European Commission

INCEPTION IMPACT ASSESSMENT			
TITLE OF THE INITIATIVE	Revision of Regulation (EU) No 443/2009 and Regulation (EU) No 510/2011 regulating CO_2 emissions from light duty vehicles		
LEAD DG – RESPONSIBLE UNIT – AP NUMBER	CLIMA C4 2015/CLIMA/019	**DATE OF ROADMAP**	20 July 2016
LIKELY TYPE OF INITIATIVE	Commission legislative proposal		
INDICATIVE PLANNING	*Q1 2017*		
ADDITIONAL INFORMATION	*http://ec.europa.eu/clima/policies/transport/vehicles/index_en.htm*		
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A. Context, Subsidiarity Check and Objectives

Context

The July 2016 Commission's strategy for low-emission mobility[1] recalls that the mobility is an essential component of the broader shift to the low-carbon, circular economy needed for Europe to stay competitive and be able to cater to the mobility needs of people and goods, and that by mid-century, greenhouse gas emissions from transport will need to be at least 60% lower than in 1990 and be firmly on the path towards zero. Action on vehicles is one of the three key levers to tilt the transport sector in the right direction.

The 2030 climate and energy framework agreed by EU Heads of State in October 2014 requires a 30% reduction in non-ETS sector GHG emissions by 2030 compared to 2005. Road transport is a third of this sector's emissions.

In December 2015 the participating countries of the United Nations Framework Convention on Climate Change (UNFCCC) concluded the Paris climate change agreement. Governments agreed a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels and to aim to limit the increase to 1.5°C. The agreement calls for global GHG emissions to peak as soon as possible, recognising that this will take longer for developing countries and to undertake rapid reductions thereafter in accordance with the best available science.

The shift towards low-emission mobility will contribute towards reducing the EU's overall emissions, as we have committed to do under the Paris Agreement on climate change.

The current Regulations[2], which were last amended in early 2014, set CO_2 targets for new passenger cars and vans (collectively light duty vehicles or LDVs) for the period to 2021 for cars and to 2020 for vans. Both Regulations request the Commission to review the targets and other provisions by the end of 2015 and to report the results thereof to the European Parliament and the Council, accompanied, if appropriate, by a proposal to amend the Regulations.

- The July 2016 strategy on low-emission mobility acknowledges that further improvements in the combustion engine will continue to be needed, however, it also notes that the transformational change towards low- and zero-emission vehicles will need to be supported by a wide range of measures at all levels of policy-making to engage both manufacturers and users. The Commission will analyse the impact of different ways to incentivise low- and zero-emission vehicles in a technology neutral way, such as setting specific targets for them.

An extensive evaluation of the existing LDV Regulations has been carried out as part of REFIT[3]. This identifies that while the Regulations have been largely effective and have delivered CO_2 reductions at lower cost than

[1] COM(2016)501

[2] Regulation (EU) No 443/2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO_2 emissions from light-duty vehicles and Regulation (EU) No 510/2011 setting emission performance standards for new light commercial vehicles as part of the Union's integrated approach to reduce CO_2 emissions from light-duty vehicles

[3] http://ec.europa.eu/clima/policies/transport/vehicles/docs/evaluation_ldv_co2_regs_en.pdf

originally foreseen, there are areas deserving consideration for the future revision. These include the measurement of the emissions, the utility parameter (a way to differentiate between manufacturers' fleets), the upstream emissions from energy production and embedded emissions from vehicle manufacture. The evaluation recognises that there is a small administrative burden from the Regulations, but notes that this was not an issue raised by stakeholders and does not appear to be significant.

Road transport needs to contribute to the recently agreed 2030 climate targets, primarily to the 30% reduction (from 2005 levels) for the non-ETS sectors. No sector-specific targets will be set, but the reduction effort for the non-ETS sectors (transport, buildings, agriculture, small industry and waste) will be distributed between Member States through the revision of the Effort Sharing Decision. As indicated in the Commission Communication on low-emission mobility, reductions in the non-ETS sectors can come from actions that Member States take to reduce their own transport emissions and/or from EU legislation and policies, including the pst-2020 Strategy on cars and light commercial vehicles.

