

CCNR activities related to the energy transition

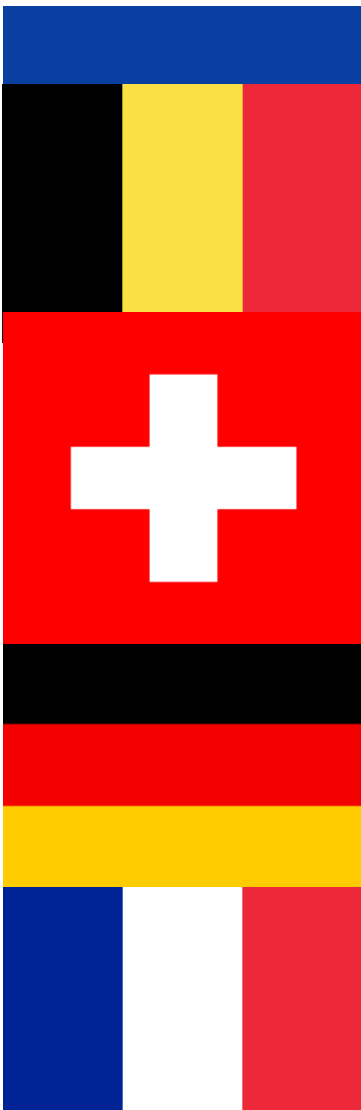
GRENDEL Know-How Transfer Event on Modernisation of Danube vessels fleet, Online, 29 September 2020

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CCNR

- Governs navigation on the Rhine
- Oldest international organisation (200 years)
- Based on Mannheim Convention (150 years)
- 5 Member States, 11 observer states and 5 observing international organisations
- Intensive participation of industry
- Guaranteeing freedom of navigation and promoting navigation on the Rhine
- Binding regulations (traffic / vessel operation, technical requirements for vessels, crew qualification, manning)
- Political, organisational, technical and social innovator
- Strategy (sustainable inland navigation, vision of zero emissions, cooperation with EU, ...)
- Mannheim Ministerial Declaration: largely eliminating emission in inland navigation by 2050
- The CCNR was the first in the world to introduce emission limits in inland navigation



European waterways and fleet



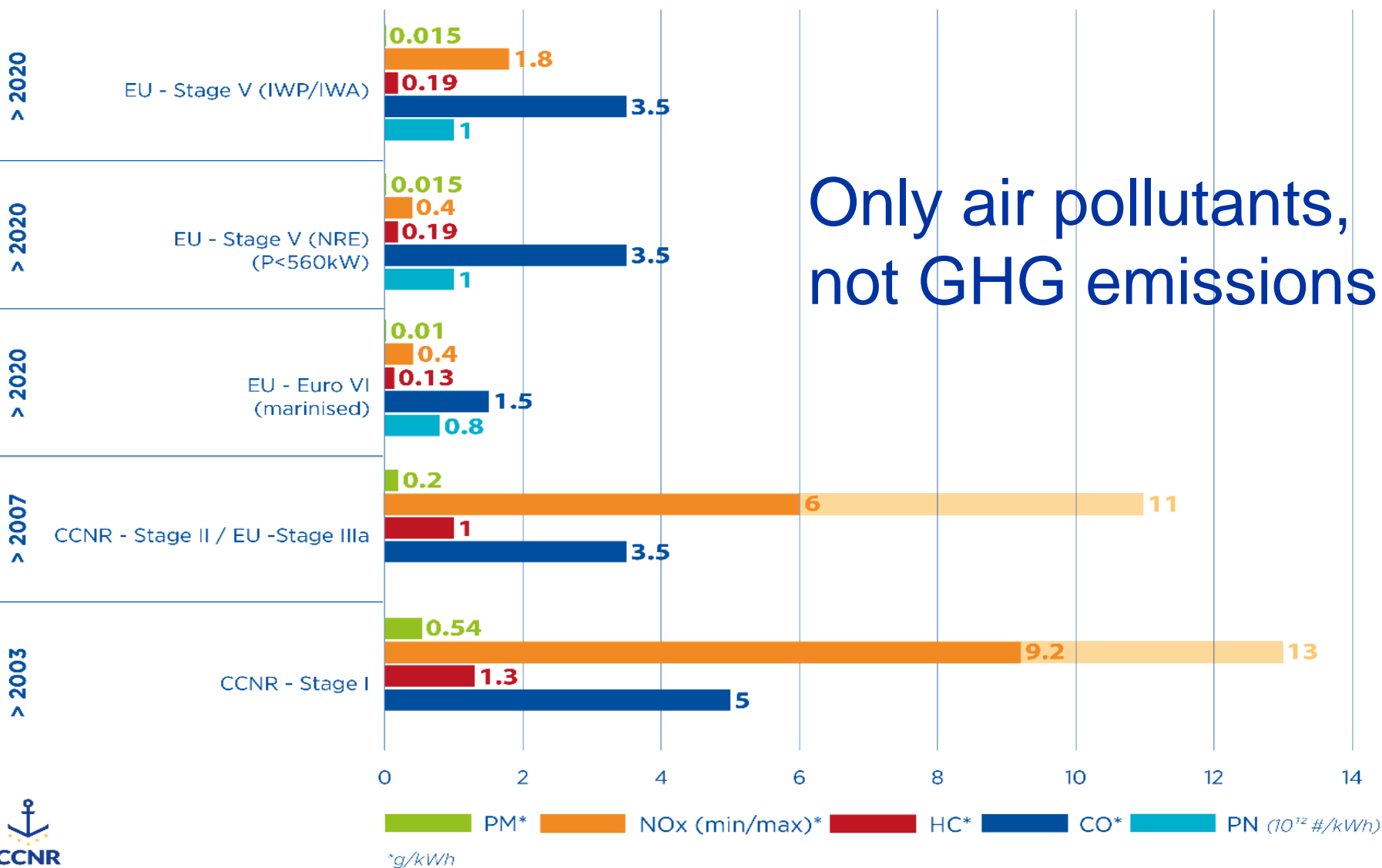
- Rhine = **some two thirds of IWT in EU** (330 million tons/year, 2 million TEU/year)
- 15,200 vessels in European fleet (2019) & new buildings = 100 / year (cargo & pax.)
- Rhine : more than 50% > 50 years old (BE, NL,DE), more than 80% > 50 years old (FR). CH 87% < 35 years.
- Danube : around 72% of push & tugs & 16% of pushed barges > 40 years; 59% of pushed barges >35 years.





