Efficient Additivated Gasoline Lean Engine

Fact Sheet

Project Information

<table>
<thead>
<tr>
<th>EAGLE</th>
<th>Funded under</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant agreement ID: 724084</td>
<td>H2020-EU.3.4.</td>
</tr>
</tbody>
</table>

Project website [1]

<table>
<thead>
<tr>
<th>Status</th>
<th>Overall budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed project</td>
<td>€ 5 993 062,74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start date</th>
<th>End date</th>
<th>Coordinated by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 October 2016</td>
<td>30 November 2020</td>
<td>IFP Energies nouvelles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EU contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>€ 5 993 062,74</td>
</tr>
</tbody>
</table>

France

Objective

The decrease of CO2 & particulates emissions is a main challenge of the automotive sector. European OEMs and automotive manufacturers need new long term technologies, still to be implemented by 2030. Currently, hybrid powertrains are considered as the main trend to achieve clean and efficient vehicles. EAGLE project is to improve energy efficiency of road transport vehicles by developing an ultra-lean Spark Ignition gasoline engine, adapted to future electrified powertrains. This new concept using a conventional engine architecture will demonstrate more than 50% peak brake thermal efficiency while reducing particulate and NOx emissions. It will also reach real driving Euro 6 values with no conformity factor. This innovative approach will consequently support the achievement of long term fleet targets of 50 g/km CO2 by providing affordable hybrid solution.

EAGLE will tackle several challenges focusing on:

• Reducing engine thermal losses through a smart coating approach to lower
volumetric specific heat capacity under 1.5 MJ/m3K
• Reaching ultra-lean combustion (lambda > 2) with very low particulate (down to 10 nm) emission by innovative hydrogen boosting
• Developing breakthrough ignition system for ultra-lean combustion
• Investigating a close loop combustion control for extreme lean limit stabilization
• Addressing and investigating NOx emissions reduction technologies based on a tailor made NOx storage catalyst and using H2 as a reducing agent for SCR.
A strong engine modeling approach will allow to predict thermal and combustion performances to support development and assess engine performances prior to single and multi-cylinder test bench application. An interdisciplinary consortium made of nine partners from four different countries (France, Germany, Italy, Spain) will share its cutting-edge know-how in new combustion process, sensing, control, engine manufacturing, ignition system, simulation & modeling, advanced coating, as well as after-treatment systems.

Field of science

/engineering and technology/materials engineering/coating and films

Programme(s)

Topic(s)

Call for proposal

H2020-GV-2016-INEA

Funding Scheme

RIA - Research and Innovation action

Coordinator

IFP Energies nouvelles

Address
Avenue De Bois Preau 1 & 4
92500 Rueil Malmaison
France

Activity type
Research Organisations

EU contribution
€ 1 400 626,25

Website

Contact the organisation
### Participants (10)

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEV EUROPE GMBH</td>
<td>Germany</td>
<td>€ 591 937.50</td>
<td>Neuenhofstrasse 181, 52078 Aachen</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
</tr>
<tr>
<td>UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II</td>
<td>Italy</td>
<td>€ 390 612.50</td>
<td>Corso Umberto I, 40, 80138 Napoli</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td>RENAULT SAS</td>
<td>France</td>
<td>€ 1 142 565</td>
<td>Quai Le Gallo 13, 92100 Boulogne Billancourt</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
</tr>
<tr>
<td>UNIVERSITAT POLITECNICA DE VALENCIA</td>
<td>Spain</td>
<td>€ 393 000</td>
<td>Camino De Vera Sn Edificio</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
</tbody>
</table>
RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN

Germany
EU contribution
€ 626 717,50

Address: Templergraben 55
52062 Aachen

Activity type: Higher or Secondary Education Establishments

Website
Contact the organisation

SAINT-GOBAIN CENTRE DE RECHERCHES ET D'ETUDES EUROPEEN

France
EU contribution
€ 665 833,75

Address: 12 Place De L'iris Tour Saint-gobain
92400 Courbevoie

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

Contact the organisation

CONTINENTAL AUTOMOTIVE GMBH

Germany
EU contribution
€ 291 392,54

Address: Vahrenwalder Strasse 9
30165 Hannover

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

Website
Contact the organisation

CONTINENTAL AUTOMOTIVE FRANCE SAS

France
EU contribution
€ 40 038,33
VITESCO TECHNOLOGIES FRANCE

France

EU contribution
€ 34 253,34

Address
44 Avenue Du General De Croutte
31100 Toulouse

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

Contact the organisation

VITESCO TECHNOLOGIES GMBH

Germany

EU contribution
€ 416 086,03

Address
Vahrenwalder Str. 9
30165 Hannover

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

Contact the organisation

Last update: 7 August 2020
Record number: 205447

Permalink: https://cordis.europa.eu/project/id/724084

© European Union, 2021