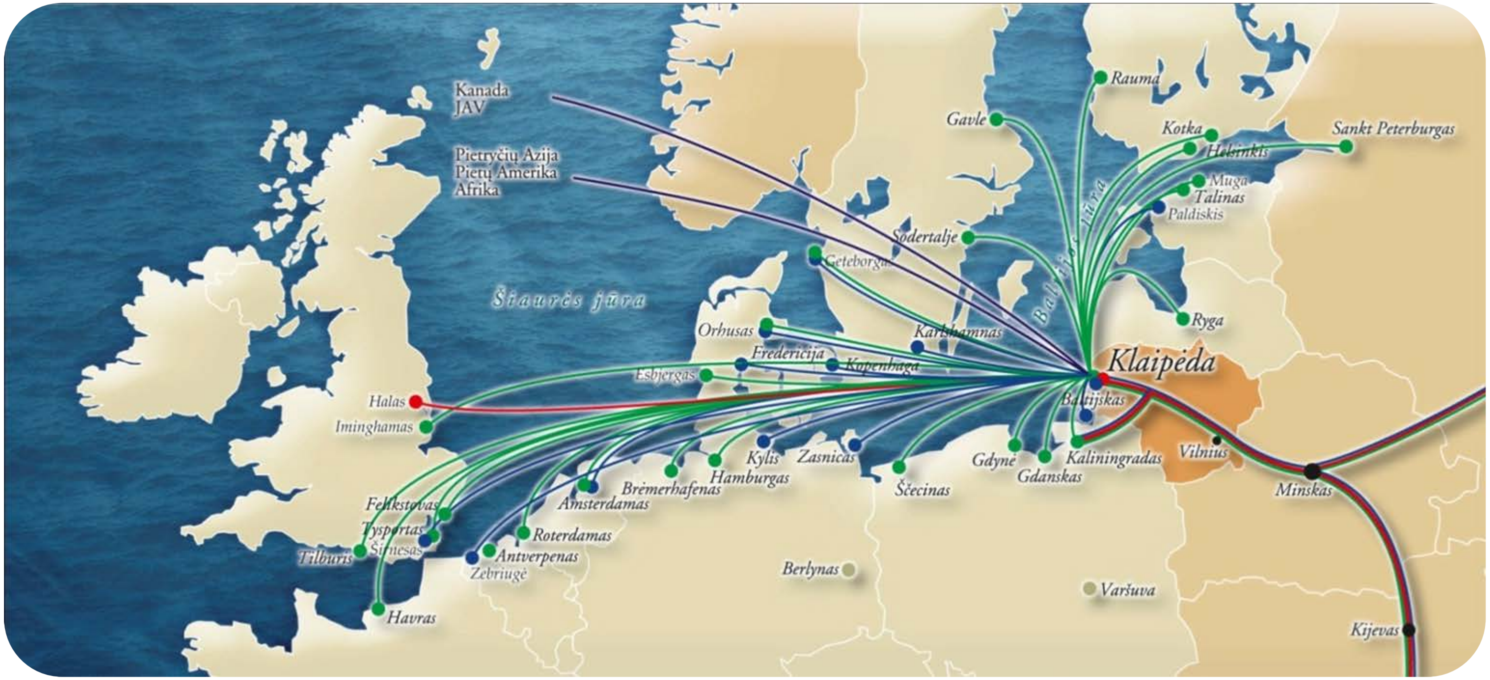
MAX. SULPHUR CONTENT:

Max.1,0 % - as from 01/07/2010

Max.0,1 % - as from 01/01/2015

Max. 0,1 % - as 01/01/2010 in EU ports

IMPACT TO LITHUANIAN CONSUMERS



RO-RO SECTOR

Annually abt. 1.700 port calls; 260.000 ro-ro units, 50.000 tons of annual fuel consumption.

