



RoRePower.com

Co-funded by the European Commission within the H2020 Programme, the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) Grant Agreement no: 824953, 2019-01-01 - 2023-12-31



# Deliverable D6.4 Public Open Info: Success stories, advantages, future perspectives, general contact info and printed or virtual dissemination materials

Revision .....1.2  
Preparation date .....2023-12-31 (M60)  
Due date.....2021-08-31 (M36)  
Lead contractor .....EFCF

## Authors:

Michael Spirig (EFCF) and all partners of the consortium

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Dissemination level		
PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	

Deliverable administration							
No & name	<b>D6.4 Public Open Info: Success stories, advantages, future perspectives, general contact info and printed or virtual dissemination materials</b>						
Status	Final	<b>Due</b>	M36	<b>Date</b>			
Author(s)	Michael Spirig (EFCF) and all partners of the consortium						
Description of the related task and the deliverable. Extract from DoA	<p><b>WT6.4: Communication and Dissemination, M3-M60</b> (EFCF, All)  The dissemination is focused on four main target groups: 1. Oil and gas companies (N-America, EU, Asia, MEA,RUS) 2. Telecom sector in Asia 3. New customer groups identified during the project 4. General public and the FCH professional world. There are reams of dissemination channels, which can be used to spread the achievements and added values of the FCH products. One additional tool for dissemination and communication is the visits of project partners at various conferences and exhibitions outside of the FCH community. <b>Effective ways to contact and attract target groups with specific information include: Mailings, emailing's, technical journals &amp; multiplier channels, client info actions (reception, workshop, ...) at leading events of the target groups (1+2), distribution of printed material at specific exhibitions, fairs and conferences, website, social media, press releases, presentations, papers, posters, videos, etc. as described in D6.4.</b> Particular emphasis is placed on: The set-up of a project website e.g. <a href="http://www.RoRePower.com">www.RoRePower.com</a>; The organization of a first common "Client info action on SOFC technology in off-grid power supply" at world leading reference events in the relevant sectors (MS6, M18), and a similar action in 2021 and a final "Industry Partner Event on SOFC technology in off-grid power supply" at the EFCF 2022 (D6.5, M42). More details are given in Section 5: Communication channels and relevance of the Draft 'plan for the dissemination and exploitation of the project's results' as well as on the section on communication. A communication, dissemination and exploitation plan will be updated in M6 and M23 of the project.</p>						
Planned resources PM of WP6	VTT	Sunfire	SP	NE	EFCF	3E	Total
	2,0	3,0	1,0	1,0	5,7	0,5	13,2
Comments							
V	Date	Authors	Description				
1.0	2022-09-22	EFCF	Draft for review				
2.0	2022-10-30	EFCF & all partners	Final version, revised in accordance with review & comments at PMC meeting 2022-10-06				
3.0	2023-12-31	EFCF & all partners	Last Final version, revised in accordance to revision requests and final cleaning actions				

# Table of contents

<b>1. Introduction .....</b>	<b>4</b>
<b>2. Public Open Info.....</b>	<b>5</b>
2.1 Website.....	5
2.2 Social media .....	6
2.2.1 Twitter .....	6
2.2.2 Linkdin.....	8
2.3 Videos.....	9
2.4 Posters.....	10
2.5 Papers - Presentations .....	10
2.6 Webinars.....	11
2.7 Stickers .....	11
2.8 Factsheets .....	12
2.9 Press releases - News Tickers.....	12
2.10 Participation in exhibitions, fairs & conferences .....	12
2.11 Client info actions (reception, workshop, ...) at leading events of target groups ..	14
2.12 Onsite visit - Virtual tours .....	14
2.13 Customer meeting and/or training, onsite info event .....	15
2.14 Others .....	16
<b>3. Success stories &amp; advantages as the base for further communication &amp; dissemination activities .....</b>	<b>17</b>
3.1 Success stories.....	17
3.2 The main advantages of the RoRePower-Systems:.....	18
3.3 Main outcomes for communication & dissemination.....	19
<b>4. Next Steps - Future Perspectives.....</b>	<b>20</b>

# 1. INTRODUCTION

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The goal of the RoRePower project is to develop and demonstrate solid oxide fuel cell systems for continuous off-grid power generation in remote regions with harsh climate conditions (from -40 to +50°C). The achievable competitiveness and profitability of the European FC solution will be able to replace conventional products as the new standard.

Furthermore, three European integrated stack and system manufacturers work together for the same market, sharing access efforts and covering complementary power levels. This sends a convincing message to the market, showing clients broadness and stability of the future market cultivation.