Emission values for checking compliance with the current Regulation are established as part of the type approval process for new vehicles using the New European Driving Cycle (NEDC). To improve the existing system, the Commission has proposed a new type approval framework to strengthen the independent testing, market surveillance and enforcement, and a new World Harmonised Light Vehicle Test Procedure (WLTP), which was agreed in UNECE. It is expected that CO_2 emission values established using the WLTP will be more representative of real driving conditions than the current NEDC. To ensure coherence, the analysis in preparation of the new initiative is based upon the WLTP.

Issue

LDV CO_2 emissions are of key importance for ensuring that the EU is on a satisfactory trajectory towards its 2030 and 2050 climate goals. In recognition of this need, both Regulations request the Commission to carry out a review by the end of 2015 and to report thereon, accompanied, if appropriate, by a proposal to amend the Regulations for the period beyond 2020. The main challenge is to set targets that are compatible with the EU's long term climate goals and the 30% reduction target set for non-ETS emissions for 2030 while ensuring that these can be achieved in a cost-effective, competitively neutral manner without harming competitiveness or causing adverse social impacts.

The Recitals of the 2014 amending Regulations noted that *"greenhouse gas emissions related to energy supply and vehicle manufacturing and disposal are significant"* and that the Commission should also look at action that can be taken *"to guide manufacturers towards optimal solutions"* to ensure that these *"emissions do not erode the benefits related to the improved operational energy use of vehicles"*.

LDV CO_2 exhaust emissions represent about 75% of total EU road transport CO_2 emissions (which in turn represent 70% of transport greenhouse gas emissions). In view of this, action to reduce LDV emissions will be important to achieve the overall emission reduction target for 2030 and the 2050 decarbonisation objective.

There are a number of market failures and barriers[4] which prevent the market alone from delivering LDV CO_2 reductions even where these have benefits greater than their costs. The most obvious market failure is that the cost of CO_2 emissions to society is an external cost which vehicle purchasers do not directly experience and therefore do not necessarily take into account in their purchase decisions.

Beyond this there are a range of market barriers which inhibit the development and deployment of CO_2 reducing technologies with lower costs than benefits. The main factors contributing to this are:

- New vehicle purchase choices are driven by a wide range of factors of which fuel economy may be one. Purchasers of new cars are on average from higher income groups than the average car driver, and, in case of company cars, are often not paying at all for the fuel consumed in their cars. This skews their purchase preferences away from fuel economy and towards factors such as comfort and power. Even where economic considerations[5] are important to the purchaser, other factors are likely to dominate, at least for cars, in particular depreciation in the first years of vehicle ownership outweighs fuel economy benefit[6]. These factors contribute to the general belief that purchasers of

[4] See e.g.: "*Market failures and barriers as a basis for clean energy policies";* Marilyn A Brown; Energy Policy Volume 29, Issue 14, November 2001, Pages 1197–1207 http://www.sciencedirect.com/science/article/pii/S0301421501000672 and "*Mind the Gap, Quantifying Principal-Agent Problems in Energy Efficiency*"; IEA; https://www.iea.org/publications/freepublications/publication/mind_the_gap.pdf

[5] For example "*Car buyer research report Consumer attitudes to low carbon and fuel-efficient passenger cars" by* Ecolane Transport Consultancy; March 2005, states the most important factors are: comfort, fuel consumption, practicality, reliability, running costs, safety, size, style and appearance. Less important factors are: brand, engine size, equipment level, image and style, insurance cost, performance and power. .

