The shipping industry perspective

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Shipping – a global growth industry

Double GDP ton-mile growth since year 2000
Shipping – sustainable and cost efficient

Requires less investments compared to land based infrastructure

Water has almost infinite capacity

3,5 million employees at sea and many more ashore

The most environmental friendly mode of transportation

Logistically reliable

Grows with 2 x GDP – Europe is leading
Stena Line – a comprehensive network
Ferries provides safe and efficient infrastructure

Every year ferries in Europe transport*:
• 805 million passengers – slightly less than aviation
• 154 million cars
• 33 million trucks and trailers

Ferries are safe, past 10 years there have been 14 fatalities in Europe.

European companies run 70% of the world ferry capacity.

The EU shipping industry is estimated to directly employ approximately 600 000 people. Each direct employee creates another 2.8 employees.

*Research for Trancommitee- The EU Maritime Transport system: Focus on Ferries 2016
The big challenge for the shipping industry
Reduced environmental footprint

- 2030: 70% CO2 emission
- 2050: New technology + New logistics

- Known technology
Fully laden Suezmax crude oil tanker at 14 knops
Stena Germanica – the world’s first ferry powered by methanol
Methanol – a sustainable fuel for global shipping

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<thead>
<tr>
<th>Fuel</th>
<th>CO2</th>
<th>SOX</th>
<th>NOX</th>
<th>PM</th>
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<tbody>
<tr>
<td>HFO (3.5%)</td>
<td>100%</td>
<td>350%</td>
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<td>HFO (1%)</td>
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<td>MGO (0.1%)</td>
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<td>LNG</td>
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<td>MeOH (NG)</td>
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<td>MeOH (bio)</td>
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- 90% REDUCTION* with Bio-methanol

*with Bio-methanol

International bunker fuel

Methanol
Battery powered vessels is the next big step
Going forward

In the long run shipping will need a liquid fuel that can burn in a combustion engine that is greenhouse gas neutral.

It may be Methanol.
Stena invests in sustainable shipping
Examples from Stena Line daily operations

Energy saving programs, technical and operational improvements have generated bunker consumption reductions of -15% since 2012.

Using shore connections for electricity contributed to lowering oil consumptions and reducing CO2 emissions with 13,000 tons.

Digital solutions, such as Stena Line’s Fuel management system, contribute to lower fuel consumption.