

# Port of Göteborg AB



*Göteborg the obvious and the green hub*



# Port support for sustainable solutions



- Shore-side electricity
- Vapor Recovery Unit
- Collaboration

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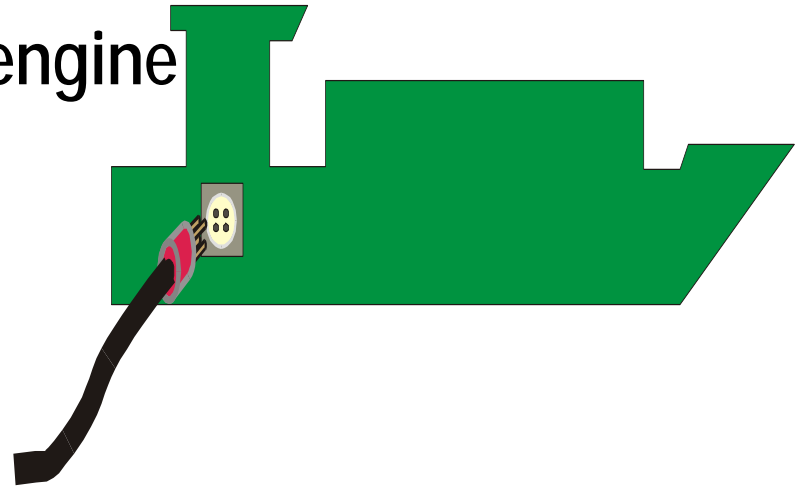
Environmental Manager

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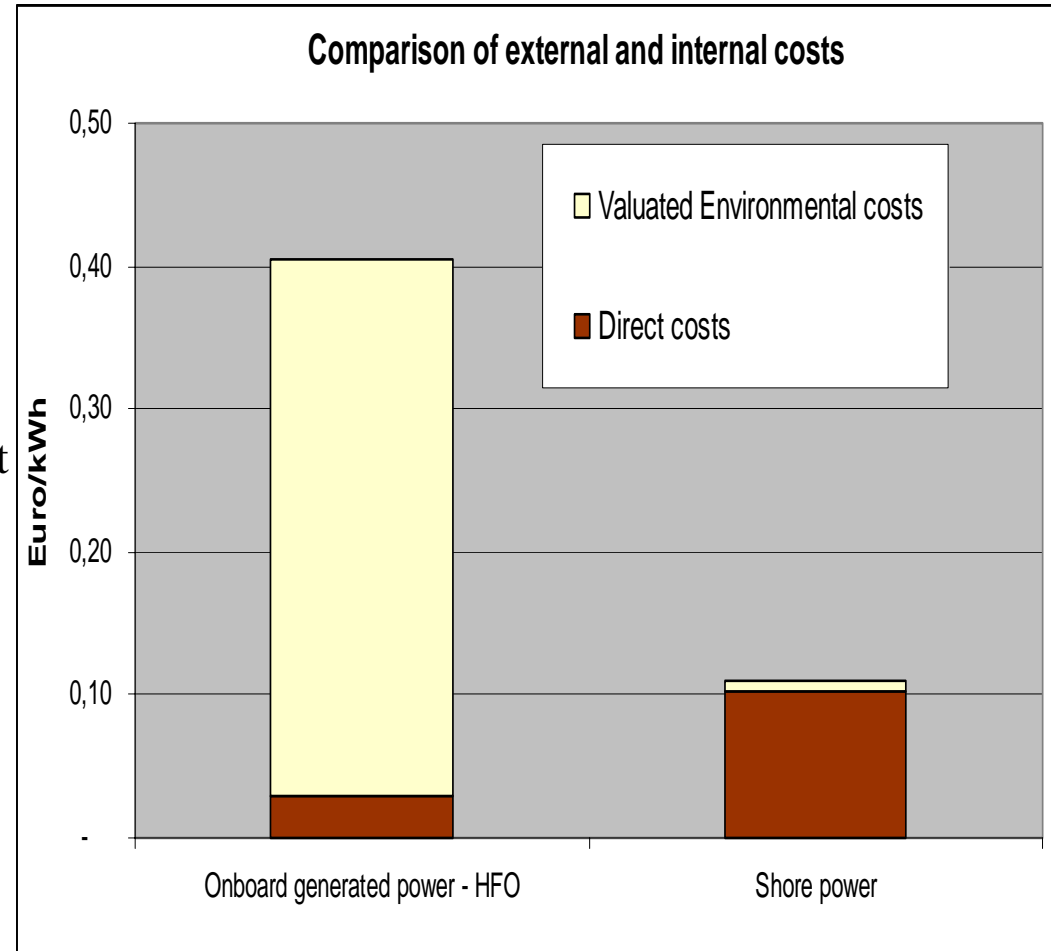
# Shore-side electricity for ships

