

**HORIZON
2020**

Advanced direct biogas fuel processor for robust and cost-effective decentralised hydrogen production

Fact Sheet

Project Information

BIOROBURplus

Grant agreement ID: 736272

[Project website](#) 

DOI

[10.3030/736272](https://doi.org/10.3030/736272) 

Project closed

EC signature date

15 December 2016

Start date

1 January 2017

End date

30 June 2021

Funded under

SOCIETAL CHALLENGES - Secure, clean and efficient energy

Total cost

€ 3 813 536,24

EU contribution

€ 2 996 248,74

Coordinated by

POLITECNICO DI TORINO



Project description

Cost-effective, decentralised production of hydrogen from biogas

Hydrogen (H₂) production from low-carbon waste sources can help decarbonise the energy system sustainably. Biogas generated in landfills and by the anaerobic digestion of organic wastes, including wastewater-treatment sludge, is a promising feedstock. The EU-funded BIOROBURplus project plans to advance the technological readiness level of a direct biogas oxidative steam reformer developed

in an earlier project for the sustainable, decentralised production of very pure H₂ from biogas with no preliminary removal of CO₂. The aim of the team is very high energy efficiency of biogas conversion into H₂ with: technical innovation leading to increased internal heat recovery; both pressure and low temperature heat recovery; and use of process off-gas to provide the heat for the previous two.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [environmental biotechnology](#) > [bioremediation](#) > **[bioreactors](#)**

[engineering and technology](#) > [materials engineering](#) > **[ceramics](#)**

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > [renewable energy](#) > **[hydrogen energy](#)**

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > **[energy conversion](#)**



Keywords

[biogas](#)

[oxidative steam reforming](#)

[PTSA](#)

[low enthalpy gas burner](#)

[coking](#)

[distributed generation](#)

Programme(s)

[H2020-EU.3.3. - SOCIETAL CHALLENGES - Secure, clean and efficient energy](#)

MAIN PROGRAMME

[H2020-EU.3.3.8.2. - Increase the energy efficiency of production of hydrogen mainly from water electrolysis and renewable sources while reducing operating and capital costs, so that the combined system of the hydrogen production and the conversion using the fuel cell system can compete with the alternatives for electricity production available on the market](#)

Topic(s)

[FCH-02-2-2016 - Development of compact reformers for distributed bio-hydrogen production](#)

Call for proposal

[H2020-JTI-FCH-2016-1](#)

[See other projects for this call](#)

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



POLITECNICO DI TORINO

Net EU contribution

€ 241 900,00

Total cost

€ 241 900,00

Address

CORSO DUCA DEGLI ABRUZZI 24

10129 Torino

 **Italy** 

Region

Nord-Ovest > Piemonte > Torino

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (11)



KARLSRUHER INSTITUT FUER TECHNOLOGIE

 **Germany**

Net EU contribution

€ 432 500,00

Address

KAISERSTRASSE 12
76131 Karlsruhe 

Region

Baden-Württemberg > Karlsruhe > Karlsruhe, Stadtkreis

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 432 500,00



SCUOLA UNIVERSITARIA PROFESSIONALE DELLA SVIZZERA ITALIANA

 Switzerland

Net EU contribution

€ 0,00

Address

STABILE LE GERRE
6928 Manno 

Region

Schweiz/Suisse/Svizzera > Ticino > Ticino

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 309 337,50



CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

 France

Net EU contribution

€ 215 000,00

Address

RUE MICHEL ANGE 3
75794 Paris 

Region

Ile-de-France > Ile-de-France > Hauts-de-Seine

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 215 000,00



ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS

 Greece

Net EU contribution

€ 177 225,00

Address

CHARILAOU THERMI ROAD 6 KM
57001 Thermi Thessaloniki 

Region

Βόρεια Ελλάδα > Κεντρική Μακεδονία > Θεσσαλονίκη

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 177 225,00



DBI - GASTECHNOLOGISCHES INSTITUT GGMBH FREIBERG

 Germany

Net EU contribution

€ 523 971,25

Address

HALSBRUCKER STARSSE 34
09599 Freiberg 

SME 

Yes

Region

Sachsen > Chemnitz > Mittelsachsen

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 523 971,25



ENGICER SA

 Switzerland

Net EU contribution

€ 0,00

Address

VIALE PEREDA 22
6828 Balerna 

SME 

Yes

Region

Schweiz/Suisse/Svizzera > Ticino > Ticino

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost
€ 507 950,00



HYSYTECH SRL

 Italy

Net EU contribution

€ 843 750,00

Address

VIA I MAGGIO 5

10043 Orbassano (TO) 

SME 

Yes

Region

Nord-Ovest > Piemonte > Torino

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 843 750,00



UAB MODERNIOS E-TECHNOLOGIJOS

 Lithuania

Net EU contribution

€ 130 530,28

Address

VISMALIUKU G 34

10423 Vilnius 

SME 

Yes

Region

Lietuva > Sostinės regionas > Vilniaus apskritis

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 130 530,28



ACEA PINEROLESE INDUSTRIALE SPA

 Italy

Net EU contribution

€ 159 082,21

Address

VIA VIGONE 42

10064 Pinerolo 

Region

Nord-Ovest > Piemonte > Torino

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

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[HORIZON collaboration network](#) 

Total cost

€ 221 582,21



THIRD-PARTY 

PARCO SCIENTIFICO TECNOLOGICO PER L'AMBIENTE ENVIRONMENT PARK TORINO SPA

 Italy

Net EU contribution

€ 62 500,00

Address

GALLERIA SAN FEDERICO 54 CO FINPIEMONTE
10100 Torino 

Region

Nord-Ovest > Piemonte > Torino

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 62 500,00



JOHNSON MATTHEY PLC

 United Kingdom

Net EU contribution

€ 209 790,00

Address

**2 GRESHAM STREET, 5TH FLOOR
EC2V 7AD LONDON** 

Region

London > Inner London — West > Camden and City of London

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 209 790,00

Last update: 28 July 2023

Permalink: <https://cordis.europa.eu/project/id/736272>