[6] For example https://www.moneyadviceservice.org.uk/en/articles/car-depreciation-explained recommends for the new car buyer that "choosing a car that holds its value well delivers much bigger savings over time than focusing on fuel efficiency"

new vehicles undervalue future fuel savings and would therefore not fully take them into account in a vehicle purchase decision[7];

- For similar reasons, there is no certainty for a new vehicle purchaser that they will be able to pass on the full value of higher fuel economy to a subsequent owner. Even if the new vehicle purchaser does take account of fuel savings, it would be rational for them to only consider fuel savings for the period in which they intend to own the vehicle. This is usually only a few years while the vehicles have an average lifetime of about 15 years and 4 owners, therefore only about a quarter of the societally optimal level of CO_2 reductions from vehicles would actually be demanded by purchasers;
- The undervaluation of fuel savings results in split incentives in the sense that vehicle manufacturers must take risks and invest and carry out R&D and develop and deploy new technologies to reduce vehicle CO_2 and fuel consumption which they might not be able to fully pass on to the purchaser while it is the latter who will reap the resulting economic benefit from reduced fuel consumption[8];

The use of regulation ensures that these market barriers are addressed and vehicle manufacturers are required to develop and deploy CO_2 reducing technology in line with the needs of society and the benefit of vehicle users.

The primary industries affected are the manufacturers of LDVs and of automotive components. These industries will need to deploy existing CO_2 reducing technologies and develop new ones. They will be able to benefit from global demand for such technologies.

Users of LDVs, whether business or private, and whether purchasing new or second hand LDVs will also be impacted. Due to fuel savings from more efficient LDVs, with current estimates of the cost of CO_2 saving technologies and fuels, it is expected that total costs of vehicle ownership will be reduced. However, the overall cost effectiveness of the legislation would depend on the design choices made.

Energy suppliers will be indirectly affected by a gradual reduction in demand for fuel for LDVs. Member States will be indirectly affected through the knock-on impacts of reduced fuel and vehicle tax revenues while reductions in transport sector GHG emissions will facilitate their achievement of climate policy objectives.

Society as a whole will benefit since GHG emissions will be reduced at low cost; energy security will improve since less energy will need to be used in the transport sector; and the avoided fuel expenditure (which would mainly have been spent on imports) will be recycled into the EU economy and will positively impact GDP. The uptake of new powertrain technologies is likely to make a contribution to improving local air quality.

There is a single market for cars and light commercial vehicles across the EU. If no EU action was taken to address the problem, Member States would adopt individual – possibly inconsistent – legislative approaches to reduce LDV CO_2 emissions in order to achieve the needed reductions for the non-ETS sector.

The evaluation stated that market fragmentation would likely result from uncoordinated Member State level action with the use of differing tools and levels of ambition. This would lead to higher costs, both for industry and vehicle purchasers for achieving the goal and probably be less effective at actually reducing GHG emissions. Current evidence from the use of CO_2 linked vehicle taxation[9] clearly demonstrates the widely differing approaches which would result from Member State action and the additional costs this would cause.

Subsidiarity check

Climate change is a competence shared between the EU and Member States that has largely been exercised by the Union and hence has become exclusive pursuant to Article 2(2) of the Treaty on the functioning of the European Union (TFEU). Therefore coordination at EU level is necessary and action is justified as provided for in Article 191 TFEU which aims at preserving, protecting and improving the quality of the environment, protecting human health, prudent and rational utilisation of natural resources and promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

EU action is justified on the grounds of subsidiarity as there is a single market for new LDVs. It is most cost-effective to ensure harmonised action on new LDV CO_2 targets across the whole of the EU single market because of the economies of scale. It is unlikely that Member States acting individually would set targets in an equally consistent manner as shown by the widely differing tax treatment of new cars across the EU.

[7] See e.g.: http://www3.epa.gov/otaq/climate/regulations/420r10008.pdf where a larger proportion of the studies assessed reached this conclusion.

[8] The European Car Manufacturers Association states: *"Cost increases have not been reflected in increased prices. Car prices have, over the same period, increased only in line with inflation. "* http://www.acea.be/press-releases/article/european-auto-industry-calls-on-europe-to-rebalance-co2-policy-in-the-inter

[9] ACEA welcomes the trend toward CO_2-related car taxation, but regrets the lack of uniformity in their implementation: http://www.acea.be/publications/article/overview-of-co2-based-motor-vehicle-taxes-in-the-eu

Main policy objectives

To reduce the climate impact of cars and light commercial vehicles in line with the requirements of EU climate policy and the 2030 climate and energy framework. This should be done in a cost-effective, technology and competitively neutral manner while improving the competitiveness of EU manufacturing.