- Electrical power needed for all functions on board is supplied from land, no auxiliary engine is used during port stop
- The technique is used for
  1. Ferries and ro/ro vessels with regular calls to a given terminal
  2. Container ships (LA)
  3. Tankers (coming up soon in Long Beach)
- In following ports  
Göteborg, Helsingborg, Houston, Los Angeles, New York/New Jersey, Oakland, Philadelphia, Piteå, Richmond (Virginia), Seattle, Stockholm, Tacoma, Vancouver, Zeebrugge...



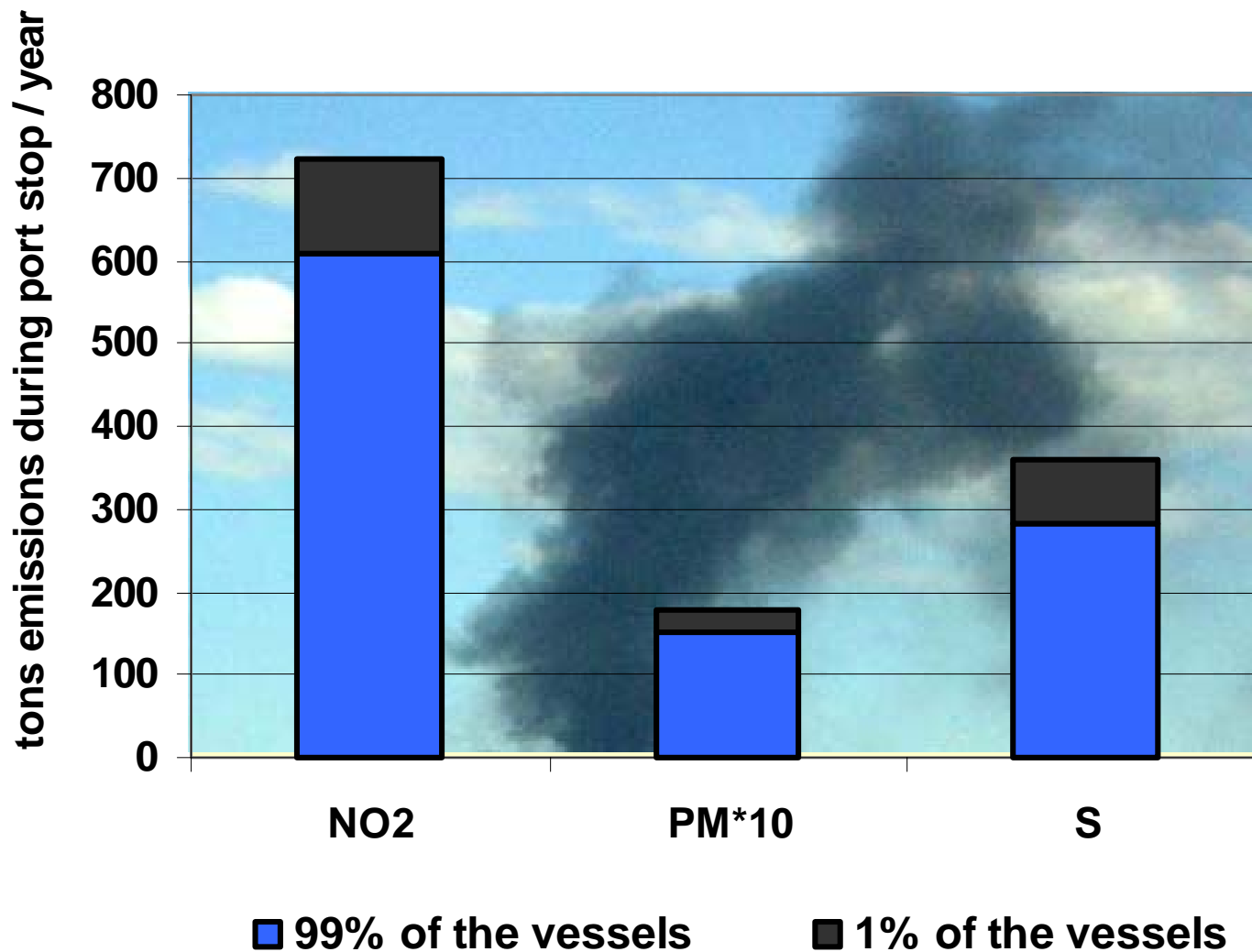
# Environmental benefits/constrains

- Reduce air emissions (NO<sub>x</sub>, SO<sub>2</sub>, VOC, PM) with 94-97 % in the port often close to densely populated areas  
[http://europa.eu.int/comm/environment/air/pdf/task2\\_shoreside.pdf](http://europa.eu.int/comm/environment/air/pdf/task2_shoreside.pdf)
- No noise
- Offer a fossil free alternative
- No benefit on the journey in between ports

