



The potential of hydrogen in decarbonising the industry in the Czech Republic

- Oldřich Sklenář

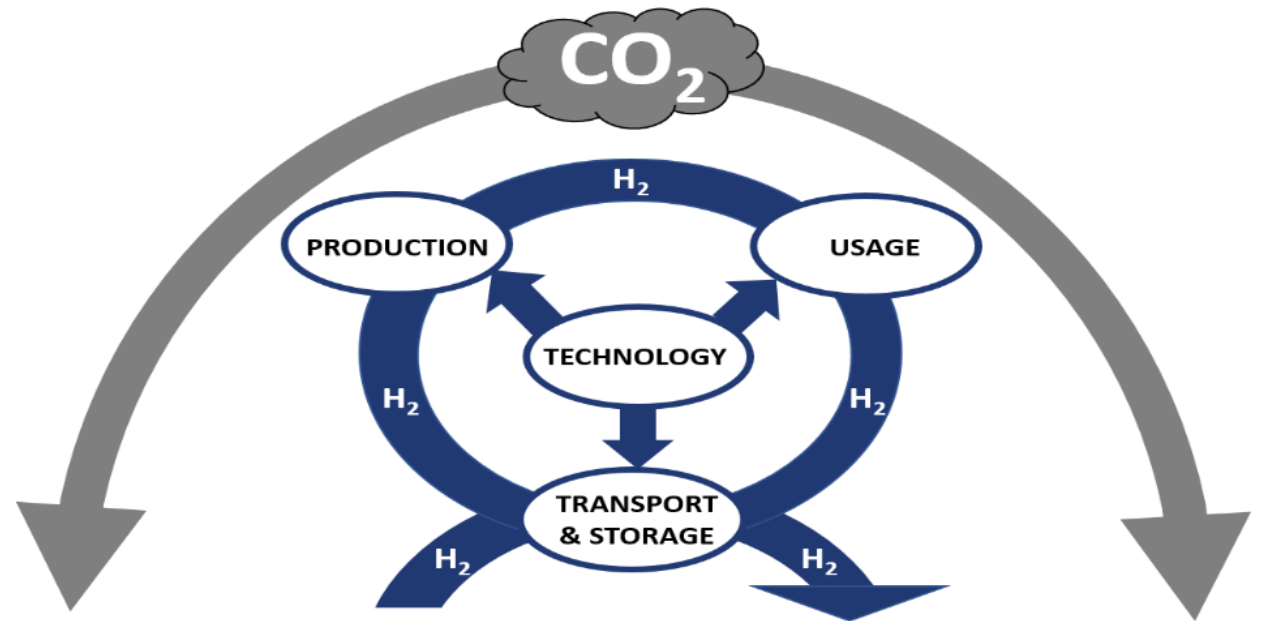
National Hydrogen Strategy

Strategic goals

- Reduce greenhouse gas emissions
- Stimulate the economic growth

Main pillars

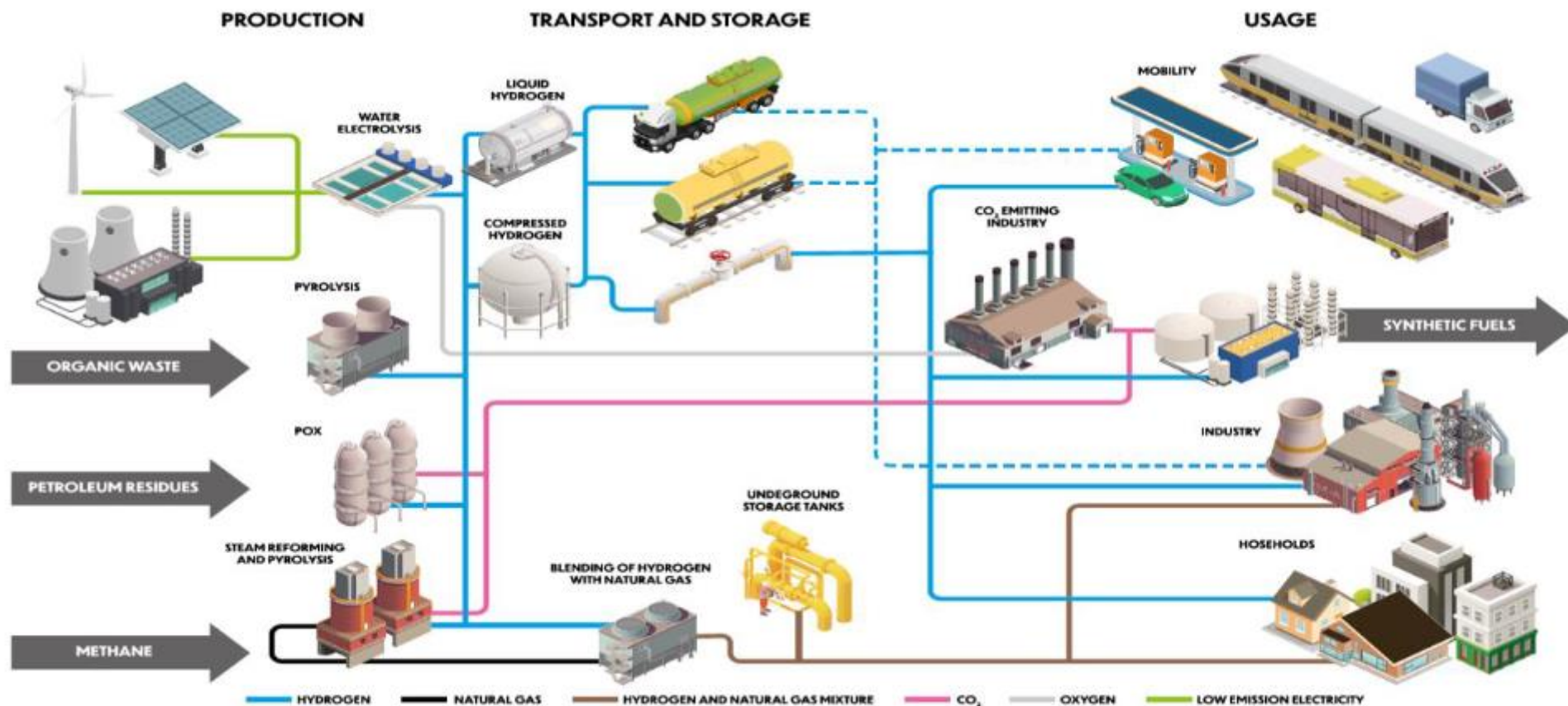
- Low-carbon hydrogen production
- Low-carbon hydrogen use
- Hydrogen transport and storage
- Hydrogen technologies



