

# Svend Søyland Senior Adviser Nordisk Energiforskning

Nytt nordiskt samarbete inom sjöfart



#### Trafikverkets FOI-dag

Svend Søyland, Seniorrådgiver Nordisk Energiforskning

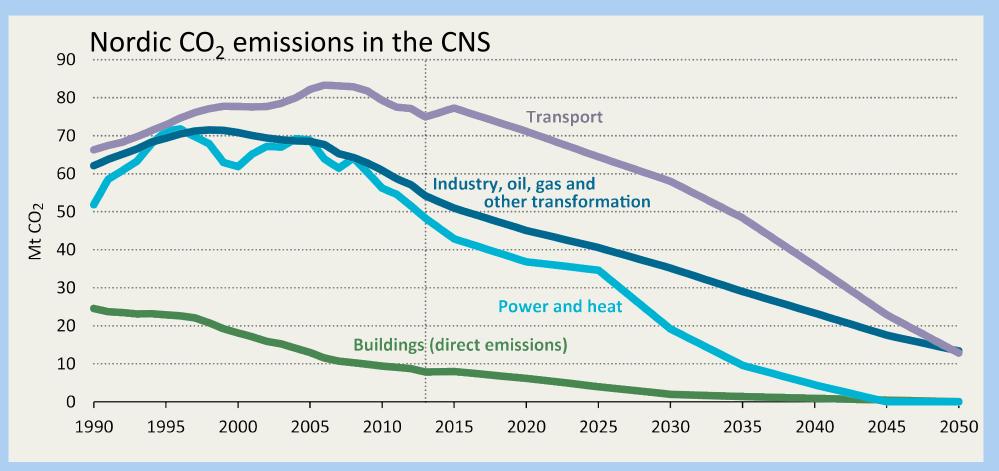
## Declaration on Nordic Carbon Neutrality:

FINLAND

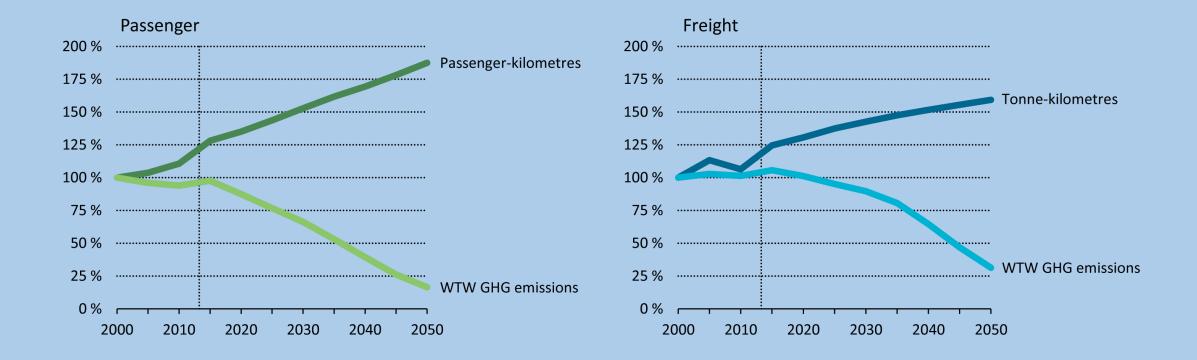
"We will intensify our cooperation by (...) decarbonizing the transport sector, including through an intermodal shift, efficiency, electrification, and use of sustainable renewable fuels"

ICELAND

## Transport - the biggest (Nordic) challenge



Source: Nordic Energy Technology Perspectives 2016



# Nordic Transport and prosjekter finansiert av NMR/EK-E

- P2X for heavy transport (tender)
- Nordic Sustainable Aviation (tender)
- Transport Minister Conference, Copenhagen 7th May (administrasjon)

#### NER: Energy and Transport programme (2014)

 Alcohol [Spirits] and Ethers as Marine Fuel (SPIRETH-project)