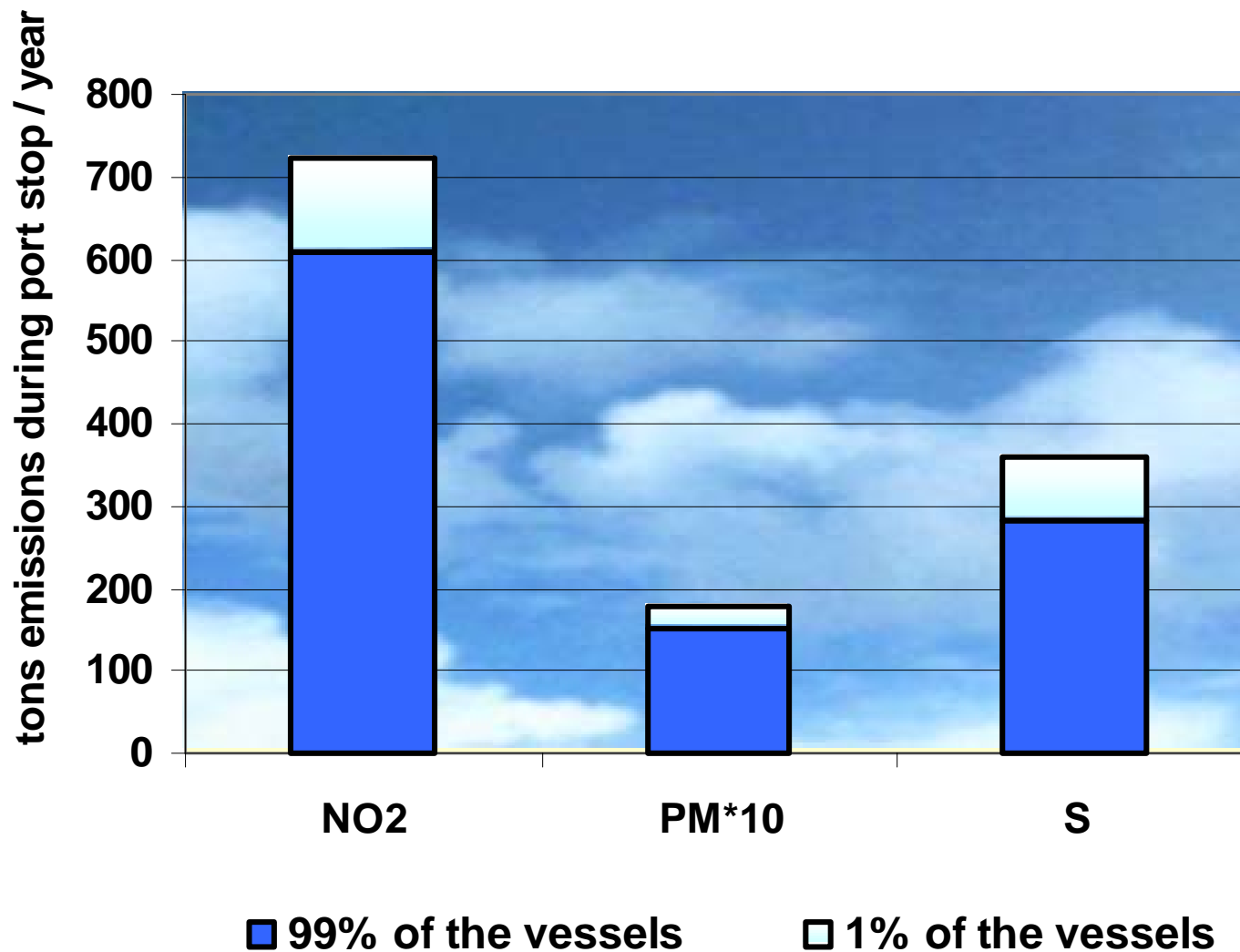




# Vessels calling Port of Göteborg