Source: The Czech Hydrogen Strategy



National Hydrogen Strategy



Source: The Czech Hydrogen Strategy

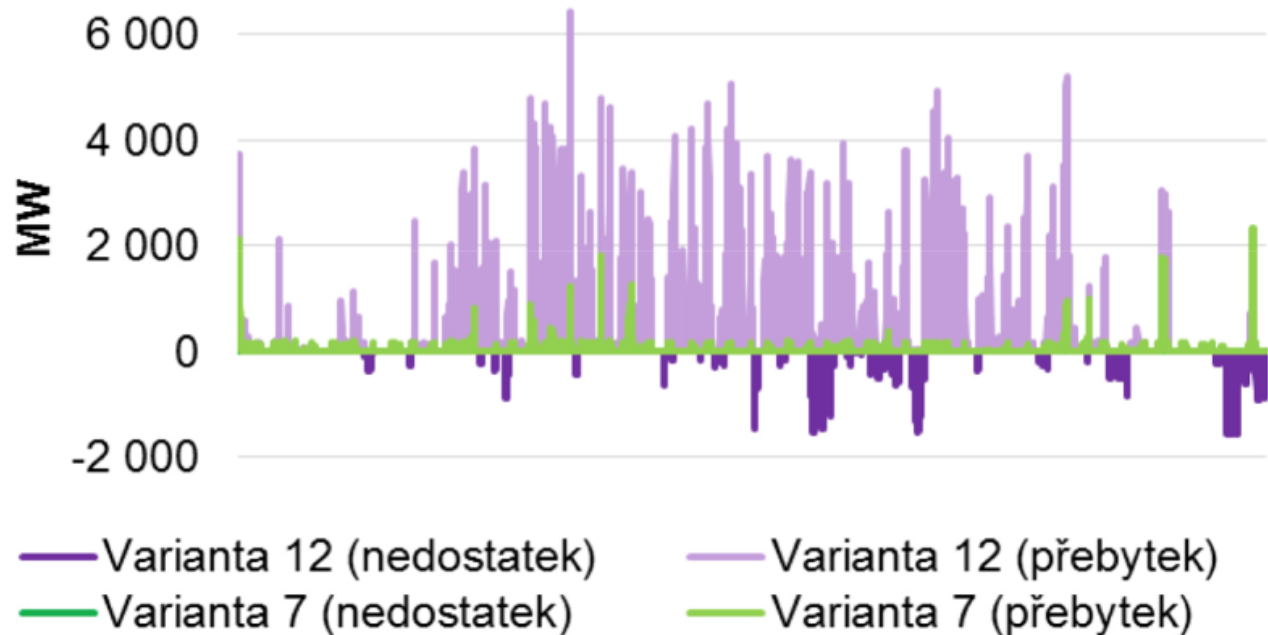


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National Hydrogen Strategy

