Panel discussion on fleet innovation towards energy transition
CCNR roadmap and promising technologies

EBU Event Brussels on the role of IWT in the framework of EU's mobility and supply policy

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Which technologies are the most promising to reach 2030 emission goals?

Answer based on the CCNR roadmap on reducing emissions in inland navigation

KEY CONCLUSIONS

» Many technological solutions available but with different levels of maturity

» No “one-size-fits-all” solution

» Many uncertainties as to technology development, prices, availability of fuels

» Technology neutral and open approach

» Reality in the middle of the two pathways
Transition pathways for IWT by 2035 and 2050

The graphs below describe the development of fuel share (in %) within the fleet (new and existing vessels) towards 2050...

... in the “business-as-usual” scenario

- GHG: -22% by 2050
- NOx: -76% by 2050
- PM: -83% by 2050

... in the “conservative” pathway

- GHG: -91% by 2050
- NOx: -90% by 2050
- PM: -96% by 2050

... in the “innovative” pathway

- GHG: -91% by 2050
- NOx: -94% by 2050
- PM: -98% by 2050
Transition pathways for IWT by 2035 and 2050

EXAMPLE:

Innovative pathway – technology share for each fleet family in 2050

(new build and existing vessels)
Air pollutants: reduced to a large extent with combustion engine equipped with modern aftertreatment.

Reduction of GHG emissions is the most challenging part.

- Where zero emission propulsions are available investments could be made before 2035.
- Development of on-shore power supply.
- Investment in Stage V combustion engines.
- As much as possible, installation of electric drivetrains enabling a modular system approach with different energy sources.
- Use of alternative drop-in fuels (i.e. HVO or bio-LNG) as far as they are produced from sustainable origins.

How to achieve intermediate targets?
Many challenges lie ahead: 3 perspectives

**FINANCIAL**

1 - important financial gap

2 - lack of incentives to trigger investment decision on the side of individual vessel owner

3 - lack of certainty that the investment made will be future proof.

**COMMERCIAL**

4 - lack of certainty regarding the demand for low/zero emission vessels.

**TECHNOLOGICAL**

Lack of certainty regarding

5 - the technologies which are the most adapted to my vessel

6 - the availability of alternative fuel infrastructure

7 - the availability of fuels (quantity and sustainable origin)
Current steps taken by CCNR and its Member States?

Regulations and standards provide for legal certainty, which in turn facilitates investments in new technologies.

Safe deployment as well as public support and confidence in the new technologies and energy carriers is critical.

» **Appropriate regulatory framework** for the use of alternative fuels and batteries

» Support to **pilot projects** and permission processes

» **Funding programmes** to support the energy transition

» **A labelling system** for inland navigation as an important tool to stimulate the transition

» List of **innovative vessels**
THANK YOU very much for your attention!

Any questions? For more information, check out our website:
www.roadmap.ccr-zkr.org
https://www.ccr-zkr.org/
https://www.cesni.eu/