Negative direct impact of sulphur limitation
13 mln. Euro

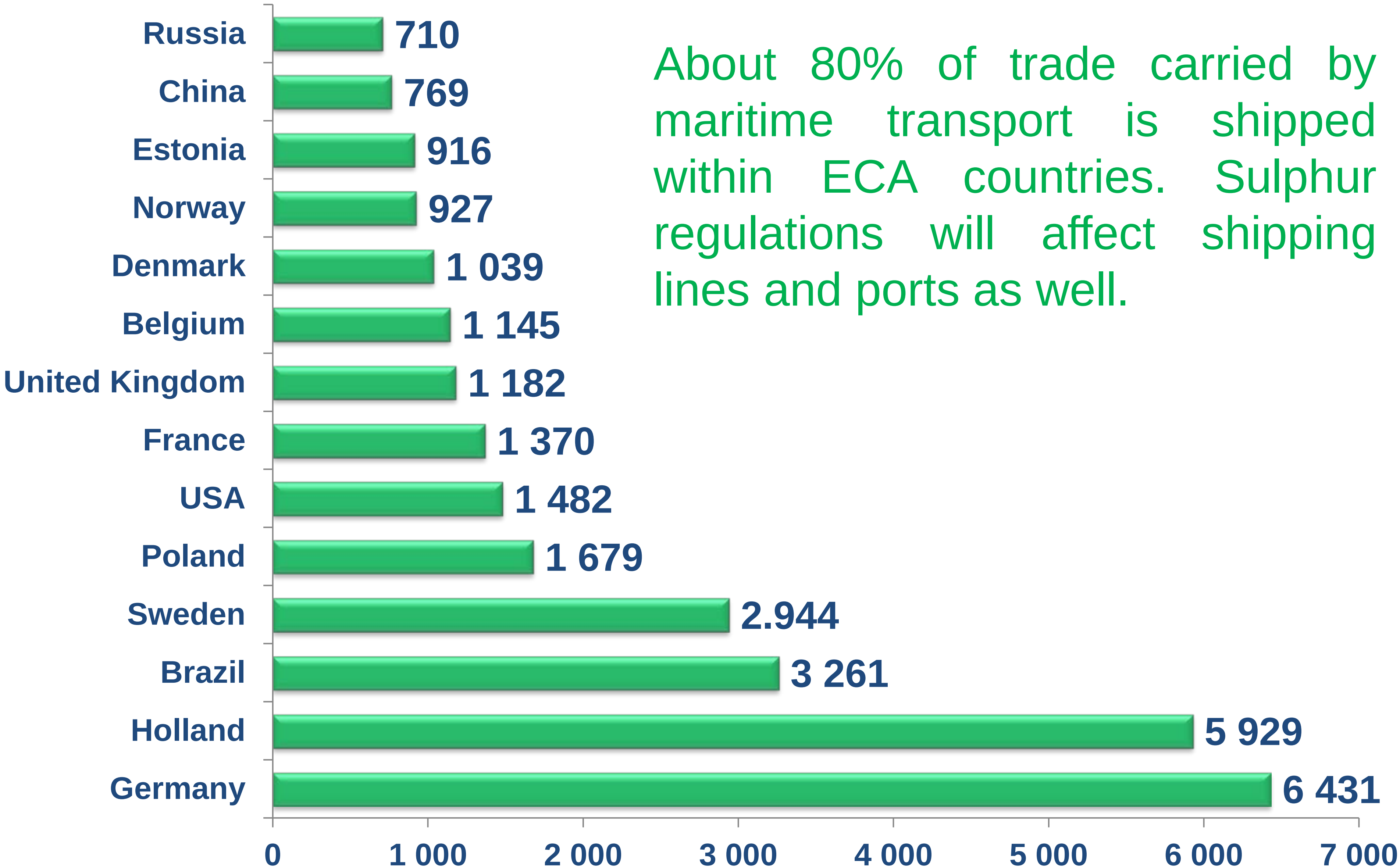
CONTAINERS' SECTOR

Annually, abt. 400.000 TEU.