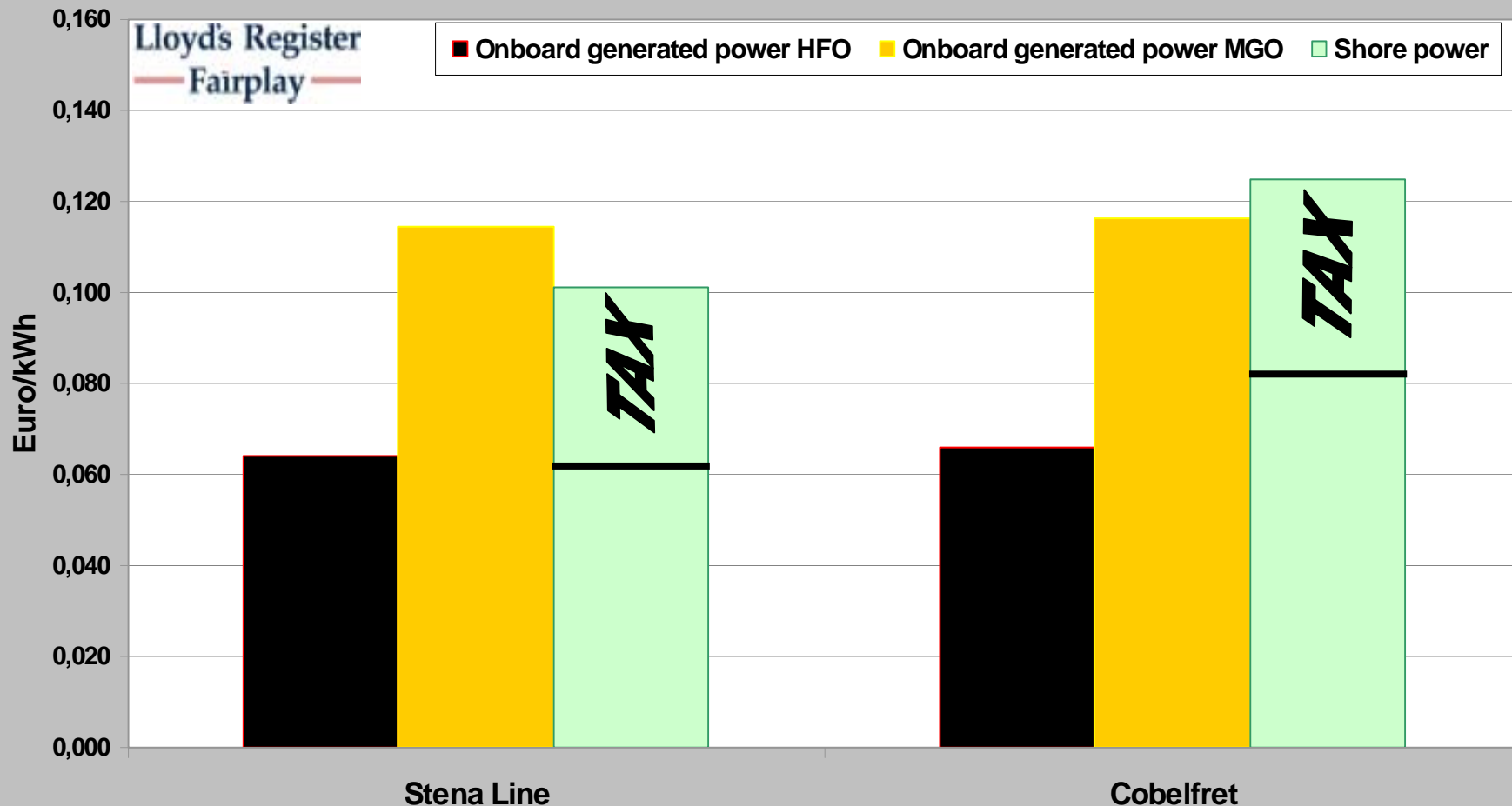


# Vessels calling Port of Göteborg



# Cost for energy generation

