HyTime
Project ID: 278855
Funded under: FP7-JTI

Low temperature hydrogen production from second generation biomass

From 2012-01-01 to 2015-06-30, closed project

Project details

<table>
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<th>Total cost:</th>
<th>Topic(s):</th>
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<td>EUR 3 057 249,80</td>
<td>SP1-JTI-FCH.2010.2.4 - Low temperature H2 production processes</td>
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<td>EU contribution:</td>
<td>Call for proposal:</td>
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<td>EUR 1 606 900</td>
<td>FCH-JU-2010-1 See other projects for this call</td>
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<td>Coordinated in:</td>
<td>Funding scheme:</td>
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<tr>
<td>Netherlands</td>
<td>JTI-CP-FCH - Joint Technology Initiatives - Collaborative Project (FCH)</td>
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Objective

The aim of HyTime is to deliver a bioprocess for decentral H2 production from 2nd generation biomass with a productivity of 1-10 kg H2/d. The novel strategy in HyTime is to employ thermophilic bacteria which have shown superior yields in H2 production from biomass in the previous FP6 IP HYVOLUTION.

Biomass in HyTime is grass, straw, molasses or unsold organic goods from supermarkets. The biomass is fractionated and converted to H2 at high efficiency unique for thermophilic fermentation. Dedicated bioreactors and gas upgrading devices for biosystems will be constructed to increase productivity. The H2 production unit will be independent of external energy supply by applying anaerobic digestion to valorize residues. HyTime adds to the security of supply H2 from local sources and eradicates geopolitical dependence.

HyTime builds on HYVOLUTION with 5 partners expanding their research efforts. Three new industrial partners, 2 of which are NEW-IG members, have joined this team with specialist expertise in 2nd generation biomass fractionation and gastechnology. This way a pan-european critical mass in agro- and biotechnological research, the energy and hydrogen sector is assembled to enforce a breakthrough in bioH2 production. The participation of prominent specialists with interdisciplinary competences from academia (1 research institute and 2 universities) and industries (3 SMEs and 2 industries) warrants high scientific quality and rapid commercialization by exploitation of project results and reinforces the European Research Area in sustainable issues.

The partners in HyTime have a complementary value in being developers or stake-holders for new market outlets or starting specialist enterprises stimulating new agro-industrial activities to boost the realization of H2 from renewable resources. The concept of HyTime will facilitate the transition to a hydrogen economy by increasing public awareness of the benefits of a clean and renewable energy carrier.

Related information

| Result In Brief | The efficient extraction of hydrogen from food waste |
| Report Summaries | Final Report Summary - HYTIME (Low temperature hydrogen production from second generation biomass) |
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Subjects
Industrial Manufacture

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