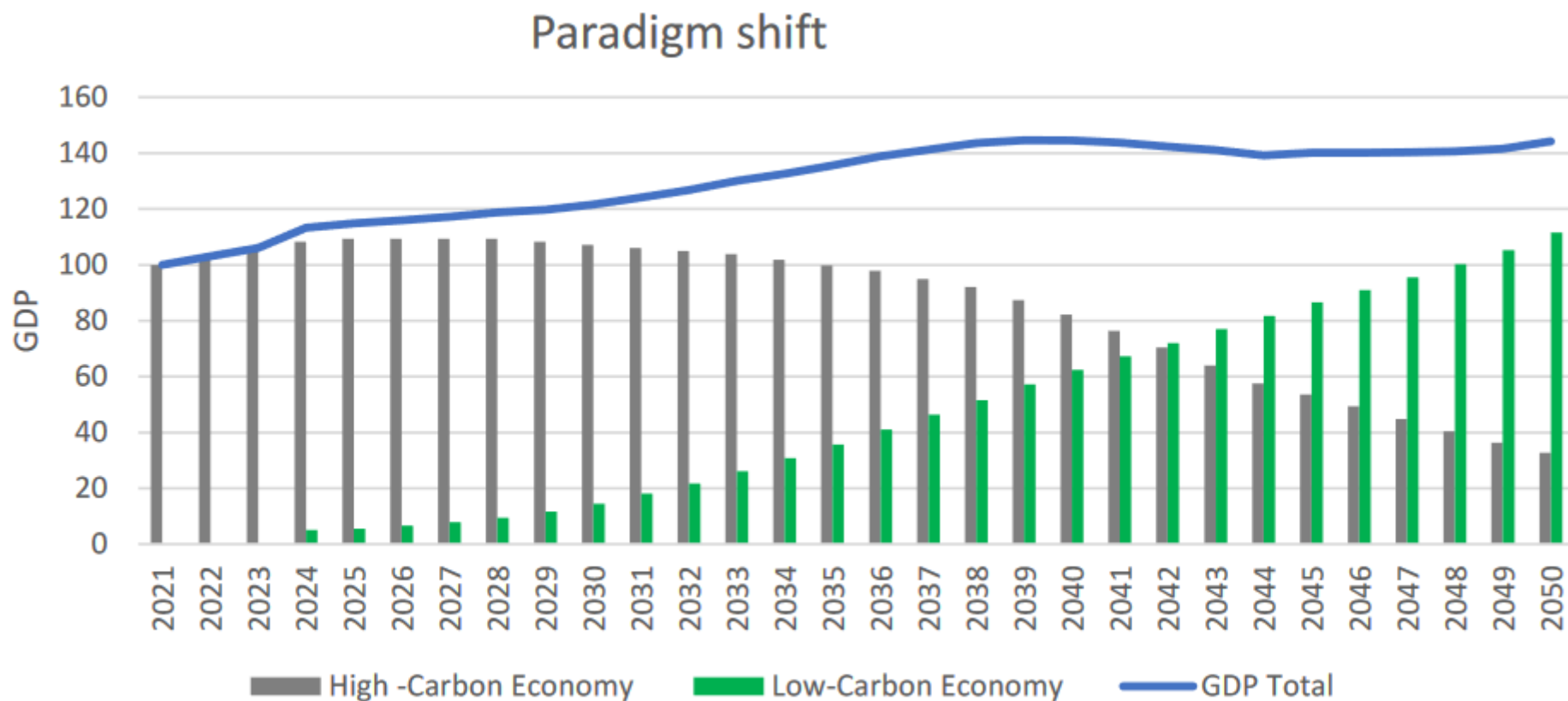
Potřeba exportu a importu 2040



Source: presentation of company ČEPS to the Coal Commission



National Hydrogen Strategy

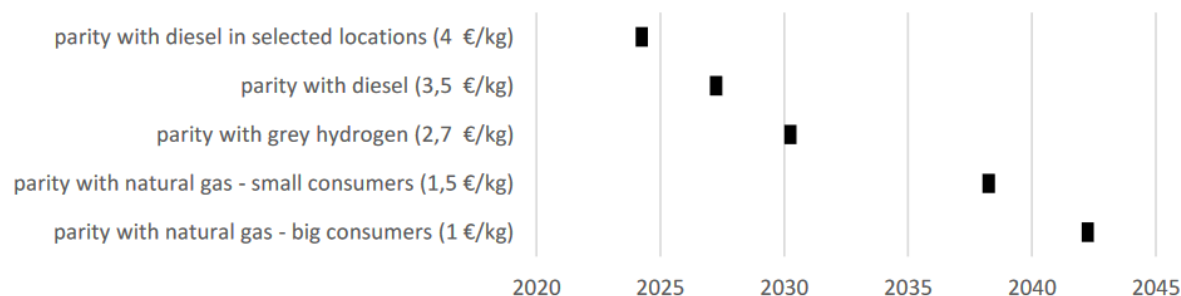


Source: The Czech Hydrogen Strategy

