

# Realistic expectations for the use of alternative fuels on the Danube in Austria

Comparison of possible future fuels and drawing a  
rough pathway

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## Alternative Fuels - Comparison

	Biofuels / E-fuels	Methanol	Hydrogen
Regulations ship	none	ES-TRIN 2025	ES-TRIN 2027
Regulations Infra/fuel	Minor	Medium-high	Medium - high
Extra costs shipadaption	none	Medium - high	high
Extra costs infra	minor	low	high-very high
Extra costs handling	non	low	high
Safety level (fuel) compare to diesel	similar	lower	significantly lower
Energy desity (volume) comp. diesel	similar	50%	10-20%
Container needed	no	no	yes

## Overview Prices

Very rough estimation on stock market prices!

Fuel	Price € / KWh
Diesel	0,08
HVO	0,11
Methanol (green/grey ?)	0,09
H <sub>2</sub> /green	0,3

## Alternative fuels - possible pathways on the Austrian Danube

Current approach: Making HVO on the Austrian Danube available

- Discussions have already been held with the providers and bunker stations to get a flagship project in Vienna
- Working on the regulatory frame
  - RED III, Tax regulations – Very complex topic due to international dependencies
- Use of HVO on the ships of the viadonau and the Austrian Shipping Surveillance since autumn 2023 – Test phase, no technical issues have currently occurred

## Alternative Fuels - possible pathways on the Austrian Danube

Future approach:

- In our opinion, methanol could be the best option for inland shipping over long distances

Reasons:

- Relatively high volumetric density,
- significant lower handling risks than H<sub>2</sub>,
- low costs for adapting landside infrastructure,
- Methanol technology is better usable for retrofit
- Methanol might be one of the better solutions for energy transport.

## Alternative fuels - possible pathways on the Austrian Danube

### Measures to be taken:

Create a comprehensive strategic view for a future pathway on the Danube to limit the possible options to probable options.

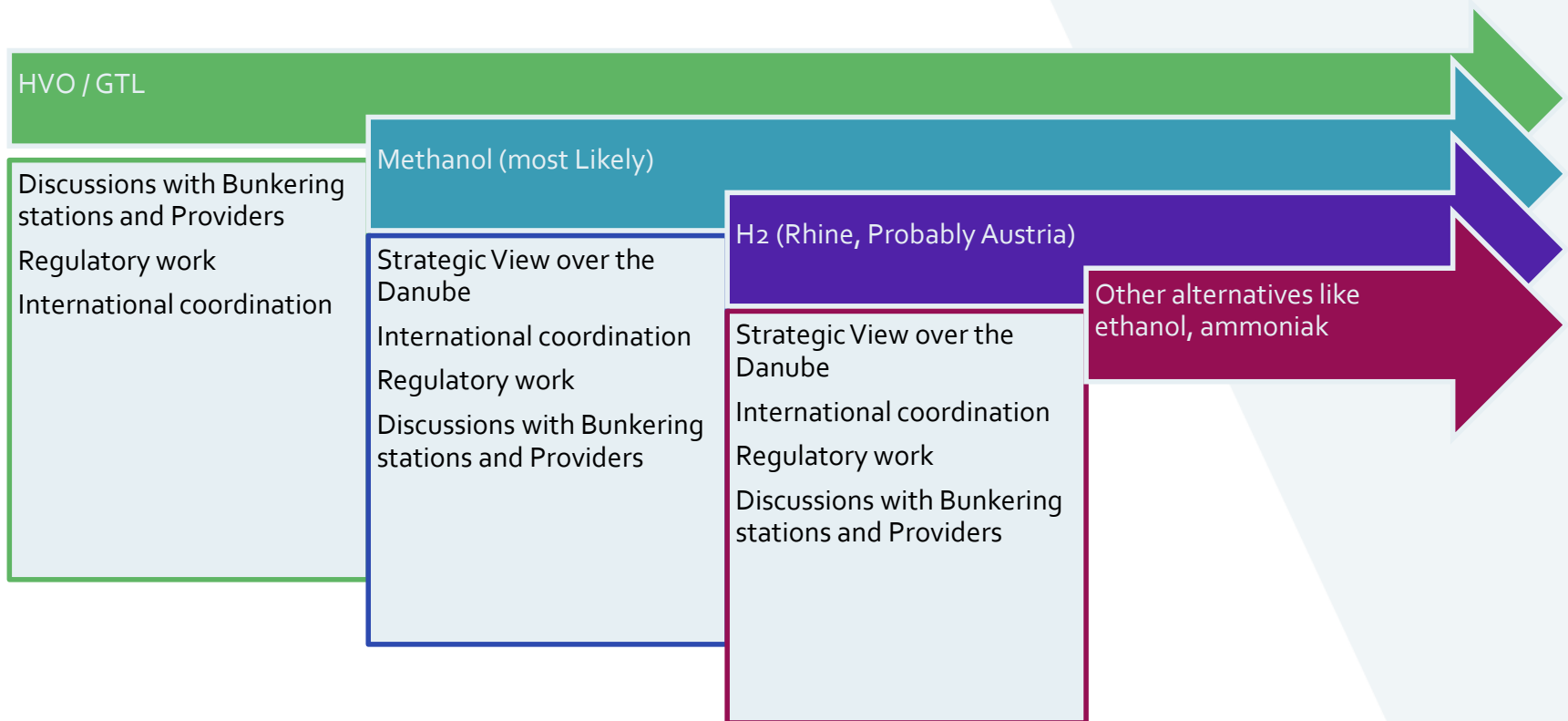
### Regulatory work:

- ES-TRIN will be MeOH ready with edition 2025!

### Open Issues:

- NRMM – Adaption for MeOH combustion engines
- RED III, Tax regulations – Very complex topic due to international dependencies
- Regulations for Bunkering structures
- Regulations and Standards for fuel Quality

## Alternative fuels – An overview



## Action needed from stakeholders and the industry and technology providers

- Pilot Projects on ships, bunkering infrastructure and availability of alternative fuels
- Strategic decisions for production and IWT transport of energy along the Danube

### Contribution to:

- Comprehensive work on the future path together with the authorities
- Work on regulations and standards



## Many thanks for your attention



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