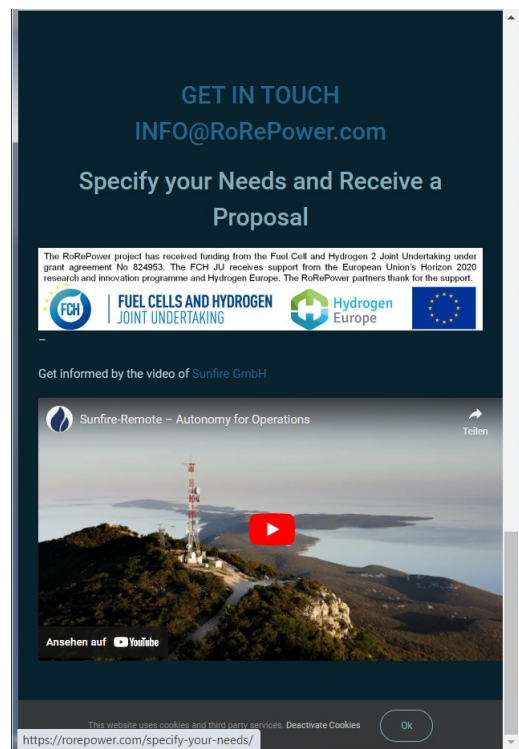
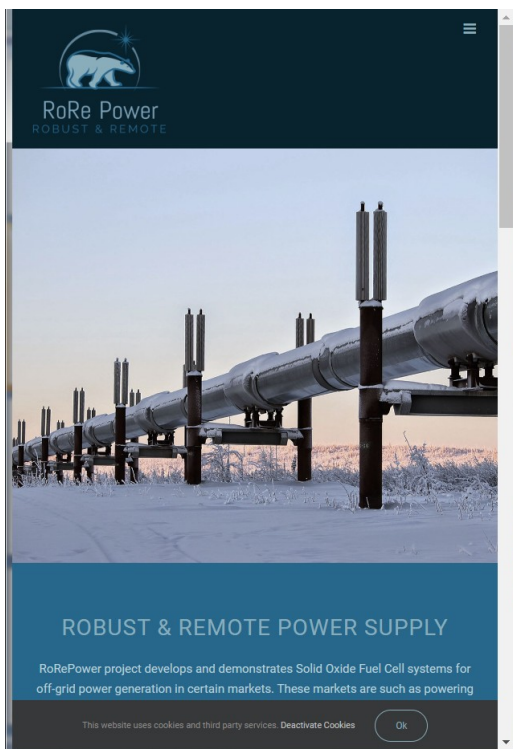
However, in order to be perceived on the market and to achieve effective exploitation, the existence of new competitive products, their advantages and the market-building cooperation of manufacturers must also be communicated. To this end, the partners in the RoRePower project have used and will continue to use various channels and means. The following sections provide an overview.

## 2. PUBLIC OPEN INFO

### 2.1 Website

RoRePower has since the beginning an own website [www.RoRePower.com](http://www.RoRePower.com), were beside the objectives, project and contact info, a specific request form, also news (success stories) and progress info are published.

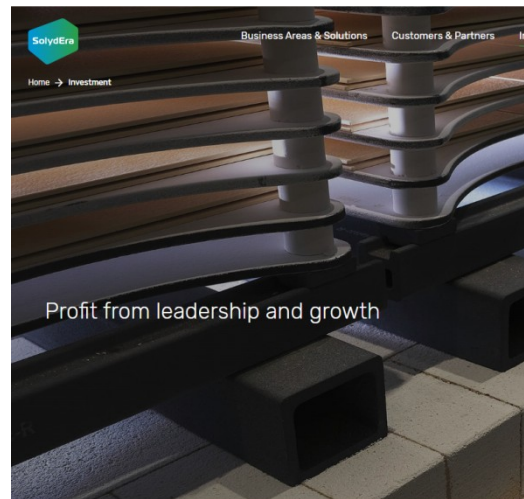
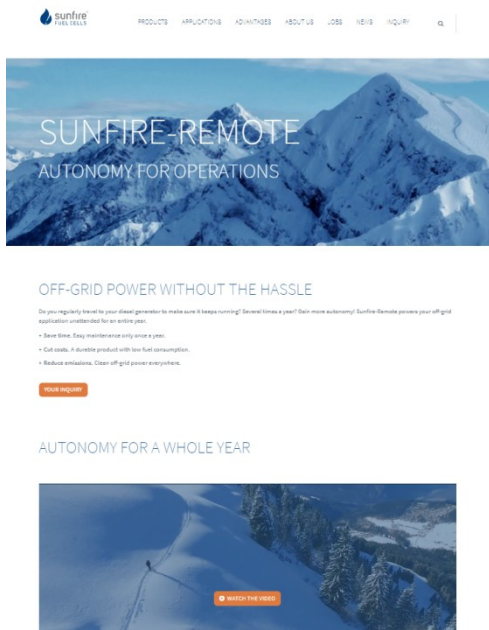
An ongoing regular update of [www.RoRePower.com](http://www.RoRePower.com) is planned for the final phase of the project.



Also very important for the D&C&E are the websites of the partners  
i.e. of the stack and system manufacturers.

<https://remote.sunfire.de/en/>  
**Sunfire GmbH &  
Sunfire Fuel Cells GmbH**

[www.solydera.com](http://www.solydera.com)  
**SOLIDpower SPA,  
renamed in SolydEra SPA**



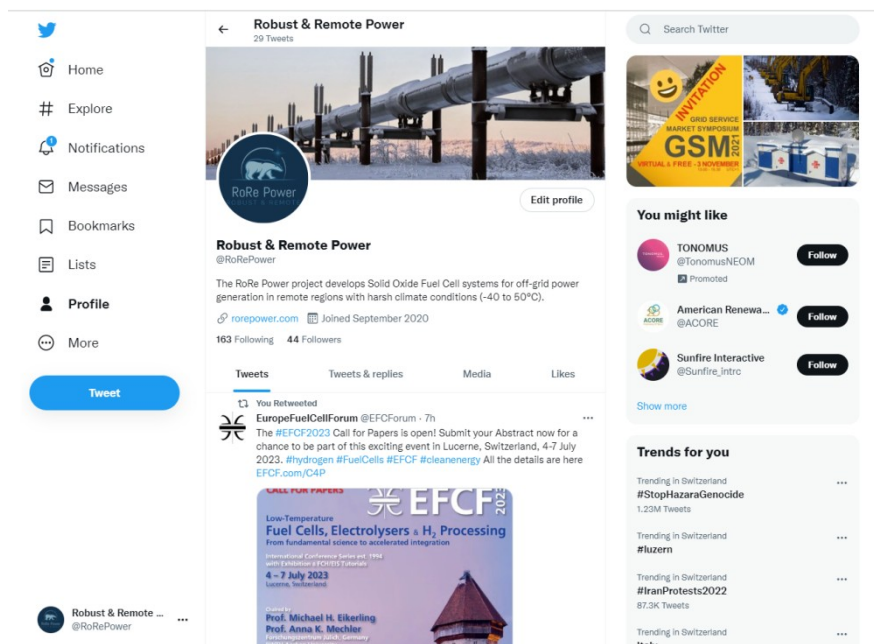
Modern efficient and climate-friendly energy technology has a rapidly growing high-volume market.