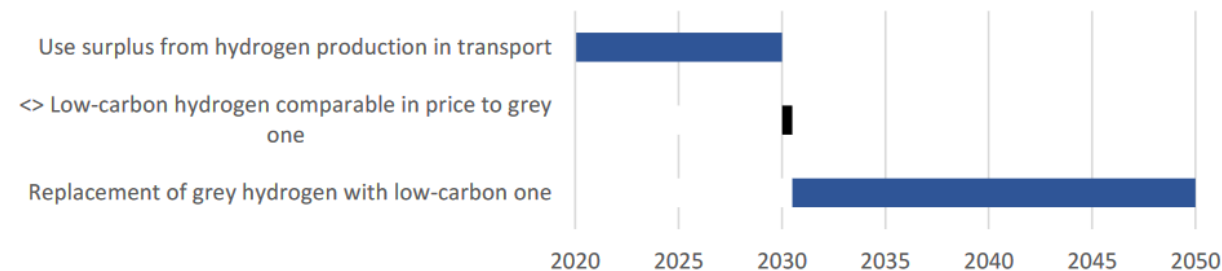


National Hydrogen Strategy

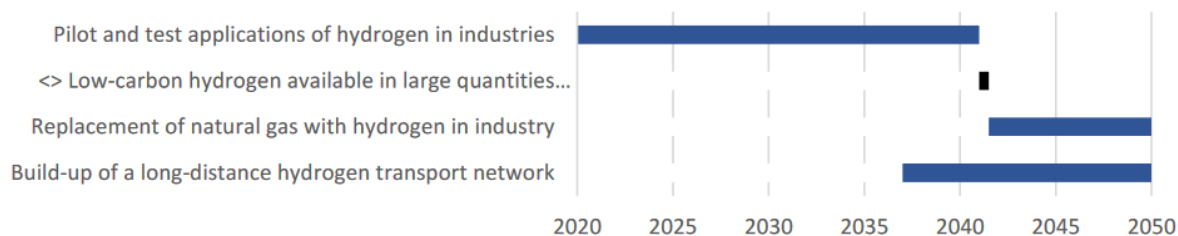
Low-carbon hydrogen price development



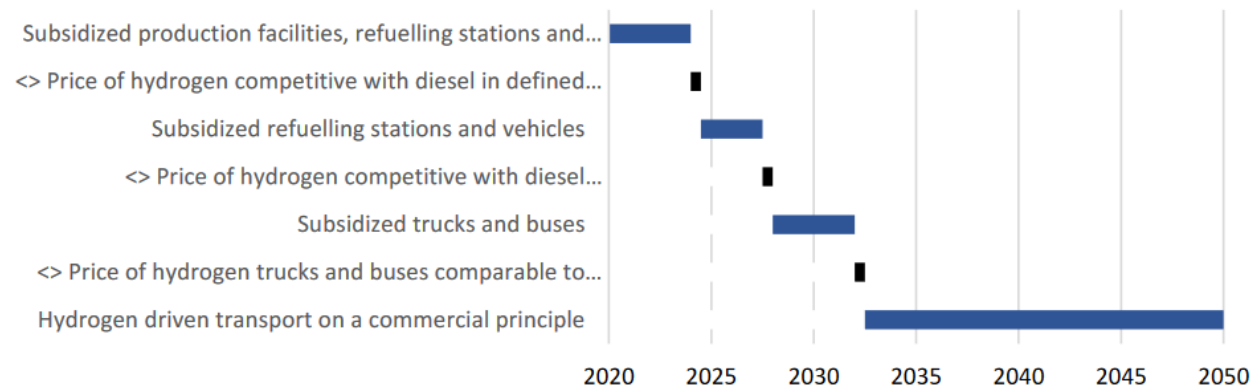
Phase-in of hydrogen into chemical industry