Negative direct impact of sulphur limitation
14 mln. Euro

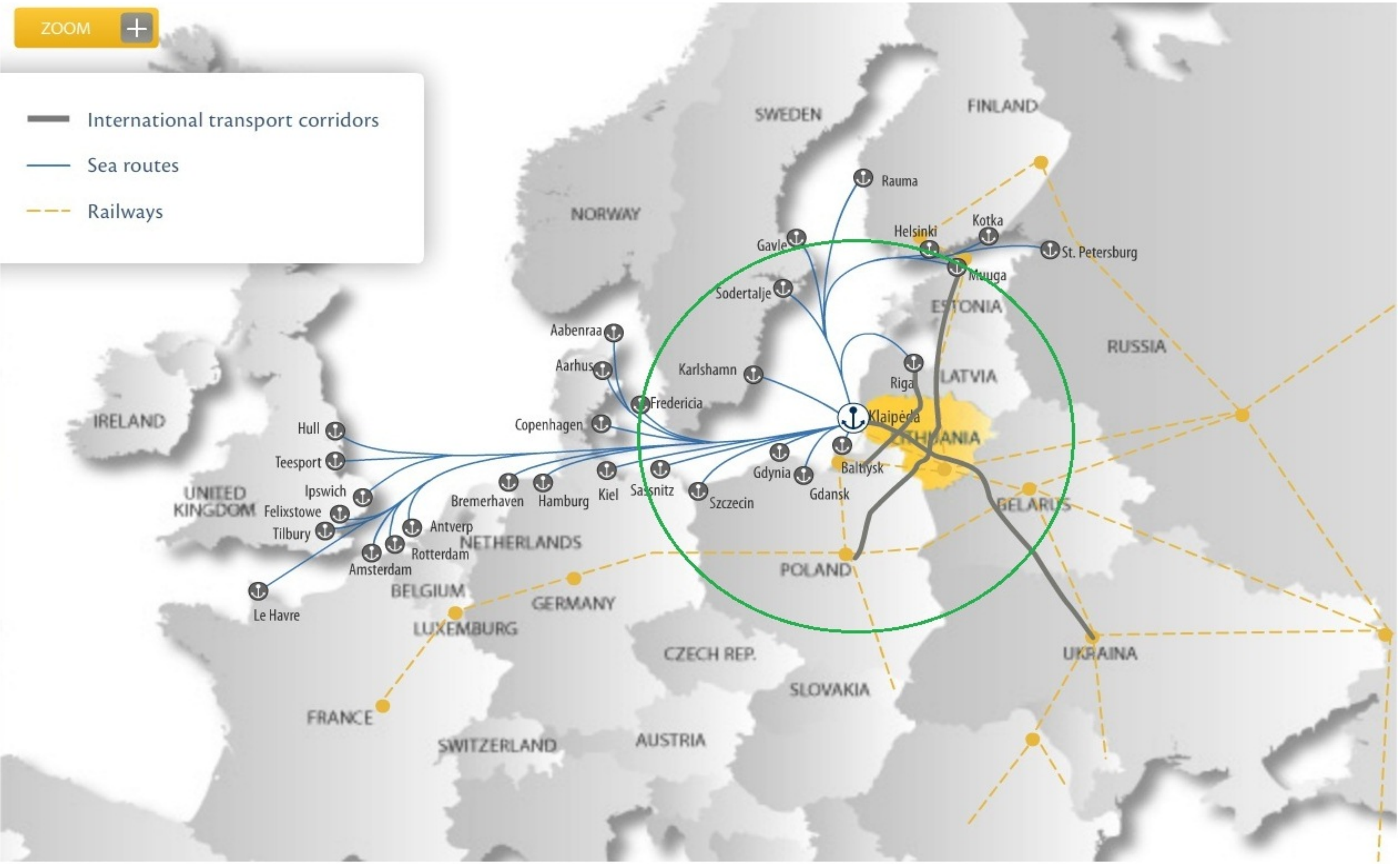
SHIPMENTS BY MARITIME TRANSPORT

(IN 2012, THOUS. TONNES)



About 80% of trade carried by maritime transport is shipped within ECA countries. Sulphur regulations will affect shipping lines and ports as well.

