

# Czech Hydrogen Strategy

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MINISTERSTVO  
PRŮMYSLU A OBCHODU

Ministry of Industry and Trade



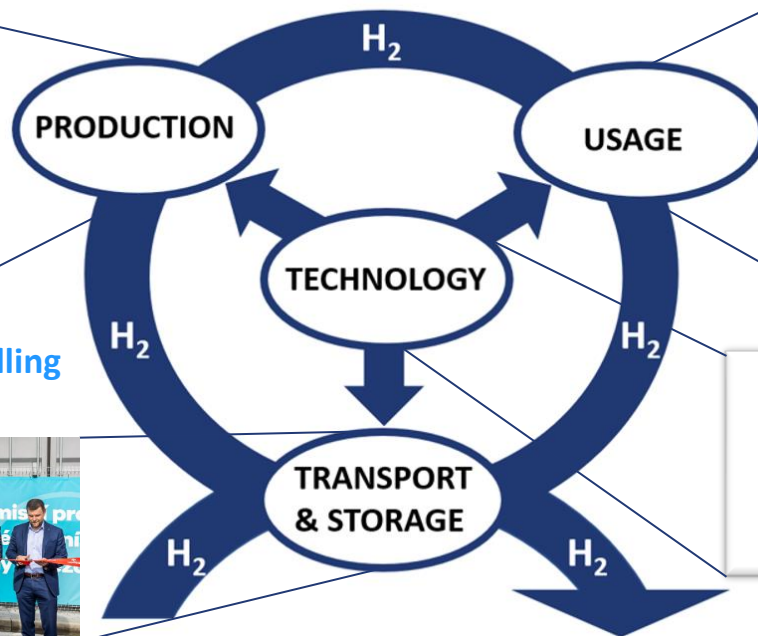
# Last year of hydrogen strategy

Spolchemie: 2 200 t/year of low carbon hydrogen



MND: photovoltaic with alkaline electrolyzers

3 public hydrogen filling stations



Alstom: first hydrogen train



Hyundai XCIENT first hydrogen truck

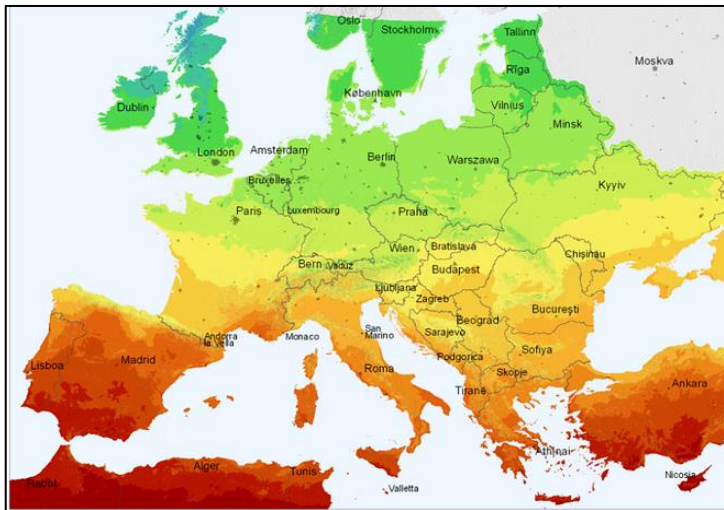


Hydrogen bus line 170 in Prague

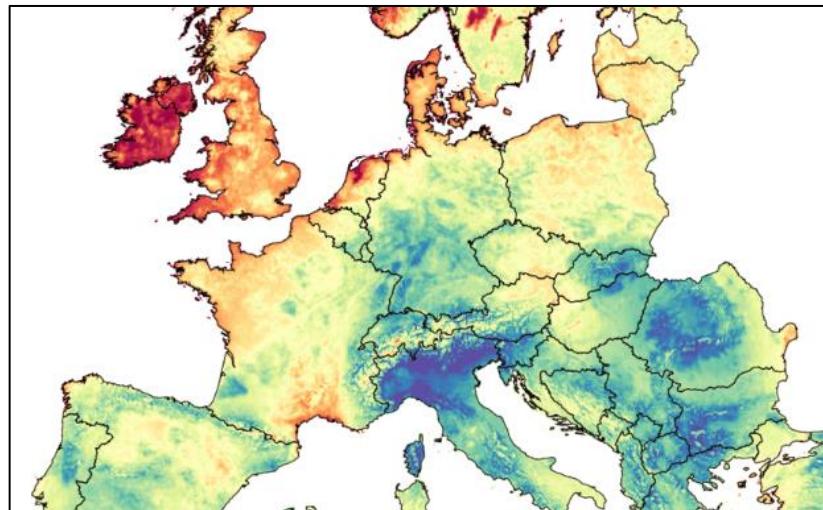


Hytep – in year 2023 more than 80 members

# „Not very good situation“ with RES in the Czech Republic



About 1000 hours/year



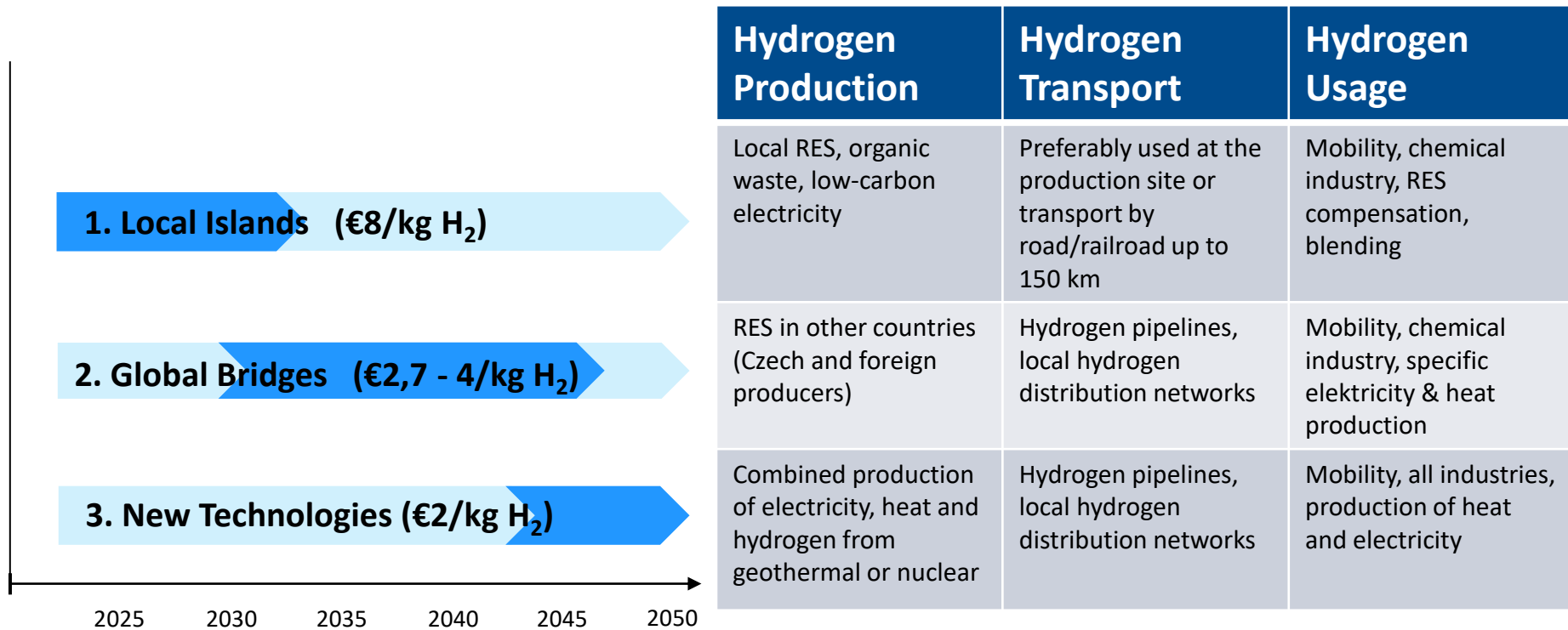
About 1800 hours/year

# Decarbonization journey is not straightforward



**It is like sailing against the wind**

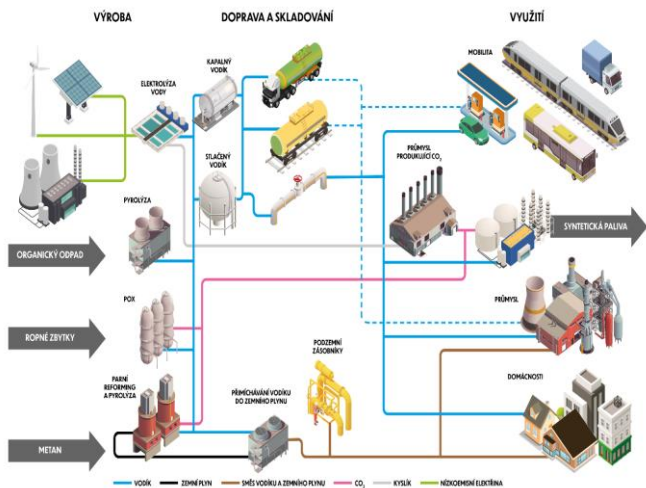