Phase-in of hydrogen into industries



Phase-in of hydrogen into transport



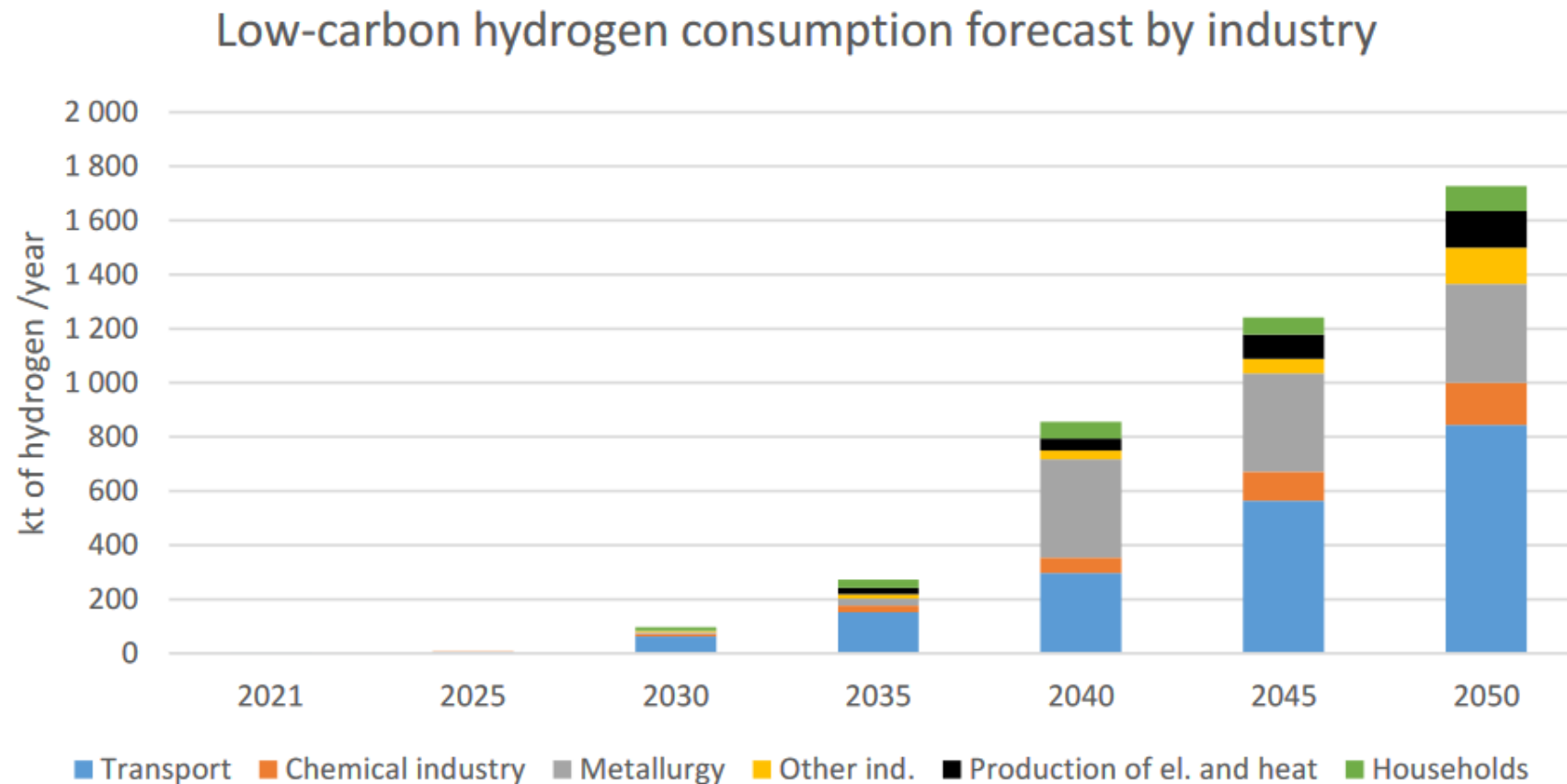
Source: The Czech Hydrogen Strategy