IMPACT OF SULPHUR REGULATIONS



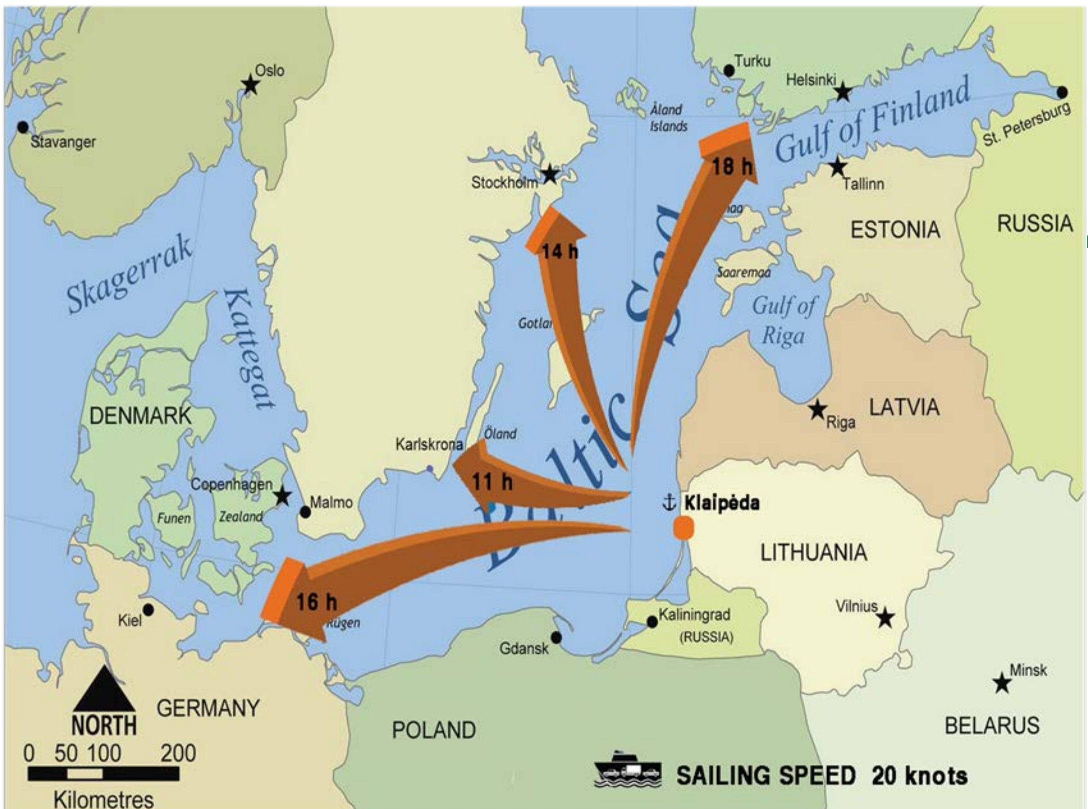
The shipping lines, which can be easily replaced by land transport, will most negatively affect – Lithuania, Poland, Germany, Denmark.

WHICH MODE OF TRANSPORT HAS A PRIORITY?

Maritime transport accounts for about 20% of total Lithuanian export and about 60% of the import.

HOW TO ATTRACT SHIPPERS TO USE MARITIME TRANSPORT?

- Today in Lithuania we have 150-200 EUR difference in favor of road transport compare to maritime freight.



- For example to transport goods directly by truck from the Moscow region to South Germany costs 350 EUR cheaper than usage of intermodal transport.

QUESTION OF TIME

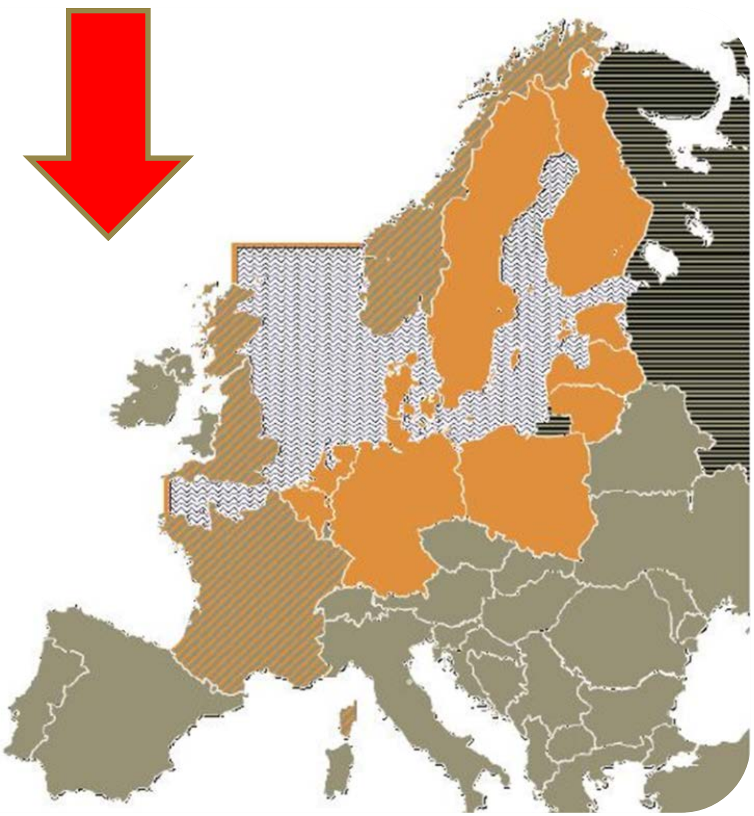
When will maritime transport be less advantageous – pure land accessibility to Western Europe?

- 2014-2020 European perspective still has to be approved by EP.
- 40 billions EUR were planned for the Connecting Europe facility.

