



EUROPEAN COMMISSION
DG ENVIRONMENT
Directorate C – Quality of Life
Acting Director

ADMINISTRATIVE AGREEMENT

N° 070201/2016/743134/SER/ENV.C3

BETWEEN

DG ENVIRONMENT (DG ENV)

AND

THE JOINT RESEARCH CENTRE (JRC)

JRC N° 34376-2016

According to the Council conclusions of 26.04.1994 (J.O. C 126 of 7.05.1994 p.1) on the role of the JRC;

According to the offer supplied by the JRC to DG ENV on its request;

According to the project entitled "**Real-driving emissions of new diesel vehicles**", within the context of the impact of climate change policies, DG ENV entrusts the JRC, Directorate C - Energy, Transport and Climate with the execution of the above mentioned project;

- 1) The present Administrative Agreement is established between DG Environment, hereinafter referred to as "DG ENV", which is represented, for the purpose of signing this Administrative Agreement, by Ms Joanna Drake , Acting Director of Directorate C – Quality of Life of the above-mentioned Directorate General, and the Joint Research Centre, hereinafter referred to as the "JRC", represented for the purpose of signing this Agreement by Mr Piotr Szymanski, Director of Directorate C - Energy, Transport and Climate (JRC.DIR.C)
- 2) The purpose of this Administrative Agreement is to provide DG ENV with an independent assessment of the real-driving pollutant emissions (specifically NOx) of new light-duty vehicles. Efforts will focus on the most popular new diesel passenger car models available in the EU with the aim to: (i) provide the Commission and the public with information about the level of real-driving emissions, (ii) provide technical input for the further development of vehicle emissions policy by the Commission, and (iii) support informed decision making towards a voluntary system for the identification of low-emission vehicles.

The work to be realised under the execution of the above mentioned project " **Real-driving emissions of new diesel vehicles** " is described in Annex I, 'technical specifications' to the present Administrative Agreement.

- 3) The JRC shall perform the work, defined in Annex I "technical specifications", within **24 months** starting from **1st January 2017**.
- 4) Any delay in the performance of the work must be immediately notified to DG ENV in charge of the monitoring of the Project.
- 5) The JRC-DIR.C shall make available the personnel necessary for the performance of the project.
- 6) A fixed cost of **400,000.00 EURO** (four hundred thousand euros) has been agreed for the performance of the work. It shall be totally financed by the General Budget and transferred to the JRC, in accordance with point 7).
- 7) The agreed credits for the performance of this work shall be made available to the JRC when the services have been performed to the satisfaction of the DG according to the Commission's accounting rules on the internal invoicing. The sums shall be transferred from the budget line 07 02 01 (*of DG ENV*) to the Legal Entity File (LEF) number 6999999009 (*of the JRC*) mentioning the Recovery Order (RO) number. The JRC will produce a debit note for each payment. Payments shall be made in accordance with the payment plan mentioned below and subject to any special provision (e.g. linked to approval of reports) as specified in the Annex I – Technical Specifications:
 - A first payment of 200,000.00 EURO (one hundred and fifty thousand euros) at the start of the present Agreement
 - A final payment of the balance of 200,000.00 EURO (one hundred and fifty thousand euros) after approval of Final Report as indicated in Annex I – Technical Specifications.
- 8) If a portion of the work is to be subcontracted by the JRC then:
 - The JRC shall seek prior written agreement from DG ENV before sub-contracting parts of the work.
 - The request for agreement from DG ENV to the sub-contracting shall bear a detailed description of the services that will be tendered and of their estimated value.
 - The tender specifications for the work to be subcontracted shall be prepared by the JRC and submitted to DG ENV with the request for prior written agreement. For calls and invitations to tender related to subcontracting under the present Agreement and that are above the threshold of Art. 137 RAP, DG ENV will be given the option to participate in the (opening and) evaluation of tenders.

- 9) Any modification of the present Agreement and its annexes shall be the subject of a written agreement having the same form of the present Agreement.
- 10) The title of the project as quoted under point 2 and the number of the present Agreement shall appear on any report, correspondence or cost statement concerning the same subject.
- 11) All the correspondence concerning the present Agreement shall be in written form and shall be forwarded to the following addresses:

for DG ENV

A. For administrative matters

European Commission
DG Climate Action/DG Environment SRD.2 - Finance
BU-9 01/22
1049 Brussels, Belgium



B. For technical matters

European Commission
Directorate-General for Environment
Unit C3 Clean Air



BU-9 04/089



for the JRC

A. For administrative matters

European Commission
Joint Research Centre
Directorate R. Resources



TP 060



B. For technical matters

European Commission

Joint Research Centre

DG JRC C.4: Sustainable Transport

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12) The following documents form an integral part of this Agreement.