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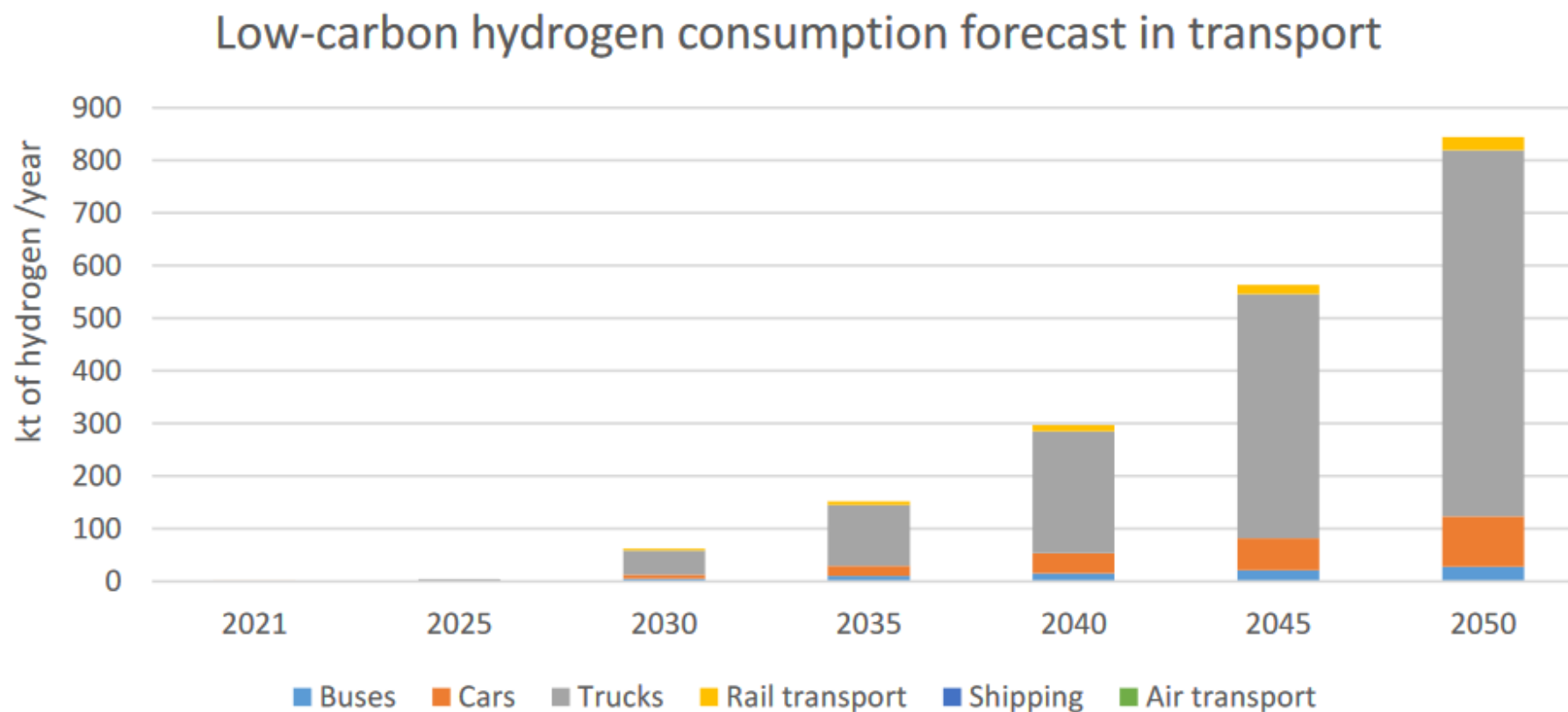
National Hydrogen Strategy



