



NUVIA

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Nuclear Technology and Innovati

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Hydrogen Technologies for Energy Storage Applications

• Principle

- Hydrogen production from water using cheap electricity
- Hydrogen storage
- Conversion of hydrogen to electricity

Applications

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- Grid-independent operation
- Load profile management
- Uninterruptible Power Supply (UPS)
- Fuel production for hydrogen vehicles









Pilot Plant for Energy Storage in NUVIA a.s., Czech Republic

Main Parts

• Photovoltaic plant, electrolyzer (electricity \rightarrow hydrogen), pressure tank 10 m3(N), fuel cell hydrogen \rightarrow electricity



TriHyBus – Triple Hybride (Hydrogen) Bus

Operational parameters

- Weigh ~ 14 t
- Maximal speed 65 km/hr
- Consumption 7.5 8 kg H2/100 km
 - Full tank range 250 300 km

• Hannover Fair 2010

- Hermes award nomination
- ◎ Brno International Engineering Fair
 - Gold medal







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Hydrogen filling station – Neratovice

• Parameters

- Compressed gaseous hydrogen
- Filling pressure ~ 400 bar
- Storage 125 kg H2 @ 40 bar
- Filling time ~ 10 min
- Ready for 700 bar upgrade
- Fuelling nozzles TK-16 and TK-25













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