SolydEra is exactly in the middle of this development as a technology provider as

## 2.2 Social media

### 2.2.1 Twitter

<https://twitter.com/RoRePower>



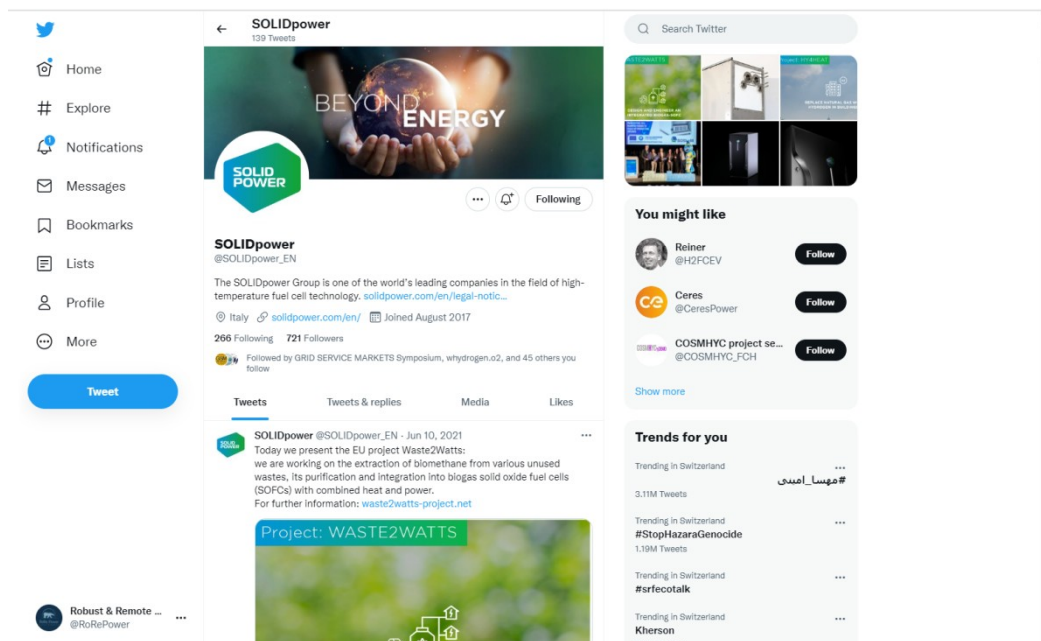


**And the accounts of the OEM partners:**

[https://twitter.com/sunfire\\_dresden](https://twitter.com/sunfire_dresden)



[https://twitter.com/SOLIDpower\\_EN](https://twitter.com/SOLIDpower_EN)



and partner VTT <https://twitter.com/VTTFinland>

## 2.2.2 LinkedIn

[www.linkedin.com/in/robust-and-remote-power-8039881b8](https://www.linkedin.com/in/robust-and-remote-power-8039881b8)

The screenshot shows a LinkedIn profile for 'Robust and Remote Power'. The profile picture is a circular logo with a blue background and a white silhouette of a power plant. The banner image shows industrial power infrastructure in a snowy, mountainous landscape. The profile name is 'Robust and Remote Power' with a small icon to the right. The bio states: 'The RoRe Power project develops Solid Oxide Fuel Cell systems for off-grid power generation in remote regions with harsh climate conditions (-40 to 50°C). Adligenswil, Lucerne, Switzerland · Contact info'. It shows '114 connections' and three buttons: 'Open to', 'Add profile section', and 'More'. Below these are two promotional cards: 'Show recruiters you're open to work' and 'Share that you're hiring and attract qualified candidates'. The 'Suggested for you' section is set to 'Intermediate' and 'Private to you'. On the right sidebar, there are options to 'Edit public profile & URL' and 'Add profile in another language'. Below that is a 'See who's hiring on LinkedIn.' banner. The 'People also viewed' section lists three profiles: Rami Elshinawy (Project Engineer in Power 2 Gas), Daniel JAKOB (Power2X - Power2Gas), and Nikul Maniya (Research Assistant at Cell Systems). A 'Messaging' button is visible at the bottom right of the sidebar.



## And the accounts of the OEM partners:

[www.linkedin.com/company/sunfire-fuelcells-gmbh](http://www.linkedin.com/company/sunfire-fuelcells-gmbh)

**Sunfire Fuel Cells GmbH**  
AUTONOMY EVERYWHERE  
Appliances, Electrical, and Electronics Manufacturing - Neubrandenburg - 796 followers  
Matthias & 1 other connection work here - 6 employees

Following Visit website More

Home About Products **Posts** Jobs People Videos

All Images Videos Articles Documents Ads

Sunfire Fuel Cells GmbH  
796 followers

Sunfire Fuel Cells GmbH  
796 followers  
13h • Edited •

E-bike event planned on an off-grid route and no charging station in sight?  
Recharge clean energy anywhere in the world with the Sunfire-Remote mobile hybrid charging station. ...see more

Promoted

Communicate Effectively  
Grammarly helps you write better in Gmail, Outlook, and Word. Install now!

Steuern  
5-tägiges Seminar zu Unternehmensverkauf und Steuern

Recht unternehmerisch  
Legal Outsourcing und Secondments - Die besten Kanzleien und ihre Experten

Pages people also viewed

Sunfire GmbH  
Renewables & Environment  
19,124 followers  
19 connections work here  
Following

Petra Power  
Renewables & Environment  
54 followers  
1 connection follows this page  
Following Messaging

[www.linkedin.com/company/sunfire-gmbh](http://www.linkedin.com/company/sunfire-gmbh)

**Sunfire GmbH**  
A World Without Fossil Fuels  
Renewable Energy Semiconductor Manufacturing - Dresden - 19,124 followers  
Christian & 18 other connections work here - 177 employees

Following Learn more More

Home About **Posts** Jobs People Videos

All Images Videos Articles Documents Ads

Sunfire GmbH  
19,124 followers

Sunfire GmbH  
19,124 followers  
4d •

Quality? Check! We are currently working on a 10 MW pressurized alkaline electrolyzer for the German energy company RWE. To ensure that the plant is built to the highest quality standards, our partners recently visited our product ...see more

See who's hiring on LinkedIn.

