Biogas2PEM-FC

Project ID: 314940
Funded under: FP7-SME

Biogas Reforming and Valorisation Through PEM Fuel Cells

From 2012-11-01 to 2014-10-31, closed project

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tbody>
<tr>
<td>EUR 1 495 040,20</td>
<td>SME-2012-1 - Research for SMEs</td>
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<tr>
<td>EU contribution:</td>
<td>Funding scheme:</td>
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<tr>
<td>EUR 1 135 999,75</td>
<td>BSG-SME - Research for SMEs</td>
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<th>Coordinated in:</th>
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<tr>
<td>Sweden</td>
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Objective

Biogas2PEM-FC is an industrial research project that aims to develop, according to participating SMEs needs, the technologies that compose a novel and integrated solution for biogas valorisation through proton exchange membrane fuel cells (PEM). Such a solution will provide a modular, reliable, cost-effective and efficient combined heat & power (CHP) system suitable for a distributed, on-site power generation from agricultural wastes. The project objectives are:

- Research for the increase of biogas production yield, using physic-chemical and biological pre-treatment technologies at laboratory scale for enhancing anaerobic digestion effectiveness. After optimization of pre-treatment technologies, different inoculates and co-substrates will be investigated and used in laboratory experiments for maximization of biogas production: high methane and hydrogen content with minimum CO2 and CO production ratio.

- Development and optimization of current biogas reforming technologies: new catalysts for an efficient conversion of biogas to hydrogen.

- Research for the integration of PEM technologies using hydrogen produced from biogas.

- Construction and field tests of a pilot plant located in a selected olive oil mill exploitation.

- Techno-economic and environmental evaluation of power generation using integrated Biogas2PEM-FC technology.

- Dissemination of Biogas2PEM-FC project results for the feasibility demonstration of low cost biogas reforming and power generation.

Related information

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<th>Report Summaries</th>
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<td>Final Report Summary - BIOGAS2PEM-FC (Biogas Reforming and Valorisation Through PEM Fuel Cells)</td>
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Coordinator

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

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