Variable Compression Ratio System for the reduction of fuel consumption and CO2 emissions in motor vehicles

Fact Sheet

Project Information

GOMECSYS VCR system

Grant agreement ID: 782767

Project website

DOI
10.3030/782767

Project closed

EC signature date
11 July 2017

Start date
1 August 2017

End date
30 November 2017

Funded under
SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

Total cost
€ 71 429,00

EU contribution
€ 50 000,00

Coordinated by
GOMECSYS BV
Netherlands

Objective

Increasingly stringent emission and fuel economy standards have been pushing old combustion engines into an accelerated evolution phase. In this context, OEMs in the industry have shifted their R&D efforts towards more thermally efficient, less polluting and down-sized engines, thus viewing the production of low emission and fuel consumption vehicles. The concept of VCR engines (i.e. the compression ratio (CR)

of the internal combustion engine can be modified under dynamic driving conditions and performance needs) has been considered as an essential future technology to meet these targets. However limitations associated with their effect in engine's architecture, their impact on the reduction of CO2 emissions and additional productions costs have hindered their widespread commercial application.
Our ground-breaking VCR system will be the first able to address the burning needs of the industry. Gomecsys VCR system is a highly innovative system differentiated from alternatives due to its engineering simplicity able to significantly enhance the performance of conventional combustion engines achieving a staggering 5-10% reduction on fuel consumption and CO2 emissions. Our core aim is to commercialize the 6th generation of our VCR system in 2020 and its commercial viability will be based on our ability to define business opportunities in target markets and attract key partners and customer OEMs for our project. Moreover, we are convinced that our project will provide "resource efficient transport that respects the environment" which is considered a critical aspect to meet "Smart, Green and Integrated Transport" societal challenge addressed by Horizon 2020 programme.
Finally, through the completion of Gomecsys VCR system project we expect to reach €15 million revenues five years after its commercialization. Phase 2 will require a €2 million investment, which will present a Cumulative Return of Investment of 4.99 in 2024.

Fields of science (EuroSciVoc)

engineering and technology > mechanical engineering > vehicle engineering > **automotive engineering**

engineering and technology > environmental engineering > **energy and fuels**

natural sciences > earth and related environmental sciences > atmospheric sciences > climatology > **climatic changes**

Programme(s)

H2020-EU.3.4. - SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

MAIN PROGRAMME

H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

H2020-EU.2.3.1. - Mainstreaming SME support, especially through a dedicated instrument

Topic(s)

SMEInst-10-2016-2017 - Small business innovation research for Transport and Smart Cities Mobility

Call for proposal

H2020-SMEInst-2016-2017

See other projects for this call

Sub call

H2020-SMEINST-1-2016-2017

Funding Scheme

SME-1 - SME instrument phase 1

Coordinator

GOMECSYS BV

Net EU contribution

€ 50 000,00

Total cost

€ 71 429,00

Address

ENERGIESTRAAT 23 B 1
1411 AR NAARDEN
Netherlands

SME

Yes

Region

West-Nederland > Noord-Holland > Het Gooi en Vechtstreek

Activity type

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

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Last update: 5 August 2022

Permalink: https://cordis.europa.eu/project/id/782767