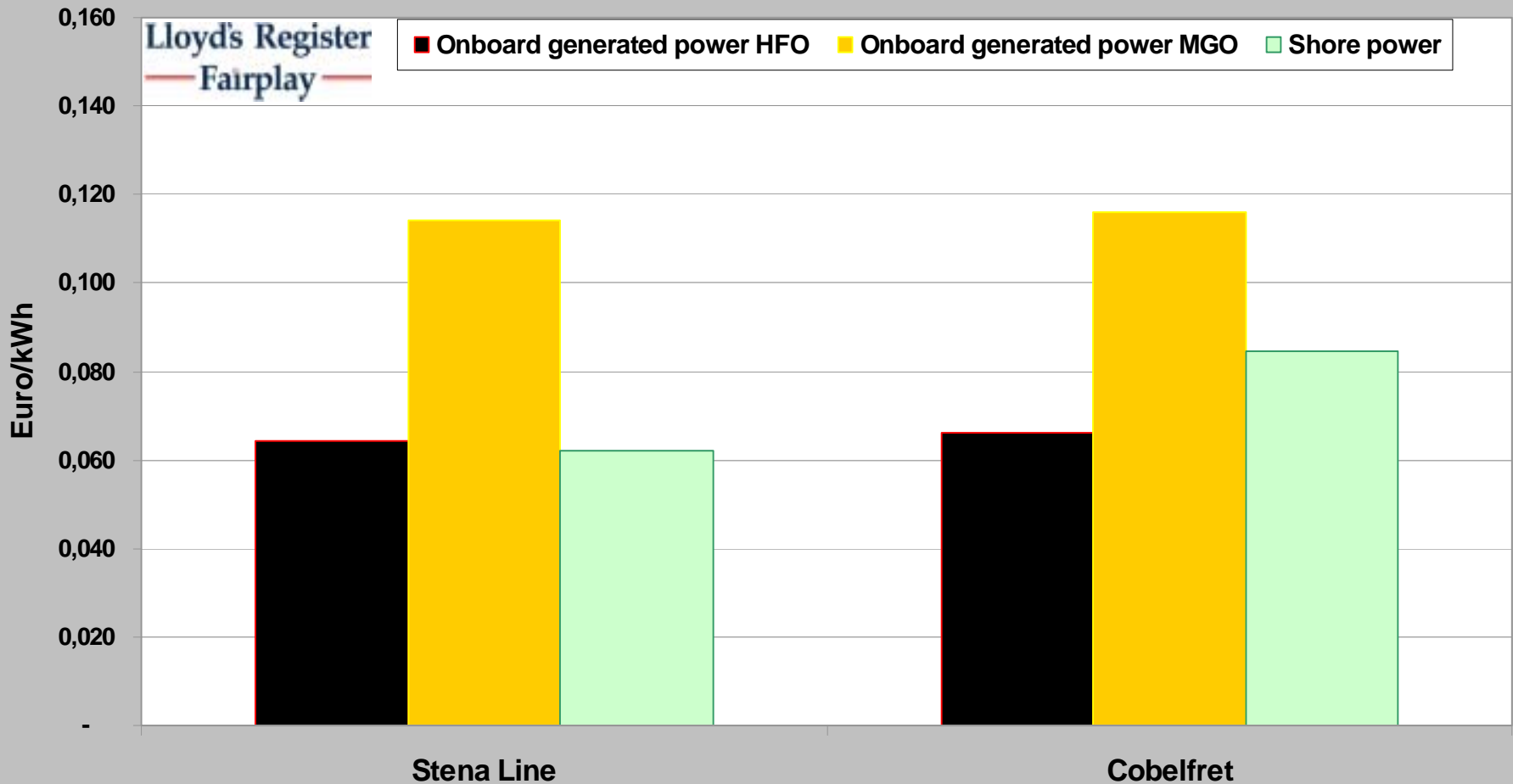
Power generation cost 2006 **incl** energy taxes