Affiliated pages

Sunfire DE  
Renewables & Environment  
Showcase page  
Following

Sunfire-Home  
Renewables & Environment  
Showcase page  
Following

Pages people also viewed

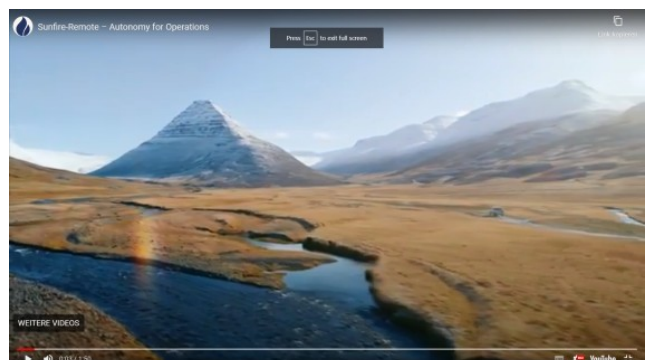
Messaging

## 2.3 Videos

Sunfire has published on YouTube i.e. on his website a success story video about "off-grid power without the hassle to get autonomy for a whole year"

<https://youtu.be/0bz-4w4s-4c>

The video is also available on [www.RoRePower.com](http://www.RoRePower.com)



## 2.4 Posters

Advertisement poster for trade shows

Technical content poster for conferences  
e.g. presented at EFCF 2022

**ROBUST & REMOTE POWER SUPPLY**

www.RoRePower.com

The project develops & demonstrates Solid Oxide Fuel Cell systems (high efficiency, low maintenance) for off-grid power generation in remote regions with very harsh climate conditions from -40 to +50°C e.g. for the very difficult to access energy supply of the gas & oil infrastructure and the continuous power supplies of telecommunication towers in outlying areas or in emerging countries for e.g. telecom base stations or microwave transceivers.

**Interested in OFF-GRID POWER WITHOUT THE HASSLE**

**OEMs**

- sunfire** Sunfire Fuel Cells GmbH
  - Booth B6.470F
  - Matthias Boltze
  - +49 351 517 33 10
  - Matthias.Boltze@Sunfire.de
- sunfire** Sunfire GmbH
  - Booth B6.272
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  - Daniele.Penchini@SolidPower.com
- SOLID POWER**
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  - M.Spring@EFCF.com

**R&D, innovation & network partners**

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  - Jari.Kiviahho@VTT.fi
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  - M.Spring@EFCF.com

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 824953. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme.

**sunfire** Sunfire GmbH

**SOLID POWER**

**VTT**

**3E Energy Oy**

**EFCF ELECTROLYSER FUEL CELL FORUM**

**Robust Remote Power Supply**

Authors: Jari Kiviahho (1), Jyrki Mikkola (1), Markus Münch (2), Daniele Penchini (3), Matthias Boltze (4), Michael Spring (5), Mari Tuomaala (6)

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(2) Sunfire GmbH  
(3) SolidPower SpA  
(4) Sunfire Fuel Cells GmbH  
(5) European Fuel Cell Forum AG  
(6) 3E Energy Oy

**Introduction**

Fuel cells can play a major role in the energy market as a clean, highly efficient and reliable way to produce energy in decentralized and off-grid power generation. Critical applications like oil, gas or safety infrastructure are main markets and thus, main requirements for the systems are in addition, units are low maintenance, long service life of components, capability of remote monitoring and reliable operation as well as compatibility harsh climate conditions both in cold and hot regions.

The RoRePower project aims at strengthening the European SOFC industry's world-leading position for SOFC technology and exploit it in the robust remote power segment. RoRePower project has and will impact the market in many ways:

- The critical aspects related to the remote operation and extreme operating temperature have been considered.
- For strengthening the European value chain, industrial partners agreed on shared BOP components and performed an intensive market research for specific parts as well as shared balance-of-plant (BoP) components for the extended climate requirements.
- RoRePower project has installed over 20 demonstration units so far and will install altogether 45 units during the project.

**System development and production**

Common needs for fuel cell suppliers in the BoP area were identified and addressed in order to reach the ambitious requirements for the units. Components were selected based on a thorough market research and focus was on components for low temperature operations, even at -40°C. Project also identified cold start-up device solutions for propane and natural gas.

**Demonstrations**

So far, RoRePower project has installed over 20 demo units and further 13 units will be installed before end of the year 2022. Data from the demo sites will be gathered and analyzed thoroughly. Analysis of the data from the demo units will include e.g. overall performance level of the systems, degradation of the units and the comparison of performances between systems in different conditions and operating profiles. Thus, robustness of the demonstration units will be evaluated. Intervals for proactive maintenance together with the performance level and degradation of the systems gives a basis for this analysis.

**Conclusion**

- Robust SOFC systems for harsh climate conditions have been developed, manufactured and are being demonstrated.
- Over 20 units have been already installed and altogether 45 units will be demonstrated.
- Efficiency of SOFC technology in the off-grid power generation in oil/gas infrastructure and telecommunication sites will be analyzed.

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under Grant Agreement No 824953. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation program, Hydrogen Europe and Hydrogen Research.