OPTIONS TO CONFORM TO SULPHUR REQUIREMENTS

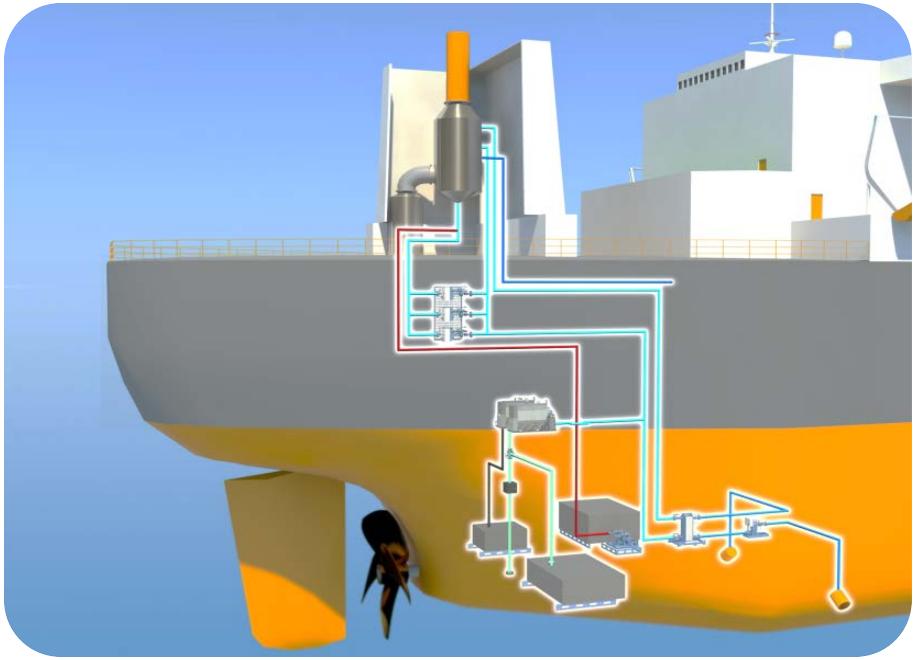
DON'T SAIL WITHIN ECA

USE MGO INSTEAD LSFO



OPTIONS TO CONFORM TO SULPHUR REQUIREMENTS

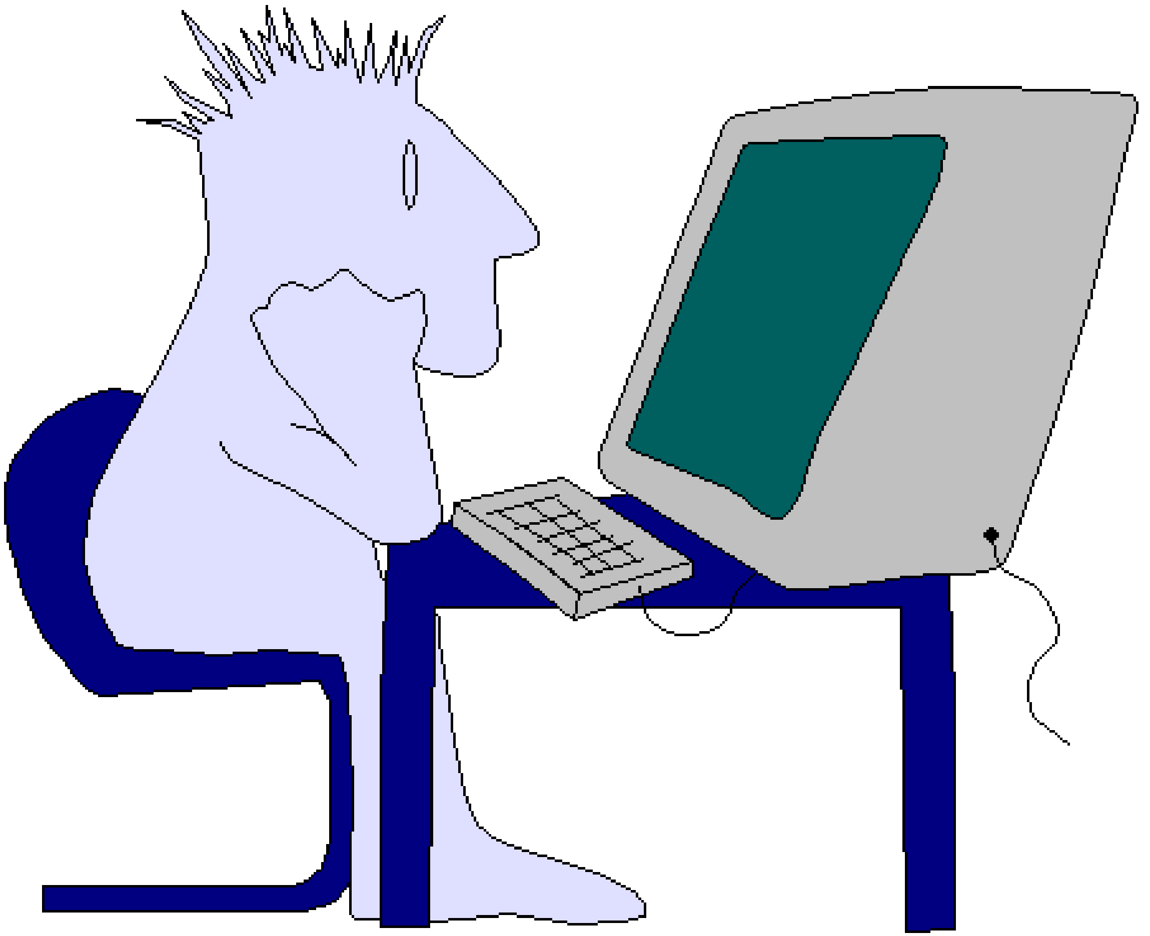
TO INSTALL SCRUBBER



TO USE LNG FOR STEAMING

STAKEHOLDERS STRATEGY

- Wait – and - See



QUESTIONS TO BE ADDRESSED – STILL NO CLEAR SAILING AHEAD

Economy

- Shipowners’ financial situation and fund availability
- Age of fleet and newbuilders programs
