



IPHE Country Update March 2024: Austria

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Covered Period	Update 10/23 - 03/24

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

EGG (Erneuerbares Gas Gesetz, Renewable Gas Act)

The Renewable Gas Act (EGG) has passed the Council of Ministers on 21 February 2024 and sent to the National Council for further consideration. The law is intended to lay the foundation for the promotion and integration of domestic renewable gas into Austria's energy supply.

WFöG (draft, public consultation)

Federal act on the promotion (funding) of the production of renewable hydrogen of non-biogenic origin.

ÖNIP (Integrierter österreichischer Netzinfrastukturplan, Integrated Austrian Grid Infrastructure Plan). Draft, likely to be finalised in the near future.

The integrated Austrian grid infrastructure plan is an overarching strategic planning instrument and enables a comprehensive overall view of the infrastructure requirements of the future energy system (electricity, methane and hydrogen infrastructure).

2. Hydrogen and Fuel Cell R&D Update

N/A

3. Demonstration, Deployments, and Workforce Developments Update

Zeus

The aim of the project is to set up demonstration plants for closed-loop processes in the hard-to-abate industrial sectors of steel and cement production. A Power-to-X unit helps to stabilize the power grid by absorbing fluctuations of renewable energy sources. The carbon from process-related CO₂ emissions is captured and used together with green hydrogen (renewable hydrogen) for hydrocarbon production. Fields of investigation are facilities for PEM-electrolysis, CO₂ separation as well as CO₂ electrolysis and catalytic methanation. In the final step, the separate facilities will be combined to a circular process.

Project coordinator: K1-Met
Project Duration: 2023 – 2027



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Project Partners: Energieinstitut an der Johannes Kepler Universität Linz, GIG Karasek GmbH, Johannes Kepler Universität, Montanuniversität Leoben, Rohrdorfer Zement – Zementwerk Hatschek GmbH, Technische Universität Wien, Umwelttechnik und technische Biowissenschaften, Verbund AG, voestalpine Stahl GmbH, WIVA P&G – Wasserstoffinitiative Vorzeigeregion Austria Power & Gas

HyGrid²

In HyGrid² the first conventional natural gas pipeline is rededicated for hydrogen purposes. The steel pipeline, which was previously operated with odorized gas, will be permanently supported as demonstration facility. The pipeline will be operated with pure hydrogen and the influence of previous operating modes on the hydrogen quality will be investigated. Additionally it can be tested whether the existing natural gas infrastructure is capable for hydrogen transport. The final result will be an overall guide for pipeline rededication, which covers the technical, economic and legal frameworks as well as further regulatory requirements and organisational processes. This profound source of knowledge will accelerate subsequent rededication processes.

Project Coordinator: Stefan Fink (s.fink@e-netze.at) Energienetze Steiermark
Project Duration: 2023 – 2025

Project Partners: Bilfinger Industrial Services GmbH, DBI Gas- und Umwelttechnik GmbH, HyCentA Research GmbH, Materials Center Leoben Forschung GmbH, HyCentA Research GmbH, Montanuniversität Leoben Lehrstuhl für Allgemeine und Analytische Chemie (AACH), Österreichische Vereinigung für das Gas- und Wasserfach (ÖVGW), WIVA P&G

H2Real

Establishment of a hydrogen valley in eastern Austria with the participation of four federal states. It aims to foster cross-sectoral hydrogen initiatives all over the hydrogen value chain. More efficient demonstration projects as well as scale-up projects on an interregional level are planned to be the result of H2Real. The project partners are grouped into clusters that cover a specific part of the value chain, such as production, infrastructure and logistics.