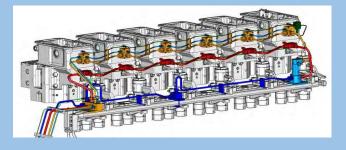
Stena Scanrail 2014



#### Stena Germanica 2015

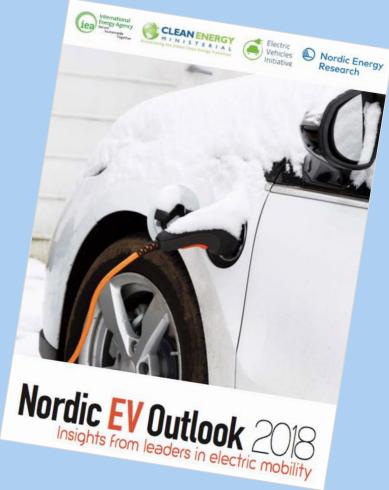


#### Stena Jutlandica 2018-20



Nordic Energy and Maritime Transport Outlook 2020

- Track policies and pilots
- Present Nordic mitigation options
- Opportunities for joint action



Publication in partnership with, ITF (OECD). To be presented at COP 26 Glasgow

### Prospects for energy and maritime transport in the Nordic region

Achieving the goals of the initial IMO strategy on reduction of GHG emissions from ships



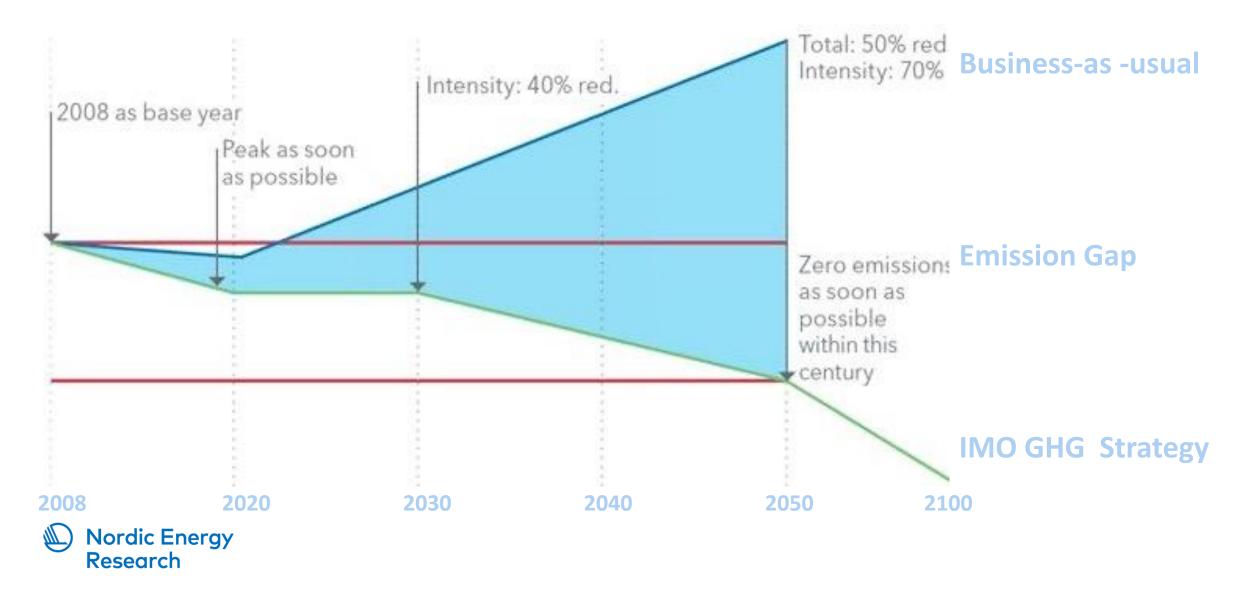
EXPERT WORKSHOP, WMU 26-27 February 2020







#### New IMO – strategy April 2018



## Maersk statement 5. December 2018

- Carbon neutral vessels commercially viable by 2030
- Cut net carbon emissions to zero by 2050

20-25 years vessel lifetime start develop new types of ships now!

HOW? Accelerate new innovations and adaption of new technology.



Maersk CO<sub>2</sub> emissions 2017 = 35.5 million tonnes = Denmark

# Nordic Energy and Maritime Transport Research programme

- Ad-hoc programgruppe etablert, MOU utarbeides
- Virtual Common Pot, ca. 30 mNOK/3-årig (2021-23)
- Fokus på alternative maritime drivstoffer
- Involvering av industripartnere
- Tverrfaglig tilnærming
- NEF vil bidra med top-up

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#### Alternative fuels and energy carriers



**Biofuels** 



Hydrogen



Electric



**Methanol** 



#### LNG/LBG



Ammonia?