- Environmental issue to meet new requirement – SOx, Nox, CO_2

Operational

- To predict trading area - inside or outside of SECA
- Operational losses (for cargo space), operational expenses, (maintenance, lubricants)

Fuel supply

- Source of supply, facilities
- Type of bunkering (barge, shore storage, truck)

Others

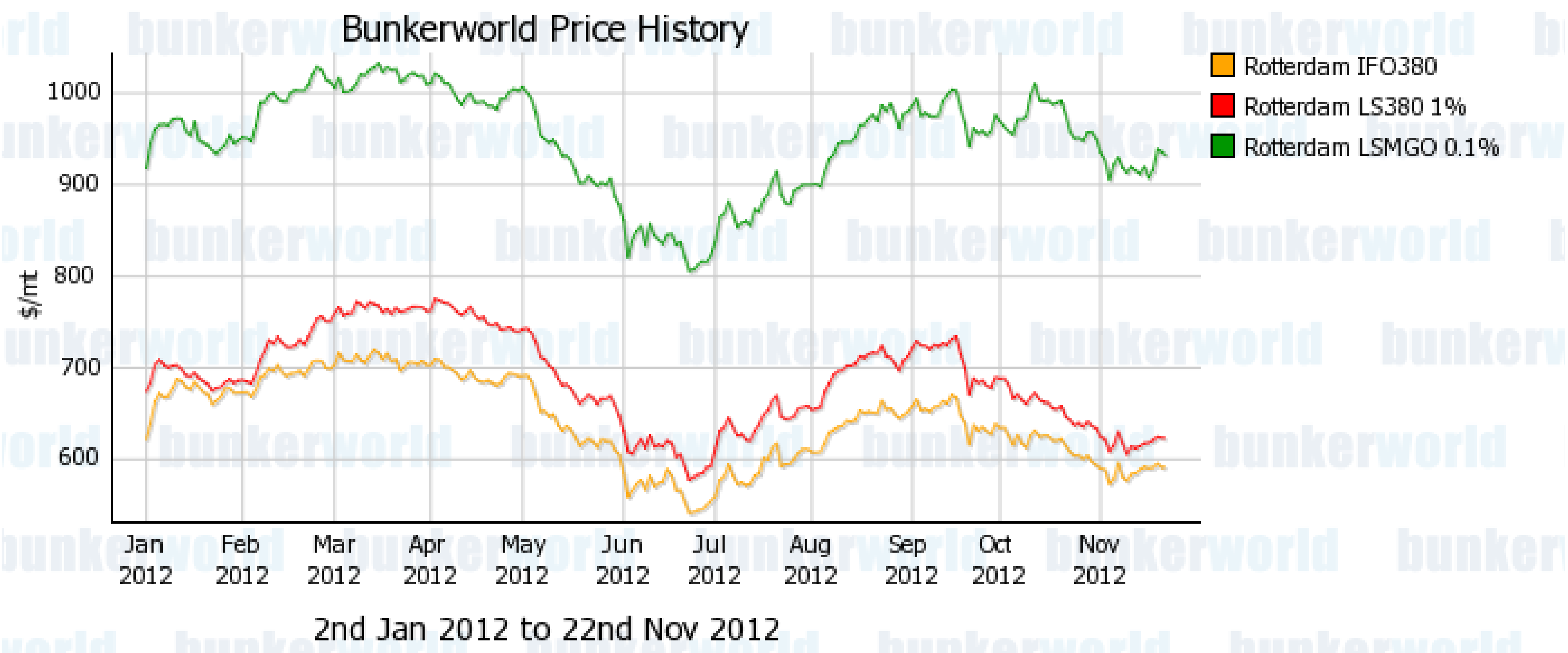
- Charterer’s view
- Fuel price development for HFO and MGO, scrubbers
- Taxation, port dues
- Competitors behavior