## 2.5 Papers - Presentations

Technical overview paper presented at the EFCF 2022

**EFCF 2022 19<sup>th</sup> European SOFC & SOE Forum** | 5 - 8 July 2022, Lucerne Switzerland

**A1607**

**Robust remote power supply (RoRePower)**

Jari Kiviahho (1), Jyrki Mikkola (1), Markus Münch (2), Daniele Penchini (3) Matthias Boltze (4), Michael Spring (5), Mari Tuomaala (6)

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(2) Sunfire GmbH, (3) SolidPower SpA  
(4) Sunfire Fuel Cells GmbH, (5) European Fuel Cell Forum AG (6) 3E Energy Oy  
Tel.: +353-353116778  
[jari.kiviahho@vtt.fi](mailto:jari.kiviahho@vtt.fi)

**Abstract**

The FCH JU project "RoRePower" brings together the three leading European SOFC technology companies as well as research centers and networking institutions to collaborate. This collaboration focuses on the development, manufacturing, and validation of a robust SOFC system and its key components for operation in exceptionally harsh environmental conditions (from -40 to +50°C, inaccessible for months and in remote locations). For the first time, fuel cell manufacturers Sunfire, SolidPower and Sunfire Fuel Cells GmbH are jointly developing the core elements of the SOFC value chain, relevantly strengthening European competitive advantages.

The development is based on the products and services of industry partners and their interest to widely deploy and market their products and services and consolidate an efficient value chain. Therefore, in addition to the unique technical advances to achieve safety, reliability, and resilience, the manufacturing concepts will be brought to a level that enables mass production. The economic project goal is to achieve a 30-40% reduction in BOP component and system costs and, taking into account the total cost of ownership, to replace conventional products as the new standard.

The plan is to install at least 45 remote fuel cell systems in the Telecommunication and the Oil & Gas business areas. Over 20 units are already operating successfully at end-user sites under very climatic conditions. This paper provides a status report on the progress, results and experiences from this important EU project driving the commercialization of SOFC technology.

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 824953. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme.



## 2.6 Webinars

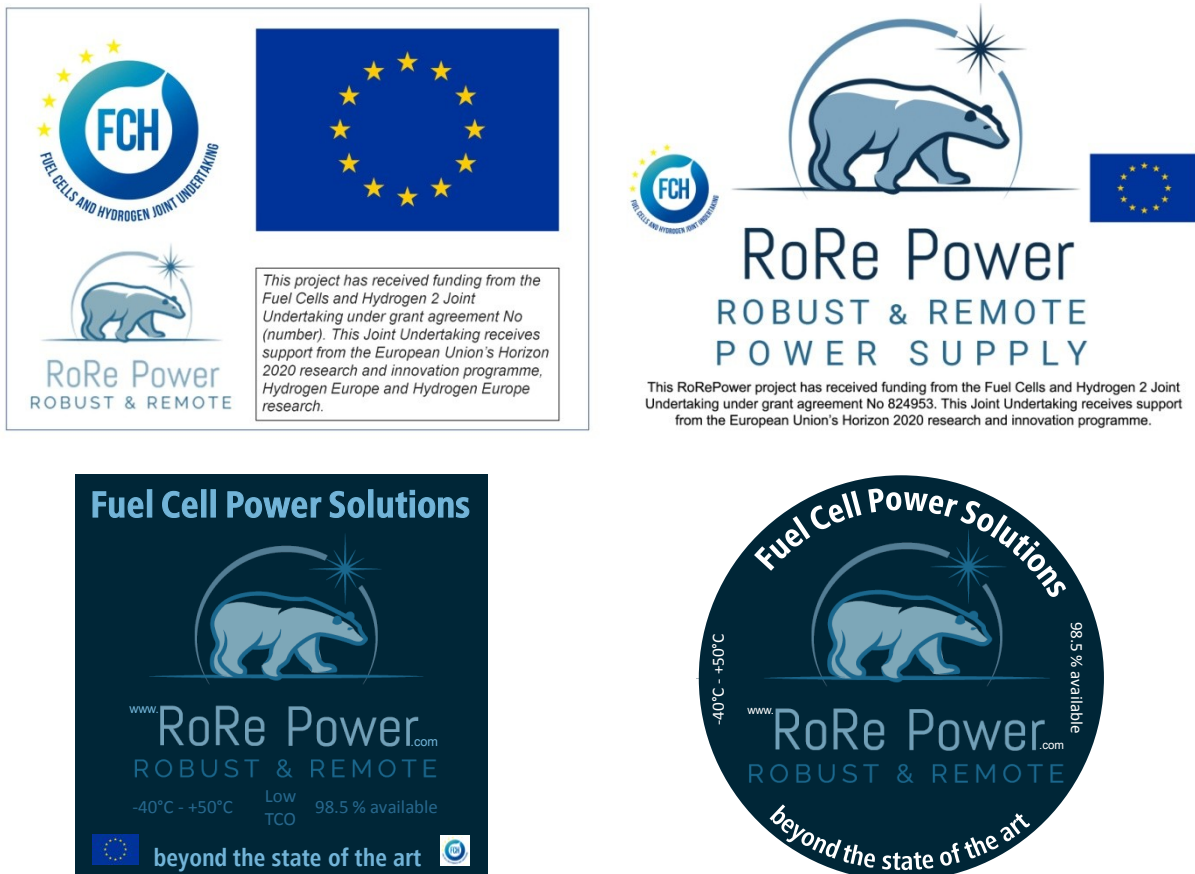
Sunfire organized a series of webinars on the topics of : "Benefits: Cost, time & emission", "Surprising autonomy", "Integration of Fuel Cell Generators...":



Date	Activity	Location
05/2022	Sunfire-Remote Webinars	virtual

## 2.7 Stickers

Stickers, which can be used to mark e.g. exhibition objects and products



## 2.8 Factsheets

Sunfire published so far one factsheet about the SUNFIRE-REMOTE 400.



AUTONOMY  
EVERYWHERE  
SUNFIRE-FUEL-CELLS.DE



### SUNFIRE-REMOTE 400



#### PRODUCT

Sunfire-Remote 400 provides off-grid power to stationary or semi-mobile applications. An integrated IP interface for telemonitoring and long maintenance intervals enable unattended operation for more than a year. This makes Sunfire-Remote 400 ideal for use in secluded areas. Reliably, the compact unit operates at a temperature range from -20 to +55°C (-40 °C optionally).