Car and light commercial vehicle emissions of CO_2 represent a large share of current EU GHG emissions. Without action, that share would likely increase. Ensuring that GHG emissions from these vehicles are reduced forms a key part of the least cost approach to meeting the EU's climate objectives.

B. Option Mapping

Baseline scenario – no EU policy change

- The "baseline scenario" would be one in which there are no changes to the current Regulations. This would mean that the target of 95gCO_2/km for cars (to be achieved from 2021 on) and the target of 147gCO_2/km for light commercial vehicles (to be achieved from 2020 on) would continue to apply. It has to be also considered that the introduction of the new test procedure (WLTP) in 2017 will require a translation of these targets under the comparable stringency principle.

Options of improving implementation and enforcement of existing legislation or doing less/simplifying existing legislation

- The existing legislation is well implemented and enforced (including the application of fines for target exceedance).
- The legislation is dependent on the establishment of CO_2 values during type approval tests. It has become clear that there are weaknesses in these procedures and the Commission has proposed a revision of the type approval framework legislation with the aim of improving its enforcement and effectiveness.
- Simplification options will also be considered in the work. All relevant elements of the legislation will be reviewed in the Impact Assessment and some could be eliminated if this improves its effectiveness and simplify its implementation.

Options for reviewing the existing legislation for the period beyond 2020.

- The assessment of options will explore a range of different aspects identified in the evaluation, the requests from the co-legislators, from input from stakeholders, and to make sure the revised legislation contributes to the 2030 climate and energy targets and the longer term decarbonisation objective in a cost effective way, and it supports further innovation and competitiveness of EU industry. The aspects will include the following:
  - **The regulatory approach**
    - Regulated vehicle categories:
      - Should the approach cover only cars (M1) and Light Commercial Vehicles (N1) or also (part of) heavier vehicles (N2)?
      - Should there be one or two regulations?
    - Regulated entities - should they be manufacturers or manufacturer groups?
  - **Approach for setting target levels**
    - What should be the target levels and what would be the best metric to use for the target (tank-to-wheel or well-to-wheel)?
    - Should there be targets for fixed dates only or targets gradually reducing each year?
    - What should be the timetable for post-2020 targets?
  - **Distribution of effort across the different actors**
    - Should there be a utility parameter or not?
    - If yes, should it be based on mass (with or without correction) or footprint?

- If not, what are possible alternative ways to distribute the effort?

- **Low- and zero-emission vehicles**
  - Should there be specific incentives for the deployment of low- and zero-emission vehicles? How could these incentives be designed, what should be the timetable?
  - How can low- and zero-emission vehicles best be defined?
- **Off-cycle emission reduction**
  - Should off-cycle emission reduction be rewarded, for example through eco-innovation?
- **Flexibilities for meeting the target**
  - Should flexibilities such as banking/borrowing or trading of emissions be introduced? Should the option of pooling be kept? If so, under which conditions/constraints ?
- **Derogations for small volume and niche manufacturers**
  - Should derogations for certain vehicle types or for manufacturers be continued or amended?

Options for alternative policy instruments to the existing legislation

- Soft law was previously employed under the pre 2008 voluntary agreement to reduced car CO_2 emissions. This was found to be inadequate and was replaced by the existing Regulations. The evaluation confirms that this approach was much less effective. In view of this, this option is discarded.
- Inclusion of road fuel use in the EU ETS has been proposed by some stakeholders as an option. However, numerous studies demonstrate that either alone or as a complementary measure, it would not sufficiently encourage vehicle efficiency improvements since a carbon price at an exceptionally high level would be required to achieve the level of emission abatement in road transport that is necessary to meet the EU's objectives. In view of this, the complementarity of this option has been already carefully considered in order to avoid negative effects in the Staff Working Document accompanying the Low-emission mobility Communication.
- There are no international standards for car or light commercial vehicle CO_2 emissions and it would be institutionally difficult to create any. Because the level of emissions is heavily influenced by the size of vehicle, fuel choice and fleet composition, all of which differ significantly between markets[10], it is unlikely that seeking to harmonise requirements would be successful in the medium term.