- Annex I: Technical specifications.

Signatures:

For DG ENV

For the JRC

28 NOV. 2016

Ms Joanna Drake
Acting Director of Directorate C- Quality of Life

Mr Piotr Szymanski
Director of Directorate C - Energy, Transport
and Climate

02. 12. 2016

ANNEX I: TECHNICAL SPECIFICATIONS

ADMINISTRATIVE AGREEMENT

DG ENV/DG JRC

Subject: Real-driving emissions of new diesel vehicles

1. BACKGROUND

Context

Air pollution remains the most important environmental cause of premature death in the EU as well as globally. Despite notable improvements during the last decades, poor air quality continues to cause over 400,000 premature deaths in the EU each year. These figures represent only a fraction of the health and environmental impacts which extend to acute and chronic respiratory, cardiovascular and other diseases and associated socio-economic costs. The European Clean Air Programme considers the high concentrations of particulate matter, nitrogen dioxide and ground-level ozone of most concern. Hence the strategic objectives are set accordingly based on an extensive evaluation and impact assessment.¹ It is furthermore noted that EU air quality standards are less strict than the specific guideline values provided by World Health Organization (WHO)². To achieve compliance with the EU air quality standards and, in the long term, move towards those stated in the WHO guidelines, air pollutant emissions need to be reduced at local, national and transboundary levels.

The successive revisions of the EU type approval legislation aimed at reducing emissions from cars through the introduction of the respective EURO standards (1-6). The latest focus was on PM and NO_x. The latter was the main focus of the Euro 6 norm for passenger cars which came into force in September 2014 (albeit still relying on standardized laboratory tests). However, in 2011, also the JRC identified that cars actually emit more than the legal standards under real-driving conditions, thereby confirming earlier speculations about a growing problem in this field. The difference in emissions can be anywhere between 2 to 20 times the legal emission limits.

These high real-driving emissions create a direct challenge to Member States in terms of meeting their air quality objectives set for the purpose of protecting citizens against the harmful effects of air pollution. Despite the growing consequences on the problem, it remained difficult to gather the political will to act. The Volkswagen case has brought this matter to the forefront of the political agenda both in the EU and in the Member States, and has undermined consumer confidence in the car industry and the regulator.

¹ SWD(2013)531, Impact Assessment

² WHO Air quality guidelines - global update 2005

http://www.who.int/phe/health_topics/outdoorair/outdoorair_aqg/en/.

2. OBJECTIVES

The overall objective of this Administrative Agreement is to gain targeted independent evidence and assessments about the sector's progress in reducing real-driving exhaust emission levels of air pollutants, especially NO_x, from new vehicles added to the EU market.

Efforts will focus on testing and assessing some of the most popular new diesel models on the market, as these are assumed to contribute most to total emissions, especially in urban areas. This will provide further technical input to vehicle emissions policy considerations by the Commission, particularly in relation to considerations towards setting up a voluntary system for identification of low emission vehicles. Another objective is to provide a better indication of the current state of real-driving emissions to the Commission and the public at large.

The JRC has already been performing real world testing of light duty vehicles for many years now, as documented in several publications (2011³, 2012⁴, 2013⁵, 2014⁶ and 2015⁷). JRC has also been fully involved in the preparation of the RDE acts, supporting discussions with scientific evidence throughout the whole process and has been actively involved in setting new emission factors for use in air quality modelling through the ERMES group.

The specific objectives of this Administrative Agreement are as follows:

Objective 1 - Assess real world performance of top 10 best-selling models on the EU market.

This part will focus on the newest and most popular diesel models sold, ranked by their most recent total sales in the EU. Recently type-approved vehicles (presumably engineered with RDE provisions in mind) should be prioritized. It is necessary to test the most recent vehicles sold, because in a normal vehicle life cycle, it is expected that these will be on the market for longer. Also, a few independent studies (ICCT⁸ 2014, TNO⁹ 2016) that have investigated vehicle exhaust emissions have focused on the higher and more expensive end of the market. Therefore a better coverage of lower vehicle market segments is desirable.