#### APPLICATIONS

- Oil & Gas: SCADA and communication systems, cathodic corrosion protection, remote-controlled gate valves at pipelines, etc.
- Security & Safety: Video surveillance systems, access control, traffic control, etc.
- Telecommunications: microwave radio repeater stations, private LTE / 5G tower, back-up power in extreme weather areas, etc.
- Further Applications: Environmental monitoring, meteorology technology, drones, etc.

#### SELECTED PROJECTS

- Germany, Deutsche Bahn AG: In various locations, Sunfire-Remote 400 powers traffic lights and barriers at level crossings during wintertime.
- USA, leading telecom network operator: Combined with photovoltaic systems, Sunfire-Remote 400 ensures the operation of several microwave radio stations in Alaska.
- Tibet, Furtenbach Adventures GmbH: For a whole season, Sunfire-Remote 400 supplied the Mount Everest Base Camp with energy. For this purpose, two units were adapted to the high-altitude air.

#### CORE ADVANTAGES

- **Autonomous**  
Low maintenance enables unattended operation > 1 year
- **Durable**  
Longest fuel cell lifetime in the market
- **Robust**  
Reliable primary power supply even under harsh conditions
- **Easy**  
Simple installation and operation
- **Clean**  
Environmentally friendly thanks to low emissions and low noise

### SUNFIRE-REMOTE 400 – TECHNICAL DATA



SUNFIRE-REMOTE 400	
Fuel	Propane / Natural Gas
Electrical power	350 W up to 2-3 KW peak power in compact power solution
Max. daily electrical output	8.4 kWh / day
Typical power range (with batteries)	80 ... 1,500 W
Rated voltage	24 V <sub>DC</sub> – varies with battery voltage between 21 ... 29 V
Thermal output	None
Fuel consumption	75 g/h ... 106 g/h (Propane) 0.094 ... 0.136 Nm <sup>3</sup> /h (Natural gas)
Gas connection	8 mm
Pressure of gas connection	18 ... 50 mbar
Weight	65 kg
Dimensions	660 x 540 x 400 mm
Ambient temperature for operation	-20 °C ... +55 °C (-40 °C optionally)
Water / lubricant consumption	none
Noise emission	<55 db(A)
IP protection category	IP50
Communication	Ethernet TCP / IP
System scope	Sunfire SOFC core system, battery management, desulfurization cartridge, exhaust tube 1 m
Essential accessories for operation	Battery VRLA 24 V, > 300 Ah
Qualifications	CE, NRTL certification for North America pending

Sunfire Fuel Cells GmbH | Lindenstraße 45 | 17033 Neubrandenburg | Deutschland | +49 395 351733-0 | info@sunfire-remote.com | sunfire-fuel-cells.de

## 2.9 Press releases - News Tickers

Sunfire publishes on its website and news channel facts and figures in the various application fields i.e. Telecommunication, Safety, Oil & Gas and Others as well as news and success stories about installations, field tests, awards, etc. see <https://sunfire-fuel-cells.de/en/>

### NEWS



#### PROFESSIONAL OFF-GRID POWER SUPPLY FOR MICROWAVE RADIO STATIONS

Fuel cell as the cheapest and cleanest off-grid power supply. Today, off-grid power is usually generated by solar photovoltaic, wind and diesel generators in order to ensure operating conditions, thermoelectric generators (TEG).

[READ MORE](#)



#### SUNFIRE-REMOTE RECEIVES THE "SOLAR IMPULSE EFFICIENT SOLUTION" LABEL

The award-winning off-grid power generator from Sunfire Fuel Cells GmbH is now one of more than 1,000 suitable solutions for protecting the environment worldwide. Sunfire Remote was.

[READ MORE](#)



#### SUNFIRE-REMOTE PROVEN SUITABLE FOR SUSTAINABLE TELECOMMUNICATIONS INFRASTRUCTURE IN A FIELD TEST

More and more operators of off-grid applications prefer fuels cells to conventional diesel generators. Sunfire-Remote has now shown that the CO<sub>2</sub>-emissions compared to diesel engines are not only due to a

[READ MORE](#)



#### SUNFIRE-REMOTE WINS THE NETWORK SUSTAINABILITY AWARD 2021

In the competition, Sunfire-Remote impressed with a clean power solution for off-grid applications. Sunfire Fuel Cells GmbH (Sunfire) will use the prize money to build a fuel cell generator.

[READ MORE](#)

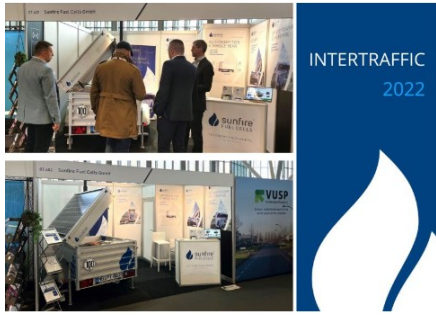
## 2.10 Participation in exhibitions, fairs & conferences

RoRePower partners participated in various exhibitions, fairs & conferences. See here some pictures and below a list of visited events. It is the goal to strengthen this kind of dissemination work. On one side it should be focused to the target audience in the oil & gas and telecom sector and on the other side be also open to the general public i.e. new customer groups like security and service providers or any other stand alone application.

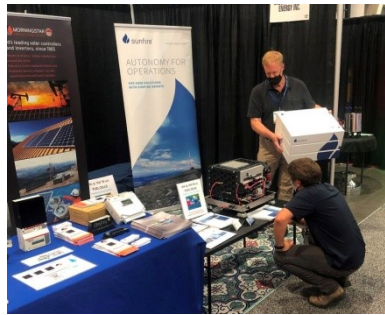


Some pictures of visited events, conferences, exhibitions and trade fairs.

