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BotH$_2$nia goes Oulu & Raahe 5.–6.5.2022

This is a presentation given at the event Both$_2$nia Goes Oulu & Raahe on 5.–6.5.2022.

BotH$_2$nia is a network of operators interested in hydrogen. The objective of the network is to create a Nordic hydrogen cluster around the Baltic Sea, beginning with the Bothnian Bay. BotH$_2$nia strengthens the position of the north in the European hydrogen industry!

BotH$_2$nia invites all businesses, research institutes, investors, municipalities and cities to roll up their sleeves for a greener future.

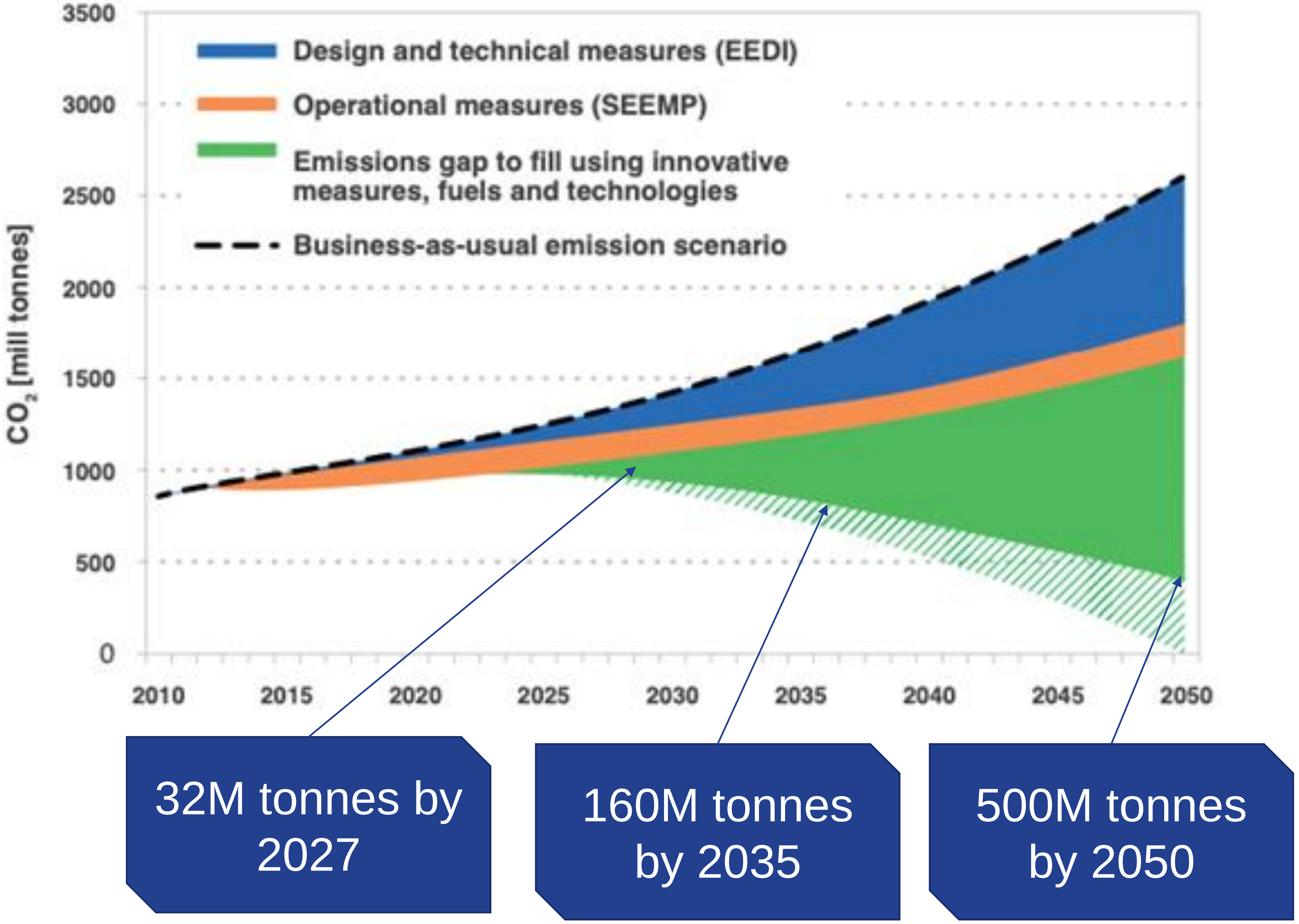
Please notice that the presentation has been modified to comply with the Accessibility Directive. In case for need the original material, please contact Minna Näsman (minna.nasman@both2nia.com).