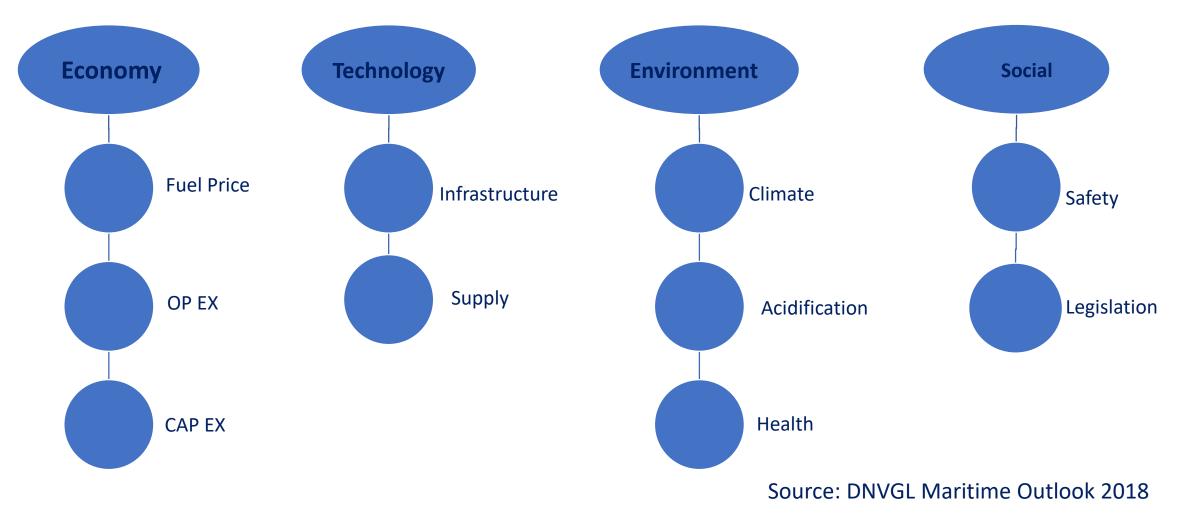




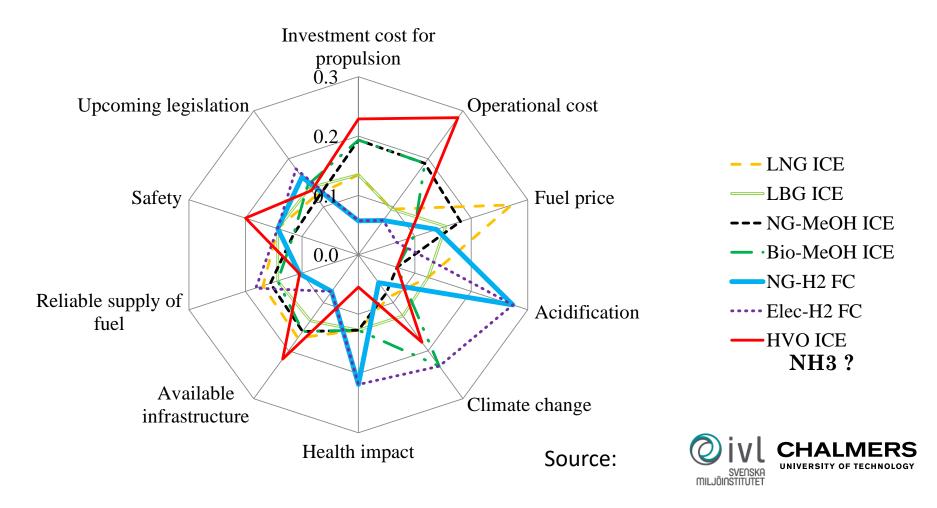




# Green Fuels - influencers



# **Comparing fuels**



Nordic Energy Research

### Keeping all transportation fuels on the table!

- Energy Efficiency the least expensive fuel!
- Drop-in fuels (ICE)
- Sustainable fuels from biomasse
- Electrofuels from renewables
- Hydrogen/fuel cells
- Electrification