Project coordinator: Johannes Jungbauer (johannes.jungbauer@wienenergie.at)
Wien Energie GmbH
Project Duration: 2023 – 2026

Project partners: Austrian Institute of Technology, Energieinstitut Johannes Kepler Universität, HyCentA Research GmbH, TU Wien, Austrian Power Grid AG, Burgenland Energie AG, Energienetze Steiermark GmbH, GAS CONNECT GmbH, Hafen Wien GmbH

Electrolysis capacity in operation: 15.2 MW (approx. 150 MW in planning or under construction)



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4. Events and Solicitations

- 3rd International Sustainable Energy Conference 04/10/2024 – 04/11/2024
Messecongress Graz, Austria
- Energiecamp der Holzwelt Murau “Wasserstoff – Power für den Wandel?“
04/25/2024 – 04/26/2024
- Oesterreichs Energie Kongress 2024 09/18/2024 – 09/19/2024
Congress Center Villach

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

No updates

6. Regulations, Codes & Standards, and Safety Update

No updates



Summary Country Update [10 2023]: [Austria]

Transportation	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fuel Cell Vehicles ¹	No target	62	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy	• Subsidy for purchase (Promotion campaign “e-mobility”)
FC Bus	8	8	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy	• Subsidy for purchase (“EBIN” funding programme)
Fuel Cell Trucks ²	No target	1	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy	• Subsidy for purchase (“ENIN” funding programme)
Forklifts	No target	unknown	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy	No support policy
H ₂ Refueling Stations	Target Number	Current Status	Partnerships, Strategic Approach	Support Mechanism
70 MPa On-Site Production	No target	-	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy, Alternative Fuels Infrastructure Regulation (AFIR)	• EBIN and ENIN funding programme (CAPEX)
70 MPa Delivered	No target	6	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy, Alternative Fuels Infrastructure Regulation (AFIR)	• EBIN and ENIN funding programme (CAPEX)
35 MPa On-Site Production	No target	-	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy, Alternative Fuels Infrastructure Regulation (AFIR)	• EBIN and ENIN funding programme (CAPEX)

¹ Includes Fuel Cell Electric Vehicles with Range Extenders

² As above



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35 MPa Delivered	No target	2	Austria's 2030 Mobility Master Plan, Austria's Hydrogen Strategy, Alternative Fuels Infrastructure Regulation (AFIR)	• EBIN and ENIN funding programme (CAPEX)
Stationary	Target Number ³	Current Status	Partnerships, Strategic Approach	Support Mechanism
Small ⁴			Austria's Hydrogen Strategy	
Medium ⁵		-	Austria's Hydrogen Strategy	
Large ⁶		-	Austria's Hydrogen Strategy	
District Grid ⁷		-	Austria's Hydrogen Strategy	
Regional Grid ⁸		-	Austria's Hydrogen Strategy	
Telecom backup		-	Austria's Hydrogen Strategy	
H ₂ Production	Target ⁹	Current Status	Partnerships, Strategic Approach	Support Mechanism
Fossil Fuels ¹⁰		0		
Water Electrolysis ¹¹	4 TWh		Austria's Hydrogen Strategy	

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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(PEM, Alkaline, SOEC)				
By-product H ₂				
Energy Storage from Renewables	Target¹²	Current Status	Partnership, Strategic Approach	Support Mechanism
Installed Electrolyser Capacity	1 GW (2030)	15,2 MW (see also Annex)	Austria's Hydrogen Strategy	Renewable Expansion Act (EAG)
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)



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Annex

List of installed electrolysis capacity (by end of 2023)

Underground Sun Conversion – USC | Pilsbach (OÖ) | 0,5 MW

H2FUTURE | Linz (OÖ) | 6 MW

HotFlex | Mellach (Stmk.) | 0,15 MW

Renewable Gasfield | Gabersdorf (Stmk.) | 1 MW

Fronius SolHub | Herzogenburg (NÖ) | 0,3 MW

DEMO4GRID - Demonstration for Grid Services | Völs (T) | 3,2 MW

Underground Sun Storage 2030 - USS 2030 | Gampern (OÖ) | 2 MW

HySnow / HyFleet | Hinterstoder (OÖ) | 10 kW

H2Pioneer | Villach (Ktn.) | 2 MW

List of planned/ under construction electrolysis capacity (by end of 2023)

Power2X | Kufstein (T) | 5 MW

UpHy II | Schwechat (NÖ) | 10 MW

LAT Nitrogen / Verbund | Linz (OÖ) | 60 MW

Wien Energie | Simmering (W) | 3 MW

Plansee | Reutte (T) | 4 MW

IFE - Innovation Flüssige Energie | Graz (Stmk.) | 1 MW

PanHy – Pannonia Green Hydrogen | Zurndorf (Bgld.) | 60 MW
