



JRC cooperation with EU candidate, potential candidate and Horizon 2020 associated countries

Enlargement and Integration Action 2018

Workshop on “JRC tools to support the reduction of CO₂ emissions and fuel consumption from road transport in Europe: VECTO and CO₂MPAS”

Ispra, November 14-15, 2018

Background

During the last 10 years the JRC has been supporting the European Commission in the conception, formulation and implementation of EU policies concerning the reduction of CO₂ and pollutant emissions from road transport. The support has involved several activities ranging from the development of software tools and models, to providing technical and statistical support, to performing physical vehicle tests, to assisting in the management of on-going studies and reviewing communications and reports. More in particular the JRC is responsible for:

- the implementation of the “Eco-Innovation” Scheme for the reduction of CO₂ emissions from light-duty vehicles (LDVs) and the related procedure to measure the relative CO₂ benefits (as set by EU Regulations 443/2009 and 510/2011). Within the framework of eco-innovative technologies, the JRC has developed, in the last years, significant experience in testing hybrid and electric vehicles both for what concerns their fuel/energy consumption and the compatibility with the electromagnetic fields they are in contact with;
- the development and management of the vehicle simulator VECTO (Vehicle Energy Consumption Calculation Tool), that will be used, as of 2018 for the certification of CO₂ emissions from Heavy Duty Vehicles (HDVs) in Europe. VECTO is the core software on which all future policy regarding HDV CO₂ emissions will be based. VECTO was originally developed under a JRC contract and is ever since administered by the JRC team. In 2013 a major test campaign was successfully carried out for the validation of VECTO and the respective simulation methodology. It showed the benefits of the tool in accurately calculating emissions from HDVs. VECTO has today more than 100 users from all vehicle manufacturers in the HDV sector;
- the development and management of CO₂MPAS (CO₂ Model for PAssenger and commercial vehicles Simulation), that will be used, as of September 2017, in the certification of CO₂ emissions from Light-Duty Vehicles (LDVs) in Europe. CO₂MPAS has been developed to allow the introduction of a new and more representative test procedure for the calculation of energy consumption and CO₂ emissions from LDVs, the WLTP (the World-Wide Harmonized Test Procedure for Light Duty Vehicles). CO₂MPAS has today more than 200 users from all vehicle manufacturers in the LDV sector;
- the development and management of Green Driving, a web-portal that allows drivers to select the most fuel/energy efficient technology for their vehicle and to improve their driving behaviour to save fuel. Green Driving will be at the centre of DG CLIMA strategy to raise awareness about the fuel saving potential of drivers’ choices;



- the organization of the ERMES network for the definition and harmonization of emission factors from road vehicles.

All the tools developed by the JRC are publicly available and their use is regulated by the European Public License (EUPL) scheme. They can be therefore also used for academic and related purposes.

Motivation

The tools developed by the JRC serve the political objective of the European Commission. However their use is not limited to the implementation of European Legislations. The JRC has indeed interest to give the maximum visibility to the tools developed so that they can be used for other legislative purposes (for example in other political context) or for other purposes. As an example, VECTO and CO₂MPAS can be used as open access vehicle simulation software by universities and research centres. Increasing the number of users has also the advantage to receive more feedback on the use of the tools with the possibility to better design their further development.

In addition, EU candidate, potential candidate and Horizon 2020 associated countries can benefit from a thorough update on the EU policies to reduce CO₂ emissions and energy consumption from transport and from a presentations of the tools, which are currently used in Europe. Knowledge about the JRC facilities to test hybrid and electric vehicles can easily open to collaboration with SMEs working in the field. The Green Driving tools can be exploited also by Governments outside Europe to raise awareness about the energy reduction potential of users' choices.

For all these reasons, the Sustainable Transport Unit (STU) of the JRC has organised a dedicated two-day workshop to introduce participants from countries associated to Horizon 2020 to the tools developed by the JRC in the support of policies to reduce energy/fuel consumption and CO₂ emissions from road transport.

Objectives

The two-day workshop has the objectives to update participants on the current policy strategy developed by the European Commission concerning the reduction of CO₂ emissions and fuel/energy consumption from road transport and to present in details the two main tools developed by the JRC: VECTO and CO₂MPAS in this field. We expect to receive feedback on the use of the tools and on possible additional applications they may have in other contexts.

The target audience is composed by researchers and practitioners in the fields of automotive/energy/mechanical/electric engineering and by employees in transport/industry/environment ministries from countries associated to Horizon 2020.

Activities

The two-day workshop will be mainly structured in lecture-style instructions. Interaction between lecturer and audience is strongly encouraged. The following agenda is proposed:

Day 1

- **Morning session**
 - Introduction. European political objectives to reduce CO₂ emissions and fuel consumption from road transport and the Role of JRC.
 - Introduction to VECTO
 - The use of VECTO in the certification of HDVs
 - Introduction to the functionalities of the tool
- **Afternoon session**



- Practicum on the use of VECTO. Participants will be divided in groups and driven through the use of VECTO

Day 2

- Morning session

- Introduction to CO₂MPAS and Green Driving
 - The introduction of the WLTP in the EU type-approval of LDVs
 - Introduction to the functionalities of the tool

- Afternoon session

- Practicum on the use of the tool. Participants will be divided in groups and driven through the use of CO₂MPAS and Green Driving

Organisers:

Joint Research Centre of the European Commission

Dates and Venue:

14-15 November, 2018 – European Commission Joint Research Centre. Ispra (VA), Italy
The training will develop over two full days. More information on time and venue of the workshop will be provided to the selected applicants.

Useful Dates:

Deadline for Applications: 24 August 2018

Communication of Acceptance: 10 September 2017

Planned participants:

25

Participants profile:

Professionals, academics, policy officers or any person whose field of work is in the automotive/energy/mechanical/electric engineering sector.

Country of origin of participants:

Countries associated to Horizon 2020.

Grants:

Grants covering cover travel and accommodation expenses will be available for 20 selected participants.

Contacts:

To apply please send your CV and motivational letter to: JRC-EI-ROAD-CO2@ec.europa.eu.