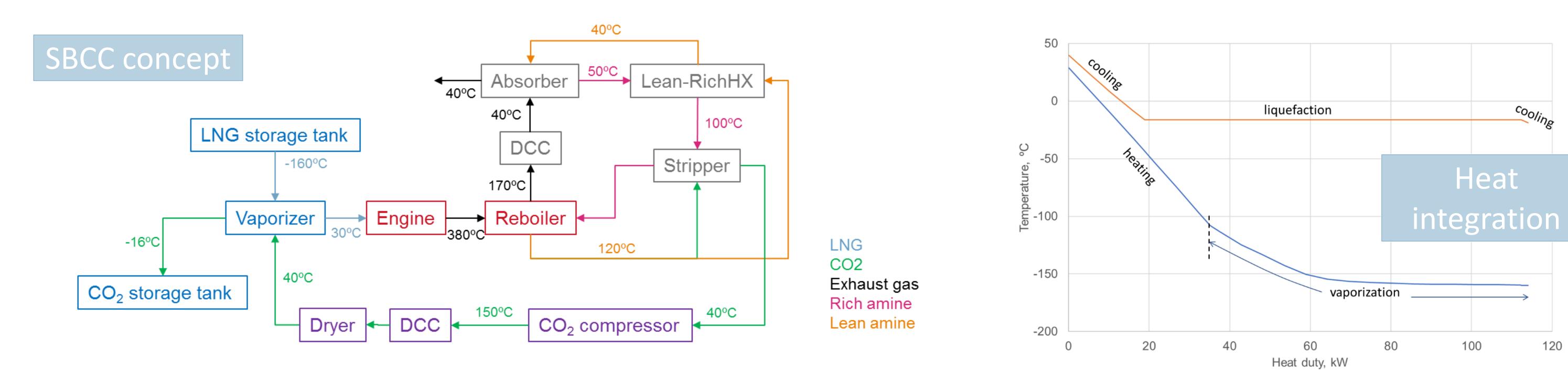




<sup>cooling</sup>

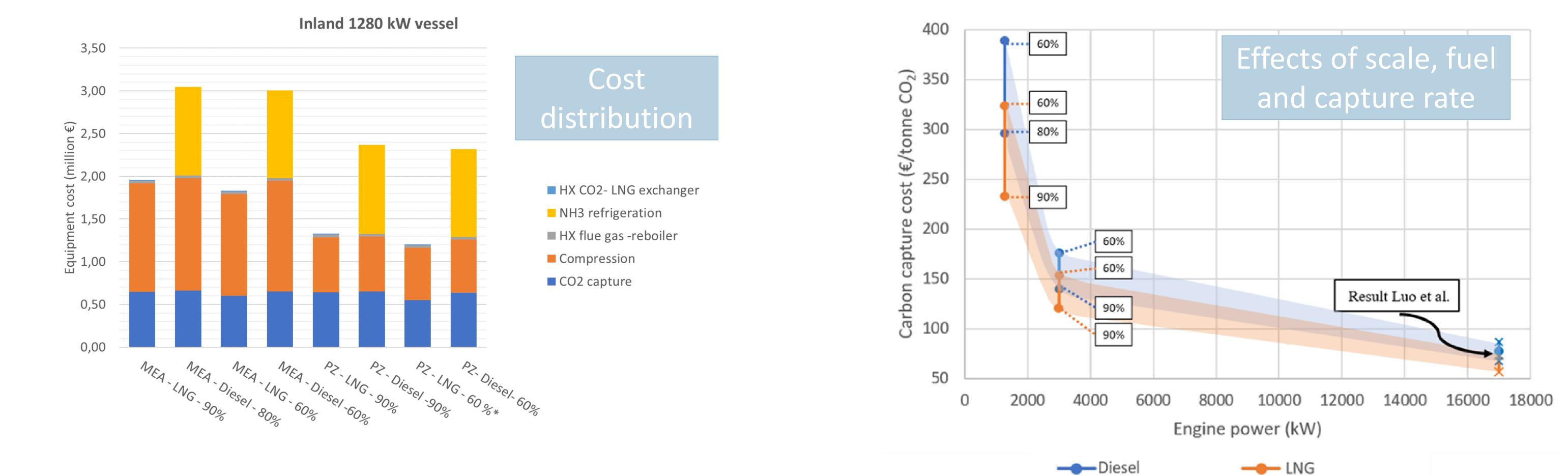
120

## Ship-based carbon capture (SBCC) onboard of diesel or LNG-fuelled ships



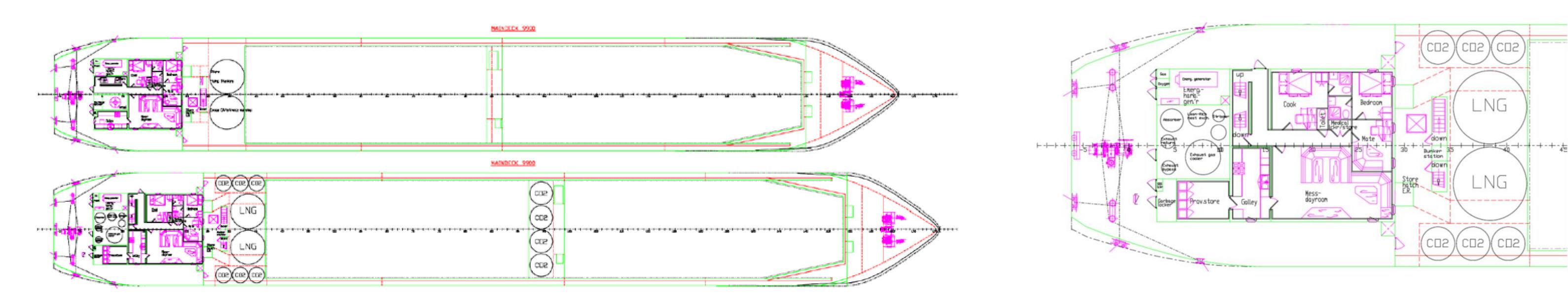
- Total shipping carbon emissions: 938 million tonnes CO<sub>2-eq</sub> in 2012  $\bullet$
- Zero emission shipping options: electricity or alternative fuels, as blue  $H_2$  or  $NH_3$
- Alternative: ship-based carbon capture (SBCC) ullet
- Studied two reference ship engines: 1280 kW and 3000 kW, LNG or diesel-fuelled

-LNG -CO2



- More than 90% of capture cost is CAPEX
- Compression is 30 to 65% of the equipment cost  $\bullet$

X. Luo and M. Wang, "Study of solvent-based carbon capture for cargo ships through process modelling and simulation.," Appl. Energy, vol. 195, pp. 402–413, 2017.



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