A french SME proposes Autonomous water quality solutions.

Summary

Profile type
Technology offer

Company's country
France

POD reference
TOFR20230904016

Profile status
PUBLISHED

Type of partnership
Investment agreement
Commercial agreement with technical assistance

Targeted countries
• World

Contact Person
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Term of validity
4 Sep 2023
3 Sep 2024

Last update
4 Sep 2023

General Information

Short summary

A French SME designs, manufactures and technological innovative solutions to face the water and energy challenges. The SME solutions allow to preserve water resources and ensure quality water for the population by offering advanced technological solutions to water network operators

Full description

The company was created as a result of a technological innovation in micro-turbine technology that quickly found interest among drinking water network operators. The PICOGEN® is a micro turbine directly set-up on pipes and able to generate enough electricity to power network devices from very low velocity water flow. This unique and easy to set-up solution received the Solar Impulse Efficient Solution label in February 2020.
For 5 years, the SME has been working with all the players in the drinking water network value chain to understand their needs and develop its technology accordingly.
The smart water network market attracts many players offering a large range of sensors and communication solutions. However, none of them offers complete solutions to solve cost, integration, energy availability, and maintenance issues faced by operators. SAVE aims to go furtherby offering to operators the next revolutionary all-in-one smart drinking water solution to ensure reliable water quality. SAVE's strategy is to shift from a technology brick provider to a complete smart water solution provider for public authorities, network operators and distributors. The company aims to disrupt the smart water market by bringing a scalable all-in-on solution able to constantly comply

with user expectations and regulatory requirements. An ambition made possibleby the SMART PICOGEN platform approach, which enables the company to integrate the most suitable existing or innovative technologies in the most optimal way. SME's objective is to make the SMART PICOGEN the standard for smart drinking water networks, becoming the key player for both operators and technical providers.

Advantages and innovations

The SMART PICOGEN (S-PG) upgrades the PICOGEN® to a whole new level: an in-line plug-and-play technological platform with a modular casing integrating energy production and storage, sensing, control, and communication devices. The S-PG can be easily installed like a standard pipe fitting on existing and new waterpipes (Ø80mm to Ø300mm), at any place on the drinking water network, whatever the flowrate and the available pressure.
This solution provides operators with a powerful and unequalled real-time diagnostic tool fulfilling all needs:
- Measure 4 water physical characteristics through the turbine: flow, pressure, conductivity, temperature.
- Measure 3 water chemical characteristics through sensors without water withdrawal: pH, turbidity, chlorine level. The sensors in the body of the S-PG are integrated through a water circuit with a pressure reducer at the inlet, to guarantee an optimal lifespan of the sensors, and a micro-pump at the outlet to re-inject the analysed water into the pipe, avoiding water withdrawal.
- Transmit collected data in real-time to the operators to optimize network management: less than two minutes between local measure and correlated data remote availability.
- Hoard the electricity harvested with the turbine in waterproof long lifespan battery pods, with an innovative active equilibrating technology allowing the use of non-conventional cells chemistries with less ecological impact than traditional Li-ion (e.g. Na-Ion), or second-hand cells (e.g. from electric cars)

Technical specification or expertise sought

Business expertise mainly to address new markets.
open also to collaborate and propose solution for demonstration

Stage of development

Already on the market

Sustainable Development goals

- **Goal 11: Sustainable Cities and Communities**
- **Goal 6: Clean Water and Sanitation**
- **Goal 9: Industry, Innovation and Infrastructure**

IPR Status

IPR granted

Partner Sought

Expected role of the partner

The company is looking for clients or distributors to deploy their solutions worldwide. This can be through distributor contract or client long-term partnerships. The first installations in the different countries can be performed by different phases:
1-technology validation with one pilot
2- operational validation thanks to 5 to 10 pilots on a sector
3- large scale deployment.
The company is open to set technological partnerships for the integration of news devices on its S-PG platform. The company is in a industrialization phase, investors are very welcome to support us in our growth.

Type of partnership

Investment agreement

Commercial agreement with technical assistance

Type and size of the partner

- **Other**
- **R&D Institution**
- **SME 11-49**
- **University**
- **Big company**
- **SME 50 - 249**
- **SME <=10**

Dissemination

Technology keywords

- **001001005 - Embedded Systems and Real Time Systems**
- **01001001 - Automation, Robotics Control Systems**
- **001001009 - Micromachining**

Market keywords

- **08004003 - Water treatment equipment and waste disposal systems**

Targeted countries

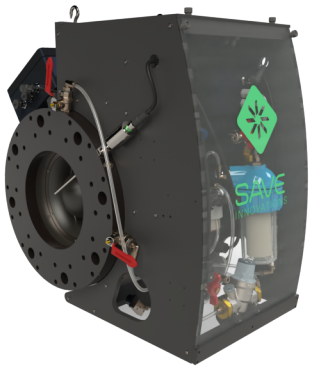
- **World**

Sector groups involved

- **Energy-Intensive Industries**

Media

Images



https://www.youtube.com/watch?v=8rUK_78omfM

Videos

SMART PICOGEN: solution for the permanent diagnosis of drinking water networks