BALTIC DRY INDEX

FUEL PRICES

Rotterdam exchange 01-04-2013

- LS380 (max 1,0%) – 630 USD/t
- LS180 (max.1,0 %) – 650 USD/t
- LSMGO (max.0,1%)– 903 USD/t



EU POLICY

- Pollutant emission reduction from maritime transport and the sustainable waterborne transport toolbox, SEC (2011).
- So far Toolbox is not clear enough.
- There is no clear view how shipping companies could take an advantage to use EU instruments to retrofit engines or install scrubbers.
- Marco-Polo, TEN-T programs more directed to creation of infrastructure (programs intensity only 20%.)

IMPACT OF SULPHUR REGULATIONS

- Approximately 14.000 ships operate in SECAs each day. From this total, approximately 2.200 ships operate daily in SECAs while 2.600 ships enter the SECAs often.
- 2% of all ships with daily operations (14.000) in SECAs start using alternative fuels (primarily LNG, but also methanol).
- 2,5% of all ships that operate in SECAs daily will achieve compliance with the Directive by installing scrubbers.

Sweco study “Consequences of the Sulphur Directive”

IMPACT OF SULPHUR REGULATIONS

- A maritime freight transport demand will fall.
- Ro-ro, containers in SSS sector, also low valued goods like pulp logs, wood chips, peat moss, will be the most seriously affected.