INTERTRAFFIC 2022



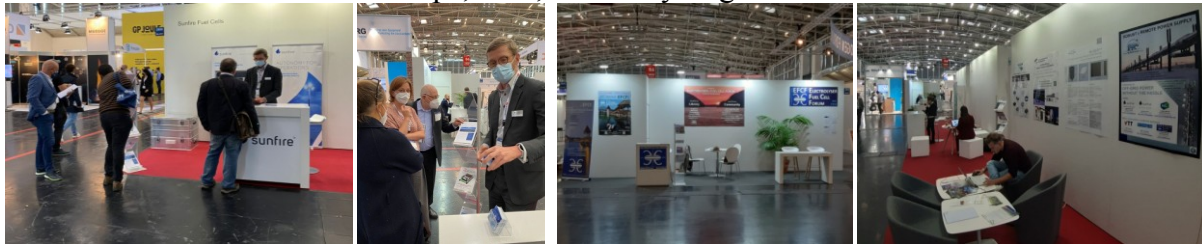
IWCE 2021



IWCE 2022



The Smarter E Europe, EES, Green Hydrogen Forum 2021 & 2022



GPEC 2020



WISPA PALOZZA 2021



List of visited events, conferences, exhibitions and trade fairs.

<b>Date</b>	<b>Activity</b>	<b>Location</b>
09/2019	KSK-Symposium / Military Special Forces Symposium	Germany
11/2019	PMR Expo Cologne	Germany
02/2020	GPEC Frankfurt	Germany
06/2021	Participation in Hannovermesse 2021	Germany
06/2021	IFSEC London	UK
08/2021	ENTELEC Houston	USA
09/2021	Homeland Security Conference Las Vegas	USA
09/2021	MINEXPO Las Vegas	USA

09/2021	IWCE Las Vegas, USA	USA
09/2021	Oil Sands Show Ft. McMurrey	CAN
10/2021	Participation and exhibition at SmarterE 2021	Germany
10/2021	Participation and exhibition at IWCE 2021	USA - Las Vegas
10/2021	WISPA PALOZZA Las Vegas	USA
03/2022	Participation and exhibition at IWCE 2022	USA - Las Vegas
04/2022	Participation and exhibition at Intertraffic Amsterdam	Netherlands
05/2022	Participation in IFSEC 2022	UK
05/2022	Participation and exhibition at SmarterE 2022	Germany
06/2022	Participation in Hannovermesse 2022	Germany
06/2022	Participation and exhibition at Global Energy Show	Canada - Calgary
07/2022	Participation and exhibition at EFCF 2022	Switzerland
09/2022	Participation in Wind Energy 2022	Germany
09/2022	Participation in SECURITY Essen	Germany

## 2.11 Client info actions (reception, workshop, ...) at leading events of target groups

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In addition to the events and exhibitions with corresponding contact to potential customers and interested parties, as described above, information and training events organized by Sunfire also took place (see next but one point).

On the other hand, client info actions at leading events of target groups have been postponed so far. The first of these workshops would be the milestone MS6. The reasons for the postponement are both Corona and technology related delays in the project, so such workshops would not have made sense yet.

Currently the plan is to focus on a final dissemination action at one of the world leading reference event in the telecom sector in addition to the continuation of the above mentioned activities. For this purpose, planning steps are already underway.

## 2.12 Onsite visit - Virtual tours

---

Site visits and virtual tours are not expected to be feasible even by the end of the project. This would require the permission of the site owner, which seems hardly achievable with the secrecy agreements that have been in place so far.

Visits and implementation project discussions at the production sites of the project partners were possible and were or will be carried out in the future. In principle, however, these and their number are also confidential information for the OEMs.

## 2.13 Customer meeting and/or training, onsite info event

Sunfire offers operator training for clients and onsite info and schooling for future customers to get a deeper view on the products and its maintenance. More info are available from:

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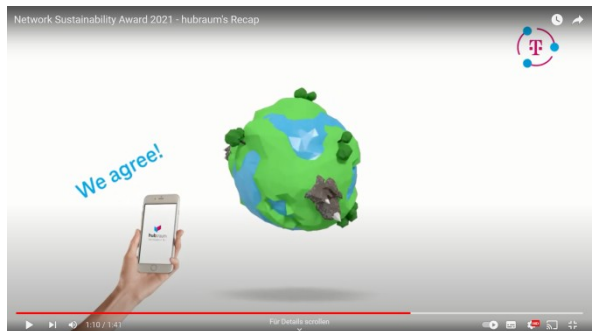
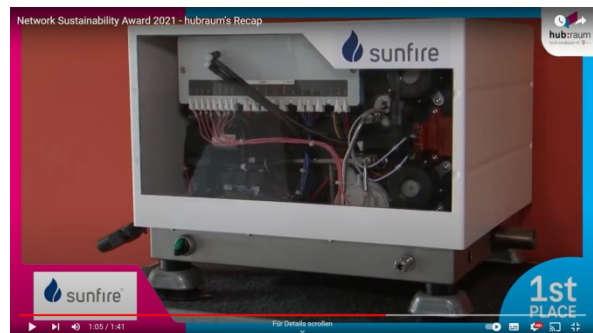
### List of further meetings and customer trainings

Date	Activity	Location
07/2019	On-site training at Sunfire Partner, Canada 07/2019	Canada
02/2020	Training at Sunfire GmbH Dresden for Dutch Partner in 02/2020	Dresden
03/2020	On-site training at UK Partner in 03/2020	UK
07/2021	Sunfire-Remote demonstratzion and integrator training	Denmark
07/2021	Remote sales training for US Partner in 07/2021	US, virtual
09/2021	Customer meetings	Canada - AB and BC
09/2021	End customer training	USA - Alaska
01/2022	Sunfire-Remote integrator training - Russia	virtual
01/2022	Sunfire-Remote integrator training - Japan	virtual
01/2022	Sunfire-Remote integrator training - Malaysia	virtual
03/2022	Customer Meeting and integration training	USA - OH
06/2022	Integration training and commissioning support	UK
06-07/2022	End customer training and commissioning support Malaysia	virtual
09/2022	Integration and service training for Malaysian partner	Dresden / Neubrandenburg



