



INTERNATIONAL PARTNERSHIP FOR HYDROGEN AND FUEL CELLS IN THE ECONOMY

IPHE Country Update June 2020: Austria

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Covered Period	To June 2020

1. New Initiatives, Programs, and Policies on Hydrogen and Fuel Cells

Actual (May 2020) relevant strategies, programs and policies are:

- Austrian Government Program (01 2020): Hydrogen and its possible contribution to decarbonisation of the industry and mobility is named prominently within the Austrian government program. Austria has the aim to become an innovation leader. Link: <https://www.bundeskanzleramt.gv.at/dam/jcr:7b9e6755-2115-440c-b2ec-cbf64a931aa8/RegProgramm-lang.pdf>
- Austrian Integrated National Energy and Climate Action Plan (12 2019)
Link: https://ec.europa.eu/energy/sites/ener/files/documents/at_final_necp_main_en.pdf
- #mission2030 – Austrian Climate and Energy Strategy (09 2018)
Link: <https://www.bmlrt.gv.at/service/publikationen/umwelt/mission-2030-austrian-climate-and-energy-strategy.html>
- Austrian National Hydrogen Strategy
Will be released in the 2nd half of 2020
Link: <https://www.bmlrt.gv.at/energie-bergbau/energie/Oesterreichische-Wasserstoffstrategie.html>
- Austrian FTI-Strategy 2020+ (will be released 2nd half 2020)
Link Strategy 2011-2020: <https://www.bundeskanzleramt.gv.at/dam/jcr:1683d201-f973-4405-8b40-39dded2c8be3/FTI-Strategie.pdf>
- FTI-Strategy Future Mobility 2020+ Funding program (will be released 2nd half 2020)
Link 2012-2020 Program: https://www.ffg.at/sites/default/files/programmbroschuere_mobilitaet_der_zukunft.pdf
- Hydrogen Strategy Tyrol (Austrian state)
Link: <https://www.tirol.gv.at/meldungen/meldung/artikel/lebensraum-tirol-holding-praesentiert-wasserstoffstrategie-tirol/>
- Hydrogen Strategy Carinthia (Austrian state)
Link: <https://www.ktn.gv.at/Service/News?nid=29961#>
- A3PS (Austrian PPP) Eco-Mobility 2030^{plus} Roadmap
Technology roadmap for the successful development and introduction of future vehicles and energy carriers. Link: https://www.a3ps.at/sites/default/files/images/downloadfiles/a3ps_roadmap_ecomobility2030plus_2018_web-comp.pdf



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2. Hydrogen and Fuel Cell R&D Update

National funding programs related to hydrogen (among other topics and programs) and fuel cells are:

Mobility of the Future (Ministry for Climate Action, Environment, Energy, Mobility and Technology, [BMK](#))

[KLIEN](#) (Clima and Energy Fund) Programs:

- Zero Emission Mobility Program
- [Energy Research Program](#)

KLIEN in cooperation with BMK – [Energy Flagship Region WIVA P&G](#) (Hydrogen Flagship Region Power&Gas)

[Public procurement promoting innovation](#)

3. Demonstration, Deployments, and Workforce Developments Update

Chosen projects among others:

[WIVA P&G](#) – Diverse Projects (ongoing)

Link: <https://www.wiva.at/v2/projekte/>

[H2Future](#) (finished; world's largest "green" hydrogen pilot facility has successfully commenced operation in 2019 at the voestalpine site in Linz, Austria)

Link: <https://www.voestalpine.com/group/en/media/press-releases/2019-11-11-h2future-worlds-largest-green-hydrogen-pilot-facility-successfully-commences-operation/>

[Green Hydrogen @ Blue Danube](#) (possible project; VERBUND (+ partners) investment project, a decision should be made within 2020)

Link: https://energy.danube-region.eu/wp-content/uploads/sites/6/sites/6/2019/12/Rudolf-Zauner_20191204-IPCEI-Green-Hydrogen@Blue-Danube-Budapest.pdf

[Demo4Grid](#) (ongoing; MPreis + partners; the main aim of this project is providing grid balancing services under real operational and market conditions and the production of Green Hydrogen for industrial energy services and transport.)

Link: <https://www.demo4grid.eu/>

[KEYTECH4EV](#) (finished; AVL List; the project had the overall objective to realize a cost optimized and CO₂ free powertrain based on fuel cell and battery technology.

Link: <http://www.iesta.at/keytech4ev/>

4. Events and Solicitations

- 14 September 2020: Presentation of the RTI Strategy Mobility
- 2nd half 2020: Presentation of the Austrian Hydrogen Strategy

5. Investments: Government and Collaborative Hydrogen and Fuel Cell Funding

Different funding programs, from basic research programs up to demonstration and procurement programs support innovative Hydrogen and Fuel Cell technology.



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Funding dedicated exclusively to Hydrogen and Fuel Cell technology:

- Energy Flagship Region WIVA P&G (diverse projects)
- Possibly Hydrogen IPCEI (Important Project of Common European Interest)

6. Regulations, Codes & Standards, and Safety Update

Nothing new to report.



Summary Country Update June 2020: Austria

Transportation	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fuel Cell Vehicles ¹	No target	41		
FC Bus	No target	0		
Fuel Cell Trucks ²	No target	0		
Forklifts	No target	n. n.		
H ₂ Refueling Stations	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
70 MPa On-Site Production				
70 MPa Delivered		5		
35 MPa On-Site Production				
35 MPa Delivered				

¹ Includes Fuel Cell Electric Vehicles with Range Extenders

² As above



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Stationary	Target Number ³	Current Status	Partnerships, Strategic Approach	Support Mechanism
Small ⁴				
Medium ⁵				
Large ⁶		1		
District Grid ⁷				
Regional Grid ⁸				
Telecom backup				
H ₂ Production	Target ⁹	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fossil Fuels ¹⁰				
Water Electrolysis ¹¹ (PEM, Alkaline, SOEC)				
By-product H ₂				

³ Targets can be units installed and/or total installed capacity in the size range indicated

⁴ <5 kW (e.g., Residential Use)

⁵ 5kW – 400 kW (e.g., Distributed Residential Use)

⁶ 0.3MW – 10 MW (e.g., Industrial Use)

⁷ 1MW – 30 MW (e.g., Grid Stability, Ancillary Services)

⁸ 30MW plus (e.g., Grid Storage and Systems Management)

⁹ Target can be by quantity (Nm³, kg, t) and by percentage of total production; also, reference to efficiency capabilities can be a target

¹⁰ Hydrogen produced by reforming processes

¹¹ Please indicate if targets relate to a specific technology (PEM, Alkaline, SOEC)



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Energy Storage from Renewables	Target ¹²	Current Status	Partnership, Strategic Approach	Support Mechanism
Power to Power ¹³ Capacity				
Power to Gas ¹⁴ Capacity				

¹² Can be expressed in MW of Installed Capacity to use the electricity from renewable energy generation, and Annual MWh of stored energy capacity

¹³ Operator has an obligation to return the electricity stored through the use of hydrogen back to electricity

¹⁴ Operator has the opportunity to provide the stored energy in the form of hydrogen back to the energy system through multiple channels (e.g., merchant product, enriched natural gas, synthetic methane for transportation, heating, electricity)