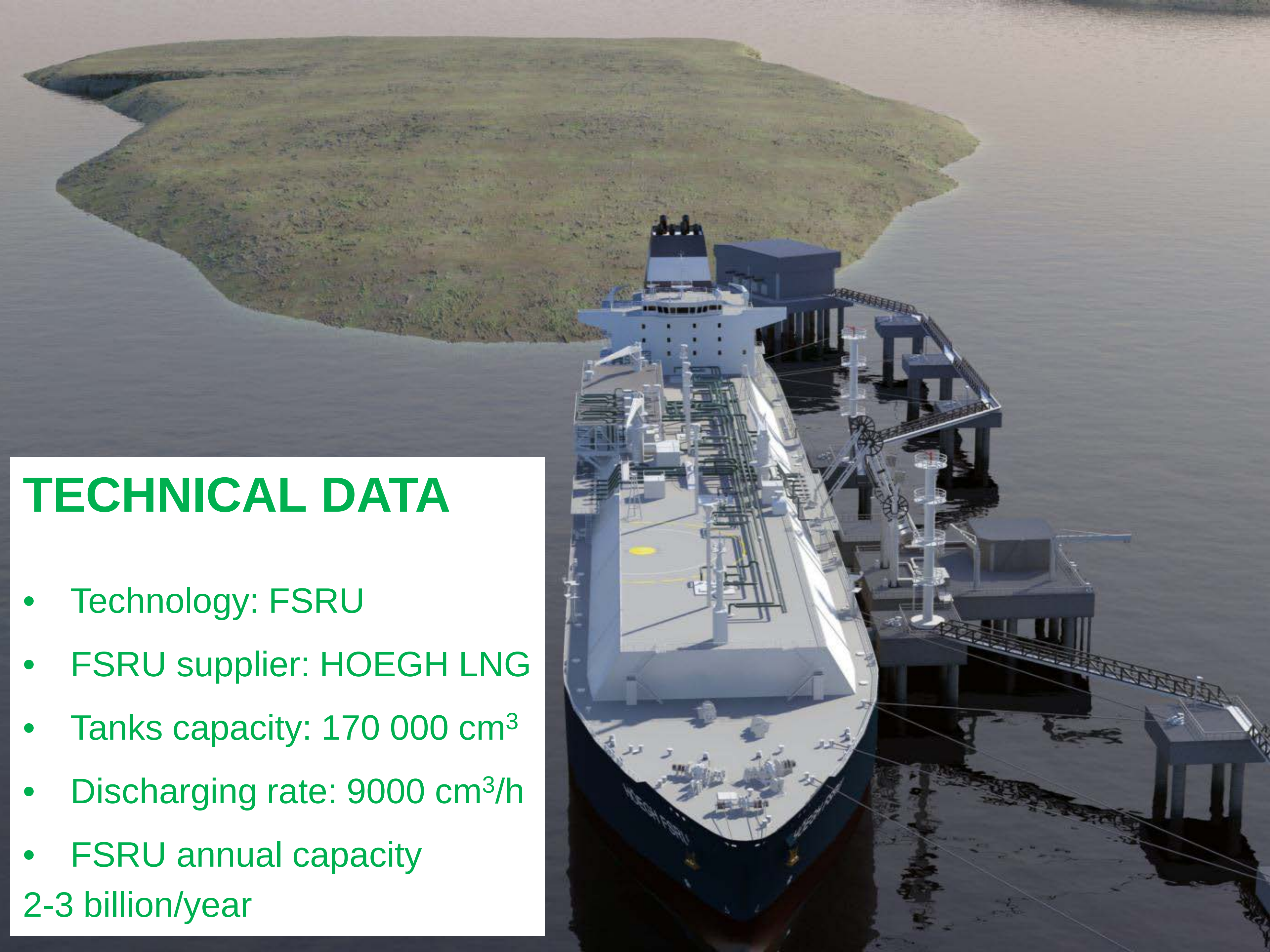
LNG TERMINAL PROJECT

The necessity to have an alternative energy source appear:

- After shutdown of Ignalina Nuclear Power Plant on 31 December 2009, Lithuania had became even more dependent on natural gas import.
- As an outcome of above gas is being supplied to the country by single pipeline from Russia (Gazprom) through the Republic of Belarus.
- Following EU requirement to ensure alternative gas supply from 3rd December 2014 – to secure an alternative gas supply source.

The LNG Terminal is the strategic priority project:

- Project fully driven by Ministry of Energy of the Republic of Lithuania (responsible for security of energy supply).
- Strong political will and full support from Government of Lithuania, Ministry of Energy and President.
- The project is included in the National Energy Strategy of Lithuania, Baltic Energy Market Interconnection Plan, and ENTSO-G implementation plan.



TECHNICAL DATA

- Technology: FSRU
- FSRU supplier: HOEGH LNG
- Tanks capacity: 170 000 cm^3
- Discharging rate: 9000 cm^3/h
- FSRU annual capacity

2-3 billion/year

Lease (10 year) – 430 mln. EUR.

Rental includes:

- Engineering services;
- Ship operating costs;
- Maintenance;
- Financing costs.

Option to buy FSRU after rental period.

THE MAIN STAGES:

- Lease of floating LNG storage with regasification facilities;
- Harbour dredging, jetty construction and preparation of jetty facilities;
- Construction of the pipeline linking the terminal with the gas-main line;
- Project management, obtaining permits, etc.

THE LNG TERMINAL IS THE STRATEGIC PRIORITY PROJECT

LNG BREAK BULK

LNG DISTRIBUTION AND CONSUMPTION IN SMALLIER QUANTITIES

A

- **INDUSTRY**

B

- **ROAD (TRUCKING)**

C

- **SHIPPING**

SHIPS' BUNKERING

- Annually SSS sector in Lithuania's ports consumes about 70.000 mts fuel oil, which amounts 140.000 cm^3 of LNG.
- Such quantity shall increase utilization of the terminal by 10%.

Start of usage of LNG gives possibility to replace backup fuels with cleaner LNG fuel

- Small LNG tanks can be installed near port.
- For example LNG cryogenic container with a volume of 10.000 cmb could supply Vilnius boiler (50 MW) with gas up to to 50 days.

Thank you for your attention!

Lithuanian Shipowners' Association
Malunininku str. 3, LT-92264, Klaipeda

Tel./Fax 370 46 219 416
lsa@klaipeda.omnitel.net
www.llsa.lt