



Consequenses of marine use of Distillate vs Bunker Fuel

Forum for Reducing Emissions from Shipping

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Norwegian Petroleum Industry Association

- Association for oil and energy-companies in the downstream business in Norway
- Corporation with NOIAs in the Nordics and Europe (Europia/CONCAWE)
- 6 employees
- 9 members – two refineries



Full City

- Cargo Ship "Full City" - wrecked outside Langesund - end of July
- 50 – 200 tons Heavy Fuel Oil - IF 180
- The oil has reached 120 km of the coastline between Grimstad og Larviksfjorden





Sulphur limit – decisions in IMO (MEPC 58)

- 1 March 2010: Sulphur Emissions Control Area (SECA) level 1% S
- 1 January 2012: Global Cap 3.5% S
- 1 January 2015: SECA Level 0.1% S
- 1 January 2020: First possible date for Global Cap at 0.5% S, subject to fuel availability review to be completed by 2018
- 1 January 2025: Second date for change to Global Cap if not possible in 2020



Sulphur limit – decisions in IMO (MEPC 58)

- Global cap of 0.5% does not specify distillates
- Alternative technologies will be allowed to meet S levels



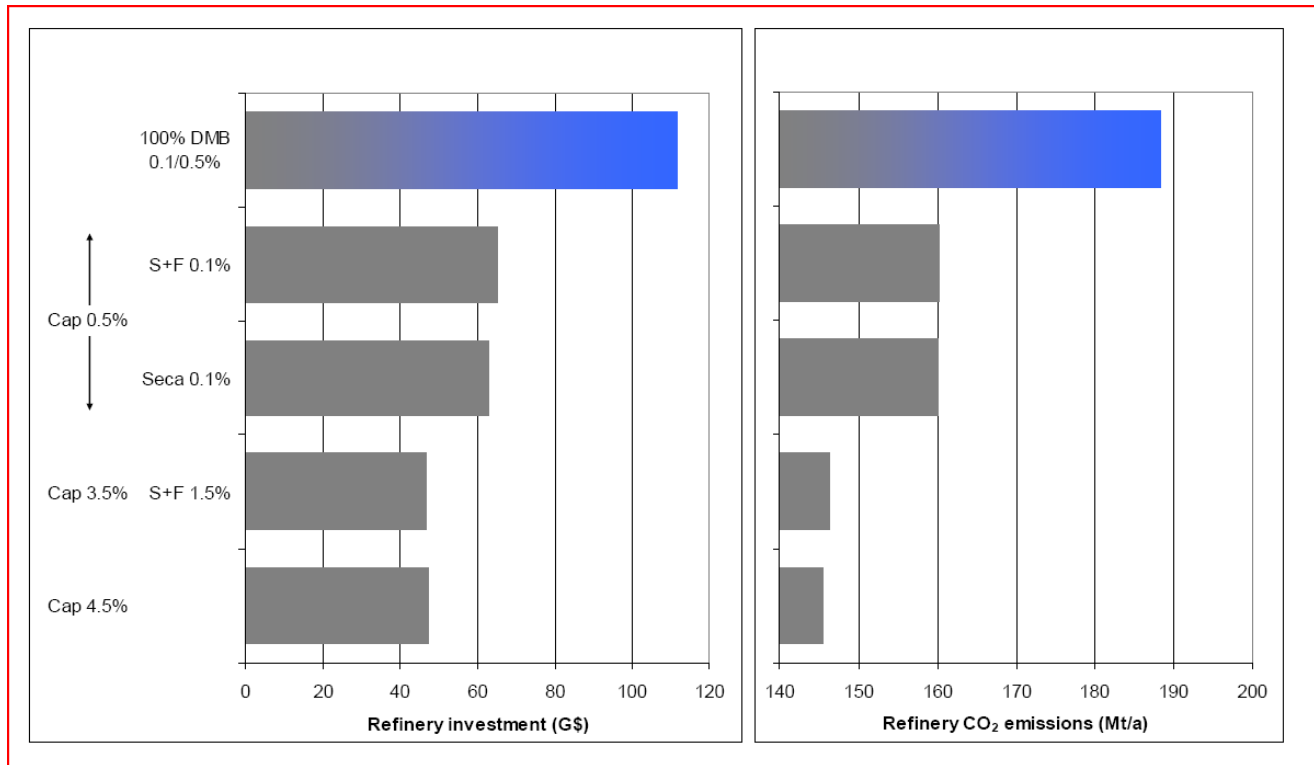
Issues for the refineries

Individual refiners will seek their best course of action, but

- The need for substantial investments (order of \$1 billion per refinery) - to be able to desulphurise residual streams or upgrade
 - Alternatives to production
 - Alternative investment opportunities
 - Global recession
- Net increased refinery CO₂-emissions
 - The resulting fuel would have lower carbon content
 - Uncertain secondary effects (reduced acid deposit in the sea and sulphate impact)
- Change in refinery configuration can only be gradual – timeframe important



Key impacts on marine fuel quality changes on EU refineries





Other impacts

- Cost of marine fuels would go up significantly
- Supply situation would become uncertain



A potential Norwegian ban of bunker fuel

- Significant raise in manufacturing costs for Norwegian refineries
- IMO-way insure "level playing field"
- Use of ECA rather than unilaterally banning bunker fuel in Norwegian waters



Summary – both industries should work together

- Shipping is vital to world trade and economic development.
- The oil industry want to contribute to sustainable development – balancing short/long term interests and global/local environment
- Important to provide adequate lead-time for the industry to prepare for change
- Preferably
 - Expanding the use of SECAs
 - First step: Tightening the sulphur spec i SECAs to 1 % and global cap to 3,5 %
 - Also develop new technologies: lean burn and emission abatement technologies