Emission limits for IWT engines

Power > 300 kW





Ministers of the CCNR Member States:

- emphasised need for up-to-date, workable and **harmonised environmental and safety regulations in Rhine and inland navigation**
- tasked CCNR to develop a roadmap in order to
 - reduce greenhouse gas emissions by 35% compared with 2015 by 2035,
 - reduce pollutant emissions by 35% compared with 2015 by 2035,
 - **largely eliminate greenhouse gases and other pollutants by 2050.**
- Ongoing work – consultation of CCNR **observers & recognised NGO** foreseen end 2020 1st semester 2021
- pointed to **need for new financial instruments** to achieve these environmental objectives & entrusted CCNR with the task of leading this development.





On-going studies on energy transition



May 2019, CCNR launched study on “**The financing of the energy transition for a zero emission European inland navigation sector**”.

Objective → analyse/advise on best financial approach & instruments to enable IWT industry to make the transition towards zero-emission

Intermediary results to be available in **October 2020**

In parallel



study about the **evaluation of greening technologies towards a zero-emission IWT sector** and **identifying scenarios for transition options as well as their related costs**

Intermediary results to be available in **October 2020** and **finalization** by the **end of the year 2020**

 study on **polluter pays systems and their application to the IWT sector**

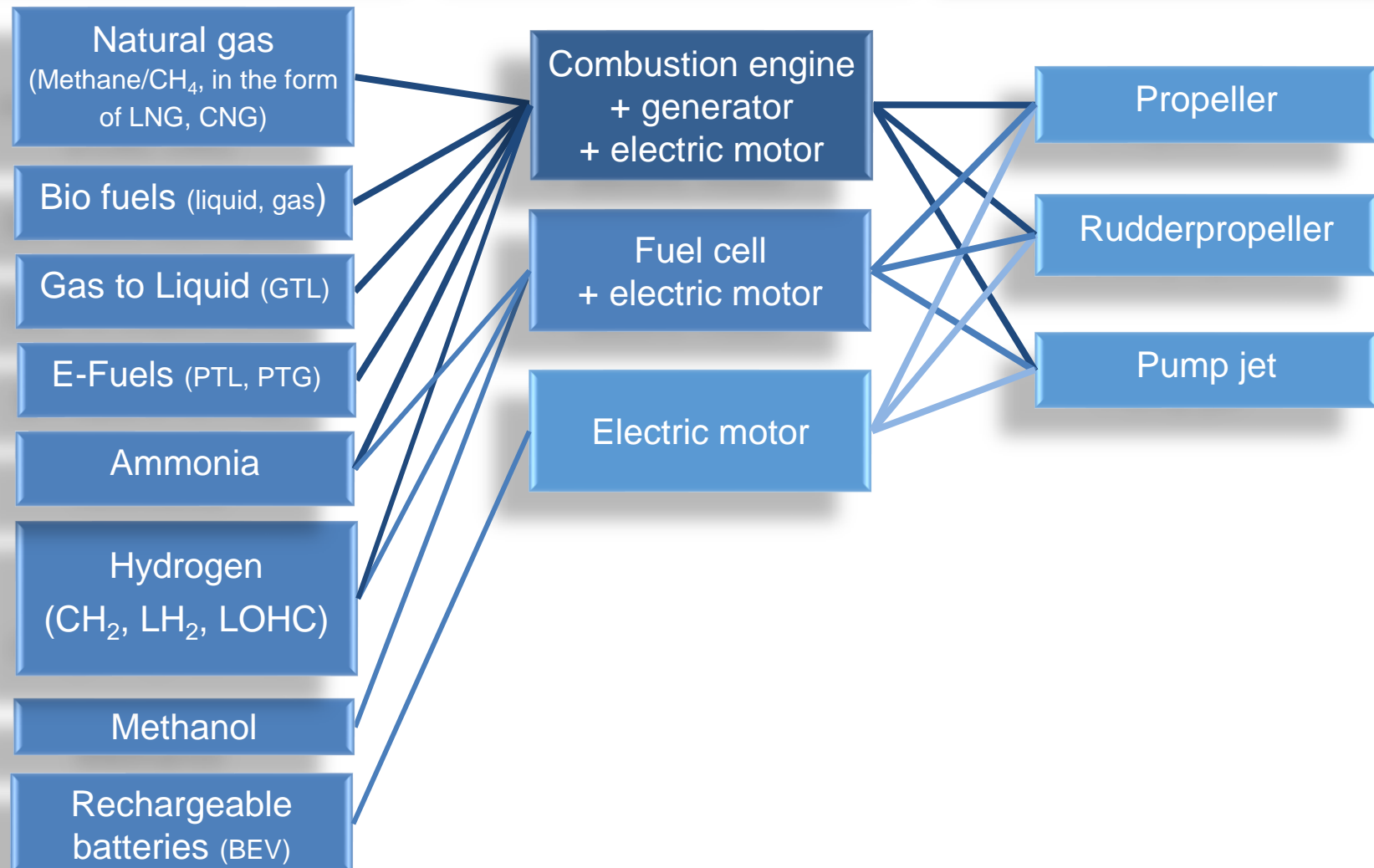
 **Final results** to be available in **October 2020**



Energy carrier (fuels)

Energy converter

Propulsion type





Rhine Vessel Inspection
Regulations (RVIR)
CCNR

Directive 2016/1629
European Union

Reference to

ES-TRIN

= Core technical requirements
for inland navigation vessels

Is mandatory for EU and CCNR
Member States

- Example ES-TRIN = the “Core” technical requirements for inland navigation vessels in Europe