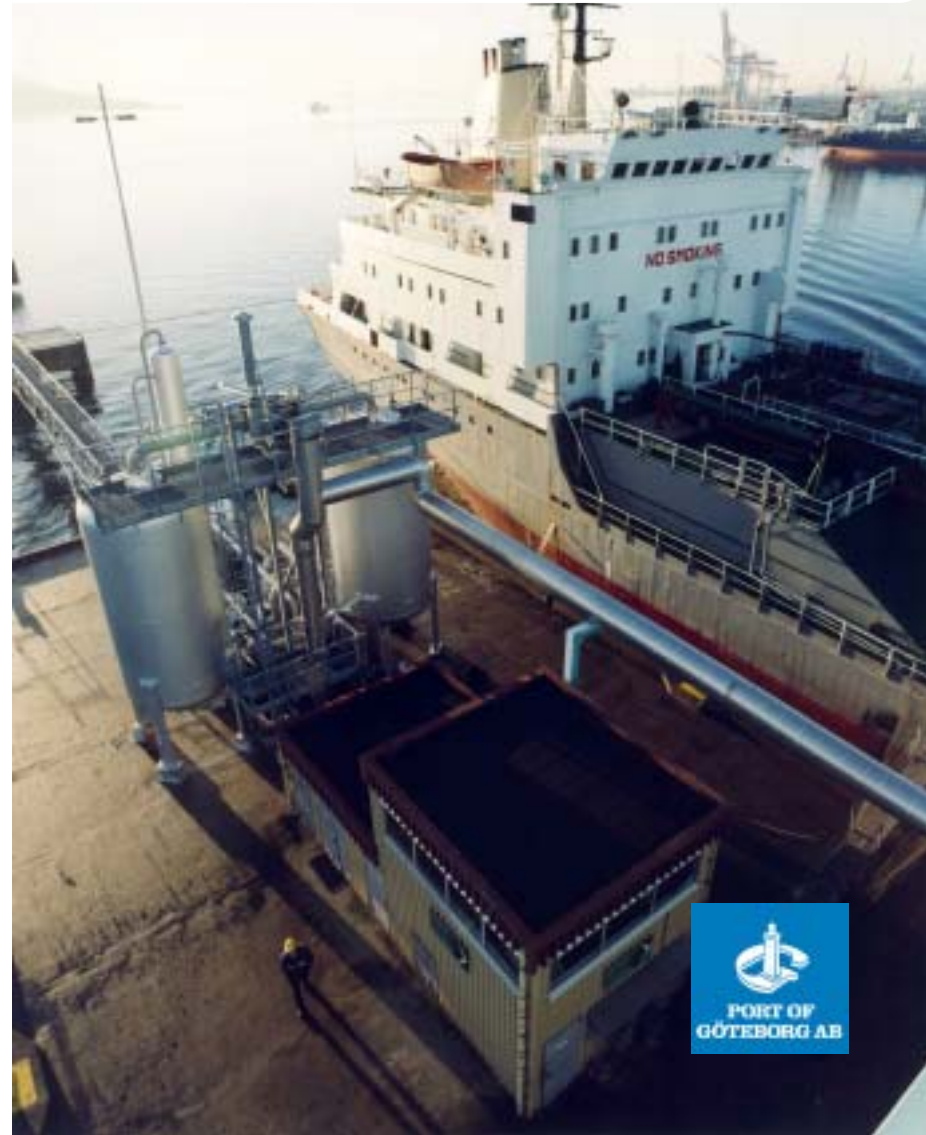
# Cost for energy generation

Power generation cost 2006 **excl** energy taxes - Gothenburg



# Vapour Recovery Unit

- A measure to reduce emissions (VOC) when loading gasoline with more than 90%
- VRU should be required in all EU-ports
- Success because of Collaboration!



# Collaboration for sustainable solutions