Source: The Czech Hydrogen Strategy



National Hydrogen Strategy



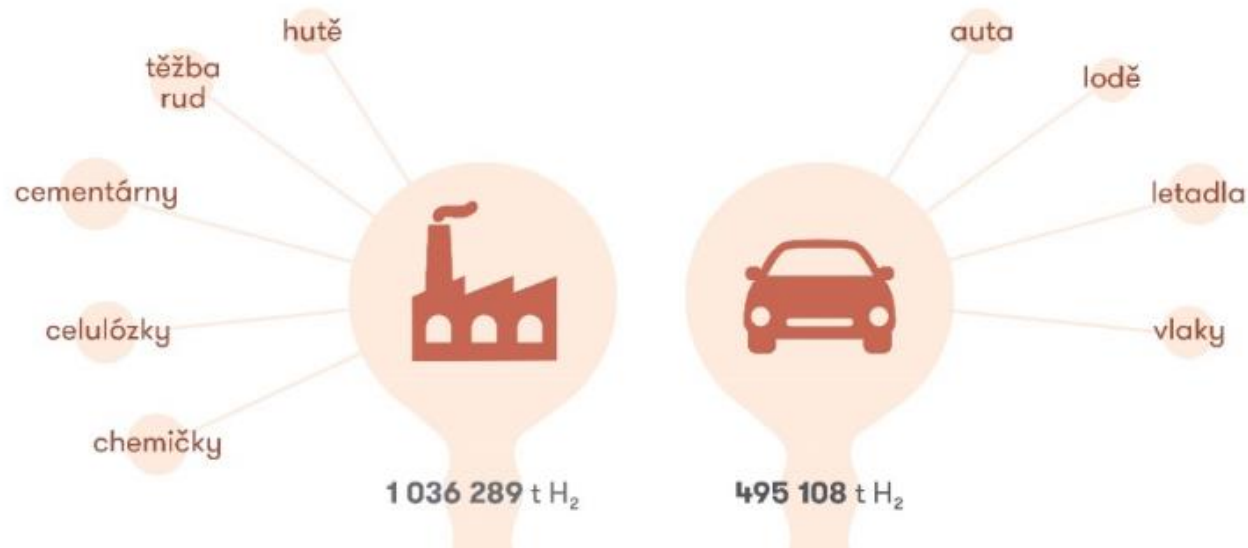
Source: The Czech Hydrogen Strategy



AMO Analysis

Hydrogen utilisation in hard-to-abate sectors:

- Metallurgy
- Foundry
- Chemical industry
- &
- Heavy freight transport
- Bus transport
- Air, ship and rail transport



Source: AMO



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AMO Analysis - Results

	H ₂ need according AMO - 2020 (kt)	H ₂ according National strategy – 2050 (kt)	H ₂ estimated production (kt)	Biomethane in 2030 estimate by EFG (kt)
Steel (coke, natural gas)	1036	635	tbd (284 in 2035)	70
Metallurgy (natural gas)				
Glass, cement and other non-metal sectors (natural gas)				
Cellulose (natural gas)				
Chemicals (coal, natural gas)				
Diesel in hard-to-abate transport				

Source: AMO



AMO Analysis- Recommendations

- Reach maximum sustainable biofuel levels and treat hydrogen as an essential for the rest (implies some massive imports)
- Ensure sufficient import capacity **on regulatory level** by liberating the European hydrogen market
 - safety standards for the production, storage and transport
 - *proofs of origin* for green/low-emission hydrogen
 - support the adoption of EU-wide standards and the emergence of global trade
- Ensure sufficient import capacity **on technical level:**
 - ensure fast construction of the hydrogen pipelines, their link to Germany or to the producers of low-emission hydrogen in CEE Neighborhood (Ukraine)
 - availability of IPCEI





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Thank you for your attention

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