Options for reviewing the scope of the existing legislation

- In the current legislation, manufacturers responsible for less than 1000 vehicles registered per year in the EU are not set specific emission targets. Any manufacturer producing more vehicles than this is unlikely to be a micro enterprise.
- Consideration can be given to whether a wider set of manufacturers should be excluded from having specific emissions targets or whether other exemptions are appropriate.

Options that take account of new technological developments

- Consideration can be given to new approaches to gathering information on fuel consumption and emissions in real world operation of cars and light commercial vehicles. New possibilities are raised from Portable Emissions Measurement (PEM) equipment and access to vehicle On Board Diagnostics port and CANbus (controller area network) data. These elements merit consideration as part of the approach to ensuring that emissions in real world driving reduce in the same way as the emissions reductions required to meet the legal target.

[10] While there are differences between EU Member State fleets those with other major markets are striking. The ICCT states the best-selling private vehicle in the EU is an 81kW, 1.6 litre diesel engine VW Golf weighing 1180kg, while in the US it is a Ford F150 pick-up truck with a 275kW, 3.7 litre petrol engine weighing 2359kg and in Japan it is a Toyota Aqua with a 54kW, 1.5litre petrol hybrid engine weighing 970kg. In EU Member States average mass in running order varies by about +/-10% around the EU average and average engine size by +/-15% and engine power by -12% to +24% around the EU average.

- It would be desirable to move towards an electronic system for vehicle registrations which would reduce error rates and facilitate the gathering of the necessary data for checking compliance with the legislation. Work in this field is underway among the relevant authorities. However, this is beyond the scope of the legislation.

Preliminary proportionality check

- LDVs cause about 15% of EU CO_2 emissions and consume about 20% of the EU's final energy. In view of the scale of these impacts as well as the significant economic benefits to be realised, measures to set mandatory targets for the further reduction of GHG emissions caused by light duty vehicles, and thereby reduce these in a cost effective manner, appear necessary to meet the EU's climate and energy goals. At this preliminary stage action is therefore considered to be proportionate.

C. Data Collection and Better Regulation Instruments

Data collection

Information is required on:

- the available technologies that can be deployed in the relevant time period to reduce new light duty vehicle CO_2 emissions as well as the costs of these technologies.
- potential impacts on industrial competitiveness to enable assessment of any competitiveness impacts and if possible to mitigate any impacts which may arise
- how the existing legal framework operates and any elements which could be improved;
- growing gap between test and real driving emissions and the contributory factors to enable this to be taken into account
- the impact of the utility parameter on company behaviour;
- the impact of different regulatory approaches and different regulatory metrics;
- the impact of the incorporation of different possible design elements (modalities) into the legislation
- overall GHG impacts.

