FCH JU PDA – outcomes event
- City of Zagreb results & next steps

Ivan Ivanković, M.Eng.
Head of Energy & Climate
ivan.ivankovic@zagreb.hr

City Office for Economy, Energy & Environment Protection
Sector for Energy & Climate
Motivation

- **Air quality issues**
  - Diesel vehicles dominance (68% FEC in transport)
  - Transport sector -> highest emission share (36%)
- **Ever more stringent energy & climate targets**
  - ...which will increase over time („Fit for 55” consequences)
  - ...but also, the largest amount of support for zero-emission activities within the EU MFF 21-27 & NextGeneration EU (RRF, InvestEU, ...)
- **Huge changes in the regulatory environment**
  - On all levels (EU, HR & ZG)
    - RED II & CVD implementation in HR in 2021
- **Putting ZET on track for a full fleet renewal**
  - 82 million passengers | 29 million km (2019)
  - 480 buses, average age 11y
    - predominantly EURO III & IV, 76 CNG buses
- **Developing a sustainable fleet renewal plan**
  - Zero emission mandate
FCH JU PDA project

• June ‘20 – June ’21
• The project included a detailed analysis of the current situation and comprehensive preparation for the introduction of hydrogen buses in public urban transport, together with all the necessary supporting infrastructure (hydrogen filling stations and storage facilities, supporting equipment, hydrogen supply, development of a comprehensive business model, etc.)
PDA results

• Review of select outcomes:
  • Analysis of regulatory barriers for HRS deployment and hydrogen application in transport (coordination with Ministries and various technical agencies)
  • Analysis of ZET bus routes in the context of FCH technology application
  • Whole-value chain RFI development & feedback process
  • Techno-economic modelling and best-practices transfer from other Member states
  • Detailed implementation plan with a TCO focus

Select key results:
• **CAPEX: €16m – €23m**
  • min. 20 articulated or ~32 solo buses
  • HRS + bus depot adaptation
• **OPEX: €17m - €30m**
  • Hydrogen (initially 600kg/day) + 10y maintenance
• **Green hydrogen price a key variable**
  • ...and also the biggest current unknown
• „At the end of the beginning” -> implementation is the next step
• Zagreb & ZET as lighthouses for other (large) cities in Croatia
Next steps

- **Successful project implementation requires:**
  - Formal start of the project implementation within the city structures (mayor, assembly) and strong political consensus
  - Securement of (co)financing via the RRF and continuation of excellent cooperation with the relevant Ministries (Energy & Transport)
  - Q2/Q3 ‘22 – start of first public procurements (bus depot preparation activities)
  - Keeping a watchful eye on EU/HR legislation process („Fit for 55”, RED III, ETS in transport, H2 certification, …)

- **This project represents a small (but meaningful) part in the overall, much larger story regarding transport decarbonization of ZET & Zagreb**
What do you think is the best way to get around town and still do our part to protect our environments?

#WorldEnvironmentDay

- Car sharing: 2%
- E-scooters: 6%
- Public transport: 87%
- My super sustainable BMW: 5%

91,871 votes · 3 days 2 hours left

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Thank you!

Ivan Ivanković, M.Eng.
ZG PDA project lead
ivan.ivankovic@zagreb.hr

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