

French company is looking for a manufacturer partner of small, lightweight 5kW hydrogen fuel cells for use in light mobility in order to charge the batteries

Summary

Profile type

Technology request

Company's country

France

POD reference

TRFR20230323022

Profile status

PUBLISHED

Type of partnership

Commercial agreement with technical assistance

Targeted countries

• **World**

Contact Person

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Term of validity

23 Mar 2023

22 Mar 2024

Last update

23 Mar 2023

General Information

Short summary

A French company designs and produces energy systems based on hydrogen gas (H₂). The company plans to launch new low-carbon product that merges the energies of solar panels (PV), Fuel Cells (FCs) and batteries to be integrated into light cars or light boats. The company seeks compact small FCs with nominal power from 5kW up to 10kW. FCs should not be bulky and featured with some specific characteristics. A commercial agreement with technical assistance is sought with manufacturer of such FCs.

Full description

The French company aims to finalise an innovative system for the production of decarbonated electricity for mobility applications (light cars, light boats) and it is looking for compact 5kW hydrogen Fuel Cells (FCs).

The requested hydrogen FCs are not intended to power the system, but to recharge the batteries and also to heat them in some cases, such an intense cold.

Ideally, the hydrogen FCs should comply with sustainable development. So, as much as possible, the proposed FCs should be provided with indications about:

-carbon footprint of component sourcing

- carbon footprint of manufacturers sourcing
- carbon footprint of the packaging
- carbon footprint of its use (efficiency in%)
- carbon footprint of recycling
- system recyclability level (in%)
- level of dismantling of the system (in%)

Design should facilitate easy dismantling at end of life to an extent as reasonably can be expected.

A manufacturer of lightweight small hydrogen FCs is sought for commercial agreement with technical assistance.

Advantages and innovations

Technical specification or expertise sought

Requested compact FCs technical characteristics:

- Nominal Power: 5 000 to 10 000W
 - Voltage: 22-48V
 - I max: 250A
 - P max: 5 000W
 - Bus CAN 2.0 B: 1
 - Electrolyser technology: PEM
 - Cooling system: Glycol
 - Weight: < 50 Kg
 - Type: Mobility
- Electronic card must comply with the automotive standards

Operating conditions:

- maximum operating temperature 30°C to 40 C
- the flow temperature is above 0°C
- 95% air humidity
- presence of sand in the air
- presence of salt in the air

Stage of development

Already on the market

IPR Status

Sustainable Development goals

- **Goal 7: Affordable and Clean Energy**
- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 12: Responsible Consumption and Production**

Partner Sought

Expected role of the partner

Type of partner:
Industrial manufacturer of compact hydrogen Fuel Cells

Role of the partner:
To provide the specific equipment and technical support for implementing FCs

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

- **SME 50 - 249**
- **SME 11-49**
- **SME <=10**
- **Big company**

Dissemination

Technology keywords

- **02009017 - Electrical supply system**
- **04001003 - Storage of electricity, batteries**
- **004002001 - Fuel cell, hydrogen production**
- **02009014 - Automotive electrical and electronics**
- **03004004 - Electrical Engineering/ Electrical Equipment**

Targeted countries

- **World**

Market keywords

- **06008 - Energy Storage**
- **06007001 - Other energy production**
- **09001005 - Motor vehicles, transportation equipment and parts**
- **03002 - Batteries**
- **09001007 - Other transportation**

Sector groups involved