# Strategic Framework: 3 stages/directions



# Local Islands

## Ambitions:

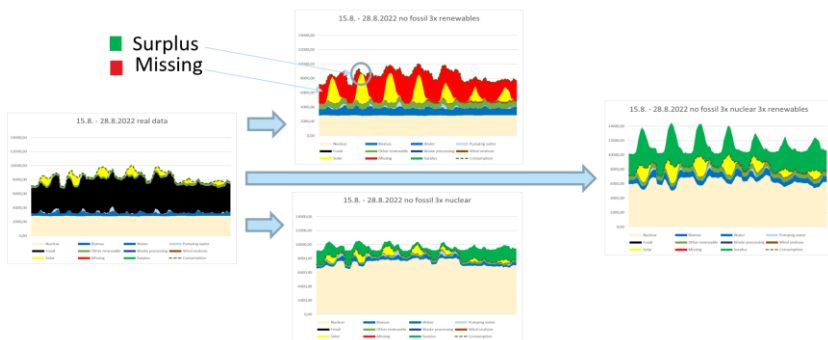
- ➔ Create the local production and consumption islands/valleys/hubs
- ➔ Make sure that such islands will be able to grow later with cheap renewable hydrogen
- ➔ Maximize the number of islands (Not maximize the consumption of hydrogen)



# Local Islands



## CZECH ENERGY MIX (AUGUST 2022)



- ➔ Utilization of surpluses from renewables and nuclear.
- ➔ Local utilization of renewables.
- ➔ Combination RES-nuclear-hydrogen will assure supply of energy regardless to the weather and year season.
- ➔ Produced hydrogen will be used in mobility and chemical industry.



# Global Bridges

## Ambitions:

- ➔ Maximize usage of renewable hydrogen
- ➔ Use the cheap renewable hydrogen from countries with RES surpluses
- ➔ Make sure that there are several geographical sources of renewable hydrogen





# New Technologies

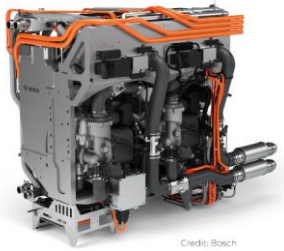


## Ambitions:

- ➔ Further decrease in the price of hydrogen
- ➔ Increase the national resilience by local production

# Hydrogen technologies – highly innovative with big export potential

## Robert Bosch



- 6. biggest Czech exporter
- Concern wide development of fuel cells in CZ
- 8 000 employees, 900 in R&D
- Development of modern production and R&D skills in CZ

## Iveco Czech Republic



- 7. biggest Czech exporter
- Export of 93 % production
- Concern wide development of intercity buses
- 4 000 employees
- Bringing foreign subcontractors to CZ

## Cylinders Holding



- World leader in steel cylinders
- Unique technological solutions

# Hytep Czech Hydrogen Technology Platform



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