Power generation & heavy traffic in 2050

Juho Könnö

Professor, Vehicle and Mobile Machinery Engineering

The Marine green fuel case



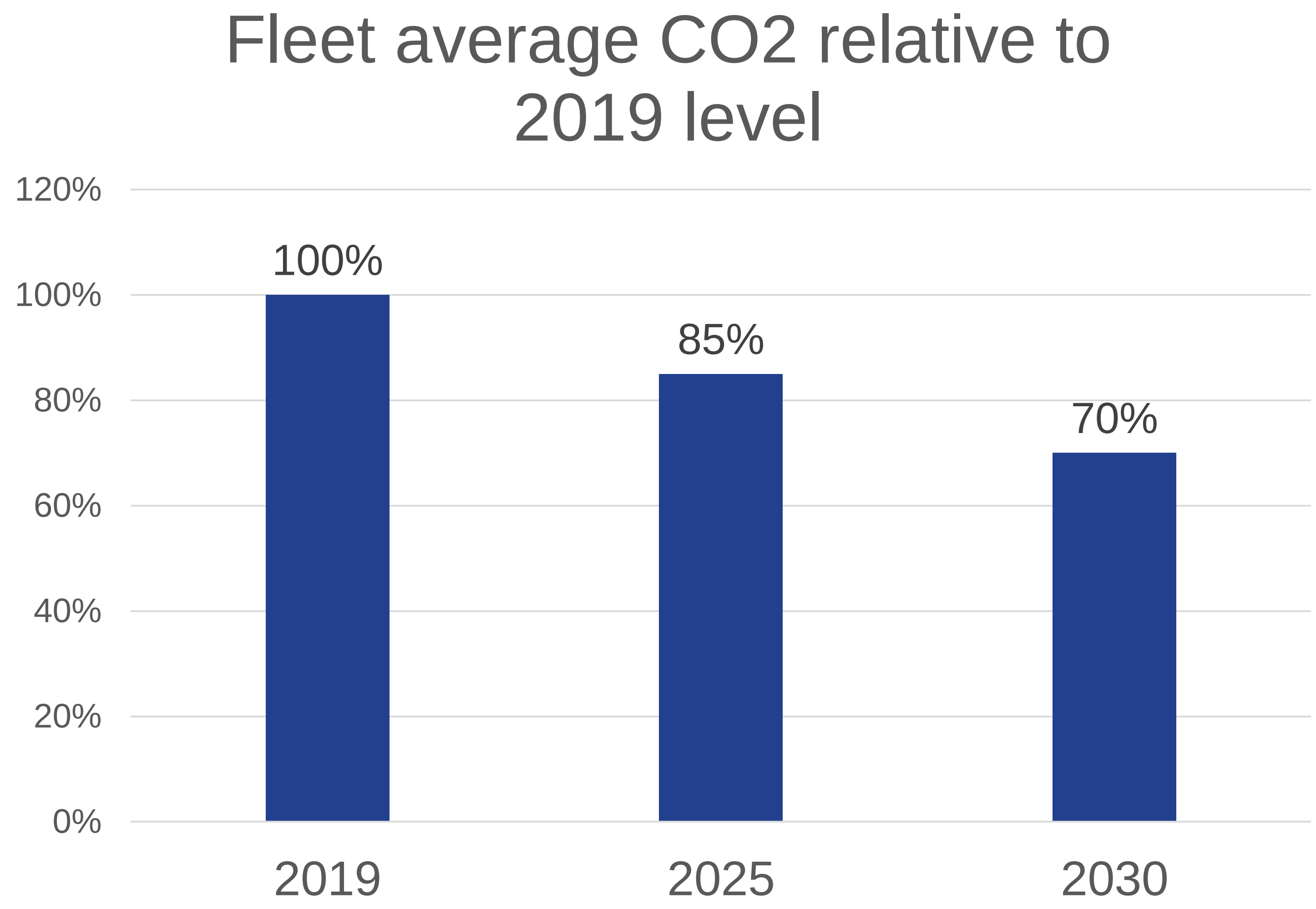
IMO target for 2050: 50% GHG reduction

Green fuels a must on top of operational measures

EU CO2 targets for heavy vehicles

6% of EU's CO2

EU regulation 2019/1242



BEV

LNG / Biogas

FCEV

Hybrid

Consequence for heavy traffic

Regulation cares about **tailpipe only**

Easiest way to stay compliant = 15% BEV into portfolio → local traffic, delivery

H2 a long-term solution, infrastructure and energy density problematic.

Road to the Zero-Emission Vehicle?


+


=

50 kWh / 100 km
0 g / kWh renewable → 0 g / km
250 g / kWh fossil → 125 g / km


+

=

20 kWh / 100 km
Finland 100 g / kWh → 20 g / km
Germany 400 g / kWh → 100 g / km