- Standard permanently developed and improved by the working group CESNI/PT, in close cooperation with **shipping industry, national administrations, river commissions**
- Regular revisions of ES-TRIN – every two years

Exemplary activities

- Development of requirements for safe use of **lithium-ion batteries** in propulsion systems (to be included in ES-TRIN 2021)
- On-going work on **fuel cells** (as well as energy storage) in **CESNI/PT/FC** (but also general consideration on requirements for low flashpoint fuels)
- Technical examination of **derogation for pilot projects** (ex. Elektra in Germany)



Ministerial commitment (Mannheim declaration) =
Mandate CCNR to

1/develop a roadmap **on emission reduction** as policy instrument, substantial synergies with EU initiatives

- **Scenarios for transition pathways** for inland navigation in 2035 and 2050 (technologies/fleet profile)
- Identify **possible measures**: regulatory (including banning certain technologies), voluntary (including energy index/label), financial support and incentives (subsidies, financing, fiscal exemptions, etc.), economic

2/ Identify **relevant financial instruments**

On-going studies on **funding/financing** instruments & evaluation of **technologies** as a **first step towards implementation** of the Mannheim declaration



- Energy transition = existential challenge for IWT
- CCNR = **international platform of exchanges** dedicated to IWT (studies, pilot projects, regulation, public policy ...)
- **Finding a European solution** (unity is strength) - essential given the size of the sector
- **Technologies: energy mix, modular approach** with electric propulsion, need for pilot projects (hydrogen/batteries), fossil LNG as a dead end
- Regulatory work to accompany the transition, CESNI as relevant instrument
- **(TBC) Workshop in April 2021** devoted exclusively to **electric drives** powered by alternative energy sources such as hydrogen fuel cells or batteries



THANK YOU VERY MUCH FOR YOUR ATTENTION

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