



Oronite



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Discussion topics

- Oronite's marine lubricant model
- Changes over the years
- Link to seaborne trade
- Impact of the various (fuel) savings



Forecast model *“the basics”*

Marine & PowerGen lubricant demand [Mt/y]

- $F(x)$: operating hours x operating load x installed power x SLOC

Forecast model *“the basics”*

Marine & PowerGen lubricant demand [Mt/y]

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Operating hours & operating load data for:

- 2 stroke Marine propulsion
- 4 stroke Marine propulsion
- 4 stroke Marine Auxiliary
- 2 stroke PowerGen
- 4 stroke PowerGen (continues, peak and standby operations)

Installed power data, based on:

- Marine: Lloyd’s List Intelligence database (split by OEM)
- PowerGen OEM information & Diesel & Gas Turbine annual report

SLOC (specific lube oil consumption) [g/kWh], depending on:

- OEM
- Engine type/year build
- Sulfur level in the fuel

regularly checked with real field data



Forecast model > 2009

Marine & PowerGen lubricant demand [Mt/y]

= operating hours x operating load x active power x SLOC



Forecast model > 2009

Marine & PowerGen lubricant demand [Mt/y]

▪ $F(x) : \text{operating hours} \times \text{operating load} \times \text{active power} \times \text{SLOC}$

Operating hours & Operating Load data for marine & PowerGen + *Slow steaming & EEDI correction and other fuel saving initiatives.....*

Active power based on:

- Installed power data [MW]
- Seaborne trade data [ton.miles]

SLOC (specific lube oil consumption) [g/kWh], depending on:

- OEM
 - Engine type/year build
 - Sulfur level in the fuel
- regularly checked with real field data*

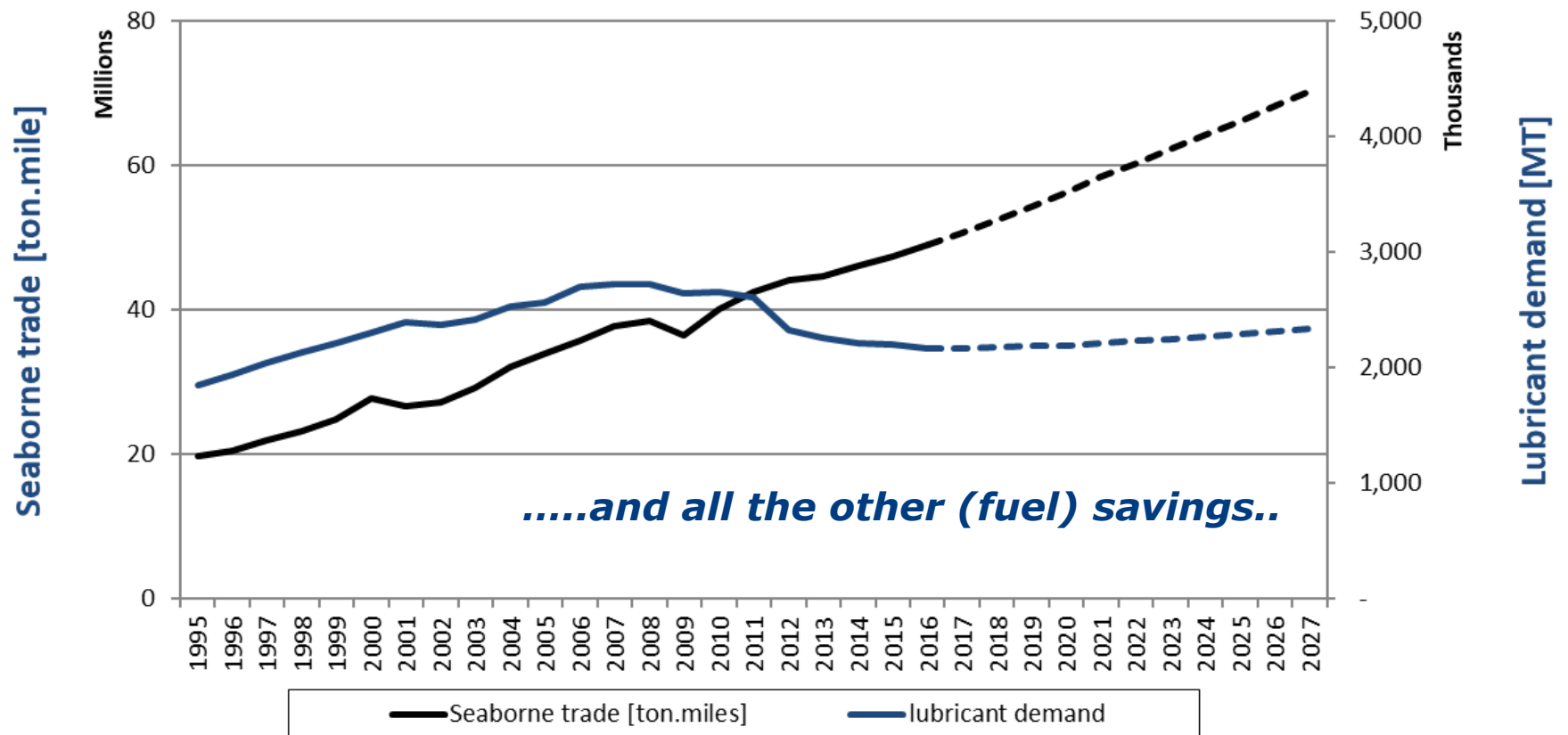


Seaborne trade & lube demand

Global Marine Lubricant demand (MCL/SO/TPEO) & Seaborne trade

Lubricant demand: 2017 Chevron Oronite marine model

Seaborne trade data: 2017 Lloyd's List Intelligence data





THANK YOU!

One more question.....

