



Centraal Bureau voor de
Rijn- & Binnenvaart

Greening

Inland barging experience

CCR

Strasbourg, 8 october 2013



General

Focus on four areas:

- LNG
- Reconditioning/retrofitting of existing engines: After treatment systems
- Diesel electric engines
- Implementation and next steps



LNG

Main experience:

- Bunkering facilities: from tankcar and limited number of loading locations at present
- Cost of LNG tanks: 1 tank builder, no standardisation
- Sailing profile: requires intensive use/long haul
- Difficult to convince clients
- High investment costs: € 600/700K
- New building versus existing vessel



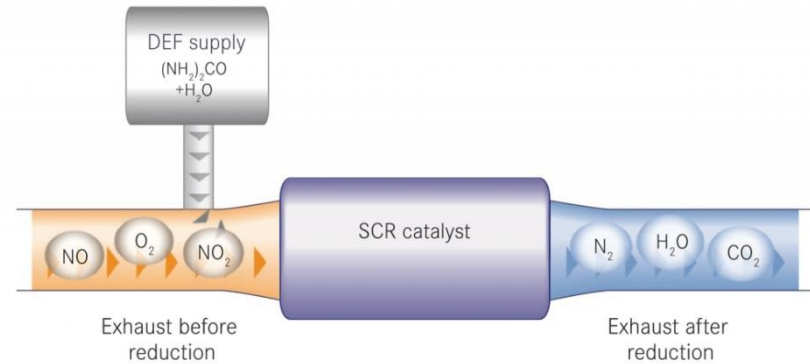
Reconditioning of existing engines

After treatment systems:

- SCR(Selective Catalytic Reduction technology)
- DPF(Diesel Particulate Filter)

Main experience:

- 30 inland barges
- Investment costs: € 100K
- Not applicable in all engines
- Made-to-measure: technical difficulties result in relative high technical costs



Diesel electric

Main experience:

- Sailing profile: requires intensive use/long haul
- Good combination with after treatment systems

Implementation and economic impact

- Stricter emission standards are essential to compete with road transport developments
- Provide a clear outlook to barge owners and engine manufacturers for emission standards
- Level playing-field between existing and new barges is essential to pass costs on to customers
- Modal shift effect is expected to be negligible
- Possibly more lenient requirements for small barges
- Financing problem: support the access to finance for barge owners and support research



Next steps

- Standardisation is necessary to lower costs
- Use off the shelf, state of the art technology/modern truck engines for small barges: requires further research
- Improve disadvantages of after treatment: requires further research