## 2.14 Others

Sunfire has applied for Network Sustainability Award and won 1<sup>st</sup> price out of 221 applicants from all over the world in 06/2021: <https://www.youtube.com/watch?v=UNHBeJRcKbI>



### 3. SUCCESS STORIES & ADVANTAGES AS THE BASE FOR FURTHER COMMUNICATION & DISSEMINATION ACTIVITIES

#### 3.1 Success stories

As summary of the above given public open info and outcome of D6.2

- Sunfire success story video about "off-grid power without the hassle to get autonomy for a whole year" see: <https://youtu.be/0bz-4w4s-4c> , [www.RoRePower.com](http://www.RoRePower.com)
- The factsheet about the SUNFIRE-REMOTE 400 gives an summary about the successful development and the final achievements of the project <https://sunfire-fuel-cells.de/wp-content/uploads/2023/07/Sunfire-Factsheet-Remote-400-Produkt-Details.pdf>
- A further success of the development of a mature RoRePower product is the availability of training and schooling, e.g. Sunfire offers operator training for clients and onsite info and schooling for future customers to get a deeper view on the products and its maintenance.
- A huge success story is the "1<sup>st</sup> price in the Network Sustainability Award", which won Sunfire against 221 applicants from all over the world in 06/2021: <https://www.youtube.com/watch?v=UNHBeJRcKbI>
- Essential prerequisite resp. basis for the successful development of a mature RoRePower product are all successfully achieved intermediate steps in the project (see summarised here below and Deliverable 6.2):

Progresses on all levels: Component, system and manufacturing improvements, data collection for system monitoring to reduce maintenance and service cost.

- ✓ Harsh climate approved BoP components
- ✓ Cold start-up implemented and reliable
- ✓ Market advantages: Lower TOC, fewer emissions and higher power supply security, specific knowhow and up to 450'000h operating experience
- ✓ Market diversity, i.e. various application for the remote markets will be available (oil/gas and telecommunication sector)
- ✓ Bankable business-case (long-term run, data for reliability, service and maintenance)
- ✓ RoRePower solutions optimally meet the decision aspects: Standards, emissions, risk for theft, footprint, specification due to harsh climate, cost evaluation based on CAPEX and OPEX (TOC)
- ✓ Complete services: Availability of training and schooling, flexible data collection and monitoring to survey running units
- ✓ Sinking prices due to economies of scale possible on the base of the joint development and common supply chain
- ✓ Ongoing Market entry pushed by the OEMs

## **3.2 The main advantages of the RoRePower-Systems:**

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### **3.2.1.1 Autonomous**

Longer maintenance intervals save you time and reduce your costs. Sunfire-Remote runs up to 10,000 hours without proactive maintenance.

### **3.2.1.2 Durable**

Sunfire fuel cells achieve a record-breaking runtime of up to 30,000 hours. The system only needs to be changed every 3 to 5 years.

### **3.2.1.3 Robust**

Sunfire remote operates at temperatures between -40 and +55 °C. In areas with changing conditions, you can rely on our power generator.

### **3.2.1.4 Easy**

A plug-and-play solution. You will be surprised how easy Sunfire Remote is to transport, install and operate.

### **3.2.1.5 Clean**

Sunfire-Remote is the environmentally friendly alternative to diesel generators. By running on propane or natural gas, you minimize emissions.

### **3.2.1.6 Reliable**

Whether in deep snow, on the highest mountains or in the middle of nowhere, Sunfire-Remote reliably supplies off-grid applications with power.

### **Sumarised and meanwhile from Sunfire published is:**

The Sunfire Remote 400 fuel cell is an efficient, reliable and versatile solution for off-grid power systems. It operates as a stand-alone power source or in combination with photovoltaic systems, providing up to 350 watts of power. It can also be used in hybrid power systems consisting of different energy sources such as solar, wind or batteries. When combined with a photovoltaic system, it can achieve an output of 1,2 kilowatts, easily supporting energy-intensive off-grid applications such as telecommunication towers, surveillance cameras or satellite systems. The fuel cell is robust and reliable in extreme temperatures ranging from -40 to +55 degrees Celsius. In short, the Sunfire Remote 400 fuel cell is the ideal choice for stable and reliable power supply in off-grid applications. <https://sunfire-fuel-cells.de/en/>

### **Finally also one of the main goals of the project is success and advantage in one**

The aligned joint development and common supply chain cultivation is a explicitly planed positive signal to market and strengthen the value chain of the whole European fuel cell industry.

### 3.3 Main outcomes for communication & dissemination

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In the previous 2 section are the main outcomes, results and innovations summarised and made available for the further communication & dissemination and also used by the OEMs for the exploitation.

Finally the main outcome and base for further communication and dissemination is:

**Robust and remote fuel cell solutions for critical infrastructure are available, reliable and bankable.**

**The European Fuel Cell Industry offers leading products for this sectors.**

## 4. NEXT STEPS - FUTURE PERSPECTIVES

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The previous sections provided an overview of the several activities and used channels and means the RoRePower partners for the dissemination of the project results, with the aim of market cultivation and entry into new segments.

Due to corona there was a delay in making results available and a lack of good opportunities to disseminate. As a result, all dissemination tasks and means are somewhat behind schedule. However, RoRePower is increasingly achieving the critical goals, which can be communicated convincingly on all channels, some of which are already running well as shown above. The project team is now planning more appropriate activities in the final year of the project.

One of the most important bases for proving the concept and the functional suitability of the developed products will be the >45 long-term running installations, which represent an important proof of success.

To improve the dissemination and exploitation in the next phase, a collaboration with Clean Hydrogen Partnership for communication and presentation is planned. Clean Hydrogen Partnership as a PPP (Public Private Partnership) and an European wide organisation under the umbrella of the EC will increase credibility and visibility of the RoRePower i.e. general fuel cell solution potentials.