Objective 2 – Contribute to production of appropriate emission factors for these vehicles

Policy makers and stakeholders that deal with exceedances of air pollutants concentrations need to know the emission performance of most popular vehicles with sufficient detail. To this end, the effect of proposed and already introduced data post-processing techniques needs to be fully accounted for and new emission data need to be produced for these vehicles. Up-to-date mission factors must be used in emission and air quality modelling in order to evaluate the effectiveness of newer diesel technology (driven by the phase-in of mandatory RDE not-to-exceed limits). It is therefore requested that the data resulting from the vehicle testing be made available to the broad community of emission modelers, specifically to the ERMES network.

³ <http://publications.jrc.ec.europa.eu/repository/handle/JRC62639>

⁴ <http://publications.jrc.ec.europa.eu/repository/handle/JRC71076>

⁵ <http://publications.jrc.ec.europa.eu/repository/handle/JRC75998>

⁶ <http://publications.jrc.ec.europa.eu/repository/handle/JRC93743>

⁷ <http://publications.jrc.ec.europa.eu/repository/handle/JRC97357>

⁸ http://www.theicct.org/sites/default/files/publications/ICCT_PEMS-study_diesel-cars_20141013.pdf

⁹ <http://publications.tno.nl/publication/34620046/H95fkX/TNO-2016-R10083.pdf>

Objective 3 – Publication of data

Final results and conclusions will be published so that the representative state of emissions is known to the general public. For the sake of transparency and public accountability, sufficient detail on the make/model of the vehicles tested should be included in the deliverables.

3. DESCRIPTION OF THE TASKS

The assignment foresees the following tasks to fulfill the objectives above:

Task 1: Obtain up to 10 of the best-selling passenger car models on the EU market (preference should be given to the latest PEMS certified vehicles, and the majority of them should be diesel vehicles) through commercially available lease or rent agreements; install state of the art PEMS equipment for measuring of all RDE regulated pollutants in accordance with applicable RDE provisions. The vehicle selection should be flexible to balance the number of manufacturers covered, and to be able also to compare recent petrol vehicles.

It should be ensured that the main part of testing is performed in line with RDE trip requirements (e.g., urban/rural/motorway shares) and boundary conditions; additional data coming from testing outside the scope of RDE parameters and boundary conditions shall also be produced.

Task 2: All emission data shall be compiled and presented for separate trips as well as in an aggregated form. These will be disseminated for use by different stakeholders, and in particular contribute to the production of emission factors in the COPERT and HBEFA emission inventory models.

Post processing of data (both current and proposed) needs to be performed as prescribed in RDE legislation and all the relevant comparisons between post processing need to be communicated. This shall include raw data comparison with post processing, as well as between different post processing methods.

Task 3: Publication of the test results is a key in ensuring transparency and shall be made after the provision of the final report.

4 DURATION OF ADMINISTRATIVE AGREEMENT

The Administrative Agreement shall last for [24] months starting [1 January 2017] and ending on [31st December 2018].

5 DELIVERABLES

The deliverables listed below (linked to the tasks set out in section 3 above) will be submitted.

Deliverable 1.1: Procedure for selecting vehicles will be developed in the first three months and subsequent start of actual testing will be proceeding for the remaining time of the agreement . Final data to be communicated in a report after all testing has finished.

Deliverable 2.1: Emission factors determination and relevant post-processing are to be performed subsequently to vehicle testing, a comparison procedure to be decided upon in the first six months of the agreement, to ensure consistency for all vehicles.

Deliverable 3.1 JRC shall provide a progress report within 12 months after the entry into force of this Administrative Agreement which shall cover procedures for the selection of vehicles and a the comparison procedure as well as test results from the first of the tested vehicles.

Deliverable 4.1 The draft final report covering all outlined tasks shall be delivered within 23 months after the entry into force of the Administrative Agreement, containing all the data, as well as relevant comparisons. Once agreed with the Commission, the final report shall be public. Additionally, the publication of a synthesis of the results in a peer-reviewed journal articles is encouraged.

6 METHOD OF PAYMENT

This Administrative Agreement will be reimbursed on a lump-sum basis.

An initial payment of [50%] will be paid upon signature of the Administrative Agreement.

A final payment of [50%] will be paid upon acceptance by DG ENV of the final report.

7 BUDGET

The budget for the work to be undertaken under the Administrative Agreement is 400,000 [four hundred thousand] Euro, including JRC's marginal overheads, and an indicative budget allocation is assumed with 80% to Task 1, 15% to Task 2 and 5% to Task 3.

8 CONTACT

DG ENV: [REDACTED] (DG ENV C.3: Clean Air)

DG JRC: [REDACTED] (DG JRC C.4: Sustainable Transport)