- An evaluation has recently been carried out of the current Regulations and this provides a good basis for assessing elements which could be improved in the legislation. The impact assessment carried out for the 2020 legislation provides a good starting point. However, the underlying information needs to be updated and the analysis expanded.
- To fill the data gaps, a set of studies have been commissioned from external contractors to address the aspects for which detailed information has been identified as necessary. Some of these (listed below) are finished and for those which are already published a hyperlink is shown
  - Consideration of alternative approaches to regulating CO_2 emissions from light duty road vehicles for the period after 2020
  - Analysis of the influence of metrics for future CO_2 legislation for Light Duty Vehicles on deployment of technologies and GHG abatement costs
  - Data gathering and analysis to assess the impact of mileage on the cost effectiveness of the LDV CO_2 Regulations
  - Improvements to the definition of lifetime mileage of light duty vehicles
  - The potential for mass reduction of passenger cars and light commercial vehicles in relation to future CO_2 regulatory requirements
  - Assessment of competitiveness impacts of post-2020 LDV CO_2 regulation
  - Evaluation of Regulations 443/2009 and 510/2011 on CO_2 emissions from light-duty vehicles
  - Data gathering and analysis to improve understanding of the fleet, market and CO_2 emissions of N2 and M2) category of vehicles (vehicles with a gross weight between 3.5 and 12 tonnes)
  - Improving understanding of technology and costs for CO_2 reductions from cars and LCVs in the period to 2030 and development of cost curves
  - Review of in-use factors affecting the fuel consumption and CO_2 emissions of passenger cars
  - Supporting analysis on real-world light duty vehicle CO_2 emissions

- Data gathering and analysis to improve the understanding of 2nd hand car and LDV markets and implications for the cost effectiveness and social equity of LDV CO_2 regulations
- Consideration of light duty vehicle leasing in relation to the cost effectiveness of LDV CO_2 regulation
- Exploration of EU road vehicle fuel consumption and disaggregation
- Consideration of the role of speed limiters in light commercial vehicle CO_2 regulation
- Consideration of the impacts of Light-Duty Vehicles scrappage schemes
- Pricing and fitment of optional extras to cars and light-commercial vehicles

- Other studies still in progress which will be completed in 2016 are:
  - Assessment of the Modalities for Light Duty Vehicle CO_2 Regulations Beyond 2020
  - Assessing the impacts of selected options for regulating CO2 emissions from new passenger cars and vans after 2020
- Other published information is available and will be drawn upon as appropriate including specific studies, data from research, evidence on currently marketed vehicles, analysis carried out in support of fuel economy and CO_2 standards in other advanced markets such as the USA and Japan.

Consultation approach

- The consultation strategy contains a number of elements:
  - Broad questions about the need for car and light commercial vehicle CO_2 standards beyond 2020 were asked in the 2011 public consultation on setting 2020 standards;
  - All specific studies which have been carried out in support of this initiative have involved data gathering and checking as well as consultation with all relevant stakeholders;
  - All completed studies are published on DG CLIMA's website;
  - The findings of all studies completed so far have been presented to stakeholders at meetings in December 2012, May 2014, December 2014;
  - The Commission has held bilateral meetings with major vehicle manufacturers;
  - The Commission has had contact and attended meetings with relevant industry associations including ACEA, JAMA, CLEPA, World Auto Steel/Eurofer, European Aluminium Association, Plastics Europe.
  - The Commission presented preliminary options for the post-2020 Strategy on cars and vans in its Communication on low-emission mobility.
  - A public consultation is being launched on the basis of a questionnaire;
  - A stakeholder meeting will be organised to hear a presentation of the main options under consideration.
- The main stakeholder groups to be consulted will cover:
  - Member States
  - Vehicle manufacturers
  - Component suppliers
  - Energy suppliers
  - Vehicle purchasers
  - Drivers associations
  - Environmental and consumer NGOs
  - Social partners
- The main purpose of the consultation is to verify the accuracy of the information available to the Commission and to enhance and verify its understanding of the views of stakeholders with regard to different aspects of the possible revision of the Regulation.

- The launch of stakeholder consultations related to this initiative is announced at:

http://ec.europa.eu/yourvoice/consultations/index_en.htm

Will an Implementation plan be established?

☐ **Yes** √ **No**

It is likely that the legislative instrument to be used will be a Regulation, in continuation of the current approach. In view of this and the fact that no margin of appreciation was left with regard to its application by Member States to avoid distortion of competition, there is no specific need to assist with implementation in Member States. Arrangements with expert groups exist to address different aspects of the current Regulations. It is anticipated that those arrangements would continue to function satisfactorily in the future.

