



Thermochemical fluids in greenhouse farming

Fact Sheet

Project Information

TheGreefa

Grant agreement ID: 101000801

[Project website](#) 

DOI

[10.3030/101000801](https://doi.org/10.3030/101000801) 

Project closed

EC signature date

18 September 2020

Start date

1 October 2020

End date

31 May 2024

Funded under

SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy

Total cost

€ 4 651 865,00

EU contribution

€ 4 029 238,13

Coordinated by

ZÜRCHER HOCHSCHULE FÜR
ANGEWANDTE
WISSENSCHAFTEN



Switzerland

Project description

Improving energy efficiency in the greenhouse

Greenhouse farming and energy intensive water recovery systems need new innovative applications to reduce their energy consumption. The EU-funded TheGreefa project proposes a new technology for heating, cooling, air humidity control and water recovery in greenhouses as well as for drying of agricultural goods using thermochemical conversion principles (desiccant fluids). These fluids absorb water vapour from air, converting the latent heat into sensible heat. The driving force required for the processes is low-temperature heat, e.g. solar heat or residual heat.

The fluids store and transport thermochemical potential without any degeneration: the technology provides loss-free storage and transport. The project will further develop and demonstrate the new technology by testing it on different European climate conditions.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [chemical engineering](#) > [separation technologies](#) > **[desalination](#)**
[agricultural sciences](#) > [agriculture, forestry, and fisheries](#) > [agriculture](#) > **[horticulture](#)**



Keywords

[sustainable greenhouse farming](#)

[temperature and humidity control](#)

[water recovery](#)

[absorption](#)

[desiccants](#)

[thermochemical fluid](#)

[renewable energy](#)

[long-term storage](#)

Programme(s)

[H2020-EU.3.2. - SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy](#)

MAIN PROGRAMME

[H2020-EU.3.2.1.1. - Increasing production efficiency and coping with climate change, while ensuring sustainability and resilience](#)

[H2020-EU.3.2.1.2. - Providing ecosystems services and public goods](#)

Topic(s)

[LC-FNR-06-2020 - Defossilising agriculture – solutions and pathways for fossil-energy-free farming](#)

Call for proposal

[H2020-FNR-2020](#)

[See other projects for this call](#)

Sub call

H2020-FNR-2020-1

Funding Scheme

[IA - Innovation action](#)

Coordinator



ZURCHER HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN

Net EU contribution

€ 1 242 593,75

Total cost

€ 1 242 593,75

Address

GERTRUDSTRASSE 15

8401 Winterthur

 **Switzerland** 

Region

Schweiz/Suisse/Svizzera > Zürich > Zürich

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Participants (11)



WATERGY GMBH

 **Germany**

Net EU contribution

€ 257 223,75

Address

FELCHOW SIEDLERWEG 19
16303 SCHWEDT ODER 

SME 

Yes

Region

Brandenburg > Brandenburg > Uckermark

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 367 462,50



TECHNISCHE UNIVERSITAT BERLIN

 Germany

Net EU contribution

€ 490 477,50

Address

STRASSE DES 17 JUNI 135
10623 Berlin 

Region

Berlin > Berlin > Berlin

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 490 477,50



INSTITUT NATIONAL DE RECHERCHES EN GENIE RURAL, EAUX ET FORETS

 Tunisia

Net EU contribution

€ 156 625,00

Address

Rue Hédi El Karray

2080 Ariana 

Activity type

Research Organisations

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 156 625,00



SFERA SOCIETA' AGRICOLA SRL

 Italy

Net EU contribution

€ 132 562,50

Address

CORSO INDIPENDENZA 5

20129 Milano 

SME 

Yes

Region

Nord-Ovest > Lombardia > Milano

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

€ 189 375,00



DOCLIFE SRL

 Italy

Net EU contribution

€ 48 037,50

Address

VIA GIUNTINI 25/6

56023 CASCINA 

SME 

Yes

Region

Centro (IT) > Toscana > Pisa

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 68 625,00



MEYER ORCHIDEEN AG

 Switzerland

Net EU contribution

€ 113 196,13

Address

ROSWIS 12-14

8602 Wangen 

Region

Schweiz/Suisse/Svizzera > Zürich > Zürich

Activity type

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

Links

[Contact the organisation](#) 

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

Total cost

€ 161 708,75



STRANE INNOVATION

 France

Net EU contribution

€ 416 500,00

Address

2 ROUTE DE LA NOUE

91190 Gif Sur Yvette 

SME 

Yes

Region

Ile-de-France > Ile-de-France > Essonne

Activity type

Other

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 595 000,00



IZNAB SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA

 Poland

Net EU contribution

€ 218 837,00

Address

UL. PORY 78

02 757 Warszawa 

SME 

Yes

Region

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

€ 312 625,00



UNIVERSIDAD DE ALMERIA

Spain

Net EU contribution

€ 206 475,00

Address

CARRETERA SACRAMENTO CANADA

04120 Almeria

Region

Sur > Andalucía > Almería

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#)

Total cost

€ 206 475,00



MORAGUES AND SCADE ABOGADOS SA

Spain

Net EU contribution

€ 266 437,50

Address

PASEO CAMPO VOLANTIN 20 3

48007 Bilbao 

Region

Noreste > País Vasco > Bizkaia

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 380 625,00



GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER

 Germany

Net EU contribution

€ 480 272,50

Address

WELFENGARTEN 1

30167 Hannover 

Region

Niedersachsen > Hannover > Region Hannover

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 480 272,50

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