



## Press release

*For immediate release*

### **Nordic leading cleantech company PowerCell converts toxic waste from olive oil production into electricity**

[Gothenburg, Sweden, December 1, 2014.] **The Nordic leading fuel cell technology company [PowerCell](#) has announced a technology developing project to convert toxic waste from olive oil production into electricity. [Biogas2PEM-FC](#) is an EU project that PowerCell coordinates. Together with partners from Spain, Greece, Sweden and the UK, a complete [pilot plant](#) has been built in Andalucía, Spain.**

The waste from olive oil production is environmentally harmful and costly to dispose of. It contains pesticides and toxic organic compounds, it is also acidic and has a high salinity. Currently the waste is turned to landfill, but which is very costly and becomes a major environmental problem.

The Biogas2PEM-FC project is an EU-funded project that PowerCell coordinates. Together with partners from Spain, Greece, Sweden and the UK, a complete conversion system has been developed. The project started two years ago and was finished October-end, 2014.

The goal of the project has been to develop a technology to convert waste from the olive oil production, into electricity. A three-part subsystem was developed; the primary step is an anaerobic digestion reaction to produce biogas from the waste, the second step is a reformer to convert the biogas to a hydrogen rich gas (reformate), and a last step -the fuel cell system to make electricity from the reformate gas.

#### **Complete plant in Andalucía, Spain**

The focus has been the research and development of technologies in the various subsystems and a complete plant has been built and is now demonstrated on an olive farm in Andalucía in Spain ([see film about the facility](#)).

The project is now in its final stage and a complete pilot plant has been built and tested on the cooperative of San Isidro de Loja, Granada. The solution developed in the project makes use of a waste that is toxic and converts it into electricity and heat that can be used by the olive mill. The plant in Andalucía includes the reprocessing of waste from olive oil production, biogas production from waste, reforming of biogas, as well as a fuel cell power generation system from reformate gas.

“With this concept we solve two problems at once. We deplete toxic waste while producing electricity and heat on a small-scale, environmentally friendly way, without any harmful emissions. This solution has a very high potential. It is estimated that up to 30 million cubic meters of wastewater is produced annually, during a three to four-month period, on an olive oil plant, water that can be used in biogas production. The technology developed in this project can also be used with other agricultural waste”, said Per Ekdunge, Project Coordinator, and Vice President and CTO of PowerCell Sweden AB.

The partners in the Biogas2PEM-FC project are:

- Power Cell, Sweden AB (publ), Sweden



- Royal Institute of Technology, KTH, Sweden
- Idener, Spain
- Leitat, Spain
- Helbio, Greece
- Marches Biogas Ltd, Shropshire, UK.
- INGENOSTRUM, Spain
- FAECA (Andalusian Federation of Agrarian Cooperatives), Spain

The project Biogas2PEM-FC has been EU supported within the SP4 Capacities program.

PowerCell Sweden AB (publ) is a leading environmental technology company that develops environmentally friendly generators with unique fuel cell and reformer technology, which is suitable for both existing and future fuels.

***Useful links:***

[The project Biogas2PEM's website](#)

[The Youtube-film from the pilot plant in Andalucía](#)

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**About PowerCell**

PowerCell is a leading energy technology company with a unique and patented technology for generating electricity from fuel cells in an efficient and environmentally friendly way. PowerCell develops and distributes advanced fuel cell systems for the transport industry, the telecommunication industry and the military sector.

PowerCell has developed fuel cell technology for more than a decade, and has perfected a unique design that enables the production of a lightweight, versatile and reliable power source for automotive, transport and stationary applications.

By combining their fuel cell- and reformer technology, PowerCell has developed a fuel cell system that converts diesel fuel to electricity in an energy-efficient and environmentally friendly manner, with minimal emissions and quiet operation. The fuel cell system is initially adapted to supply electric power to the telecom industry.

PowerCell is a spinout from the Volvo Group with the objective to develop and produce environmentally friendly power systems based on a unique fuel cell- and reformer technology that matches existing fuel infrastructures. PowerCell is based in Gothenburg and is owned by Volvo Group Venture Capital, Fouriertransform, Midroc New Technologies and Finindus. For further information, please visit: [www.PowerCell.se](http://www.PowerCell.se)