

Hydrogen Valley in Košice Region

Department of Regional Development,
Košice Self-governing Region, Slovakia



Košice Self-governing Region



Technology



Innovation



Environment

Hydrogen activities in Košice Self-governing Region



**Innovation center
of Košice Region**



**Regional Innovation Strategy
of Košice Self-governing
Region**



**The first hydrogen strategy
in Slovakia**



KOSIT



**Faculty
Of Aeronautics**



**Faculty of Materials,
Metallurgy and Recycling**



**Faculty of Mining, Ecology,
Process Control and
Geotechnologies**



**Moravian-Silesian
Region**



Pilot projects using Hydrogen technology – Mobility

Emission-free public transport



Attractive long distance equipment for citizens and tourists



Future hydrogen powered boats





Hydrogen powered bicycles

Electrical motor
BROSE 36V

Motor power
ELECTRICAL ASSISTANCE UP TO 250 W

Top speed
ELECTRICAL ASSISTANCE UP TO 25 KM/H

Fuel cell technology
150 W PEM FUEL CELL

Bridging energy
150 WH LI-ION BATTERIES

H2 storage
2 L COMPRESSED H2 GAS CYLINDER



Use of hydrogen in the Košice Self-governing Region

KOSIT



KSK KOŠICE
SELF-GOVERNING
REGION



Considering the need for decarbonization, the goal of the Self-governing Region is to deploy more than 80 hydrogen buses. Therefore, there is a need to produce green hydrogen at a stable price and the need to build a sustainable hydrogen infrastructure.

Hydrogen consumption in the transport sector:

- City buses: 10 pcs.; 20 pcs (Valaliky Industrial Park- Volvo, Košice, Michalovce)
- Suburban buses: 70 pcs.; 130 pcs (Košice, Michalovce)
- Trucks, last-mile heavy-duty transport, regional supply: 50; 100 pcs
- Forklifts: 20; 80 pcs
- Forklifts: 20; 80 pcs
- Communal equipment (garbage trucks): 2; 6 pcs
- Regional FC trains: 2; 6 pcs
- Cruise ship: 1 small, 1 larger

Total hydrogen consumption in transport is estimated at 1 000 t H₂ by 2027 and between 2 000 and 3 000 t H₂ in 2030

Clean Hydrogen Partnership



**KSR received
Project Development
assistance (PDA)**



**Commitment to join
the European Hydrogen
Valleys S3 partnership**



**Preparation of Hydrogen
Valley Proposal for Large-scale
Hydrogen Valley call**



Cooperation and good partnership as a key of success

	 IDS Východ doprava bez hraníc			
				
				

Thank you for your attention