D. Information on the Impact Assessment Process

- *IA work started in* Autumn 2015
- An ISG already exists for road vehicle greenhouse gas emissions. The services invited to participate are:

Secretariat General, Legal Service, DG GROW, DG MOVE, DG ENER, DG JUST, DG ENV, DG RTD,

DG TAXUD, DG JRC, DG COMP, DG ECFIN, DG EMPL.

E. Preliminary Assessment of Expected Impacts

Likely economic impacts

There is likely to be an additional cost for the deployment of CO_2 reducing technology in vehicles. The level of this additional cost will depend on the level of CO_2 reduction required which will be primarily linked to the level of future target.

Supplying the needed technology is likely to increase business for component suppliers. For the purposes of the assessment, it is assumed that the additional technology cost is passed on to vehicle purchasers. This may be achieved by manufacturers in different ways which may not directly show in an increase in the list price of the vehicle, for example through changing the pricing of spare parts or other after sales services or though the pricing of optional extras or engine variants. For purchasers there is an offsetting reduction in fuel consumption and thus running costs.

The level of fuel savings is dependent on the oil price and on levels of fuel taxation. The net impact depends on the scale of these various factors. It is likely that the overall impact will lead to fuel savings which outweigh additional costs or at worst be roughly neutral.

Likely social impacts

The social impacts that could arise from the small changes to new vehicle prices are expected to be very limited, given that the expected additional technology cost appears to be substantially lower than the average level of optional extras purchased by buyers of new cars – which is purely discretionary expenditure.

It is likely that the social impacts are progressively positive in that poorer vehicle users and countries with lower GDP will largely experience the fuel savings in second hand vehicles. These benefits will come at little additional cost since new vehicles depreciate in value extremely fast. Since around three quarters of all cars are bought second hand this means the majority of the fuel savings will benefit consumers who have paid less than the full cost for the fuel saving technology. It can be considered that these social impacts are likely to be positive. Evidence suggests that purchasers of second hand cars appear to be more interested in fuel efficiency than new cars purchasers[11].

Likely environmental impacts

The main environmental impact is the reduction of GHG emissions from cars and light commercial vehicles, which is the key objective of the policy. This is beneficial to society as a whole due to the reduction in climate

[11] See e.g. http://ec.europa.eu/consumers/consumer_evidence/market_studies/second_hand_cars/index_en.htm

change and is also beneficial to other economic sectors within the EU who will not have to make as large GHG reductions as they would have to without action in this sector.

Thanks to increase market uptake of new powertrain technologies, with zero tailpipe emissions at least for part of their use, a likely positive impact on air pollutant emissions is expected.

Likely impacts on simplification and/or administrative burden

Based on the findings of the evaluation, it is expected that the same types of arrangements would be continued to monitor compliance and therefore it is not expected that there will be any significant change in administrative burden compared to the existing legislation.

Likely impacts on SMEs

The majority of companies directly affected are larger than SMEs. It is likely that if there are SMEs directly covered by the Regulations, they will produce only small numbers of vehicles and therefore could qualify for an exemption.

Likely impacts on competitiveness and innovation

The Commission's study on the competitiveness impacts of the regulations shows that these are likely to be neutral. It is possible for there to be some positive and negative indirect competitiveness impacts but these are likely to be small and to cancel out.

Likely impacts on public administrations

It is likely that the instrument to be used will be a Regulation and therefore no transposition is required.

Likely impacts on third countries, international trade or investment

There is not likely to be any direct impact on third countries. Switzerland has in the past largely replicated EU car and light commercial vehicle Regulations and might continue to do so in the future. It is possible that other countries might take inspiration from the EU approach in this field.

It is not expected that international trade will be impacted as discussed in the competitiveness study since there is very little discernible possible differential impact on EU and non-EU manufacturing. It is possible that if there is an increase in the use of electrified powertrains that this would lead to an increase in the imports of battery cells from Asia since that is currently where the bulk of battery manufacturing occurs.

As identified in the competitiveness study, there may be an increase in Foreign Direct Investment for manufacturers from outside the EU who may need to expand or upgrade their manufacturing or research facilities in the EU.