



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

**Guidance on the implementation of
The Cleaner Road Transport Vehicles (Scotland) Regulations 2010
SSI 2010/390**

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1 Purpose

The purpose of this guidance document is to support those responsible for the procurement of road transport vehicles on behalf of public sector organisations in Scotland. It has been produced to assist public sector procurers and others in interpreting and implementing the requirements of the Cleaner Road Transport Vehicles (Scotland) Regulations SSI 2010/390 ('the Regulations')¹. The scope of the Regulations applies to: 'contracts for the purchase of road transport vehicles by contracting authorities, contracting entities or operators'².

It also reinforces good vehicle procurement principles.

The document stresses the requirement for all of the central government family to buy in accordance with the Minimum Mandatory level of the Government Buying Standards (GBS) for transport; it also emphasises that it is good practice for other parts of the Scottish public sector to buy in accordance with the GBS and all public sector organisations are encouraged, where relevant and proportionate to buy in accordance with the 'Best Practice' level of the GBS for transport.

It should be noted that Defra and the Department for Transport are currently working on a revised GBS for transport. The new standard is due to be published in 2014. Guidance will include a Decision Tool, advice on using award criteria and a whole life costing model.

2 Key points

The document provides guidance on how to apply the requirements of the Regulations, which are:

- by setting technical specifications for energy and environmental performance;
- by including energy and environmental impacts in award criteria;
- and/or by monetising energy and environmental impacts.

The document also signposts users to sources of further information and best practice.

¹ See Annex 1

² <http://www.legislation.gov.uk/ssi/2010/390/made>. Vehicles means cars, vans, LGVs and HGVs and specialist vehicles. The Regulations do not extend to leasing of vehicles. However, organisations may wish to consider the emissions criteria for any vehicle which they lease.

3 Background and Scottish Context

The transport sector is a significant contributor to emissions in Scotland. In 2012, transport emissions amounted to 12.877 MtCO_{2e} or 24.3% of total Scottish emissions, and the majority were from road transport.

The implementation of the Regulations takes place in the context of Scotland's climate change targets.

In the report '[Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027: The Second Report on Proposals and Policies](#)' (RPP2)³, The Scottish Government has outlined a range of proposals and policies that will be taken forward in relation to transport. These are based around four broad packages of activity:

1. decarbonising vehicles;
2. road network efficiencies;
3. sustainable communities including modal shift to walking, cycling and public transport; and
4. business engagement around sustainable transport.

These proposals and policies are anticipated to reduce emissions by 4.0 MtCO_{2e} in 2027 from a Business as Usual scenario of 14.5 MtCO_{2e}.⁴

The government's ambitions for decarbonising road transport will require a widespread adoption of alternative technologies, such as plug-in vehicles. '[Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles](#)'⁵ focuses on this ambition for plug-in vehicles and sets out a vision that:

"By 2050, Scottish towns, cities and communities will be free from the damaging emissions of petrol and diesel fuelled vehicles. A significant reduction in greenhouse gas emissions will be accompanied by marked improvements in local air quality, noise pollution and public health. Scotland will also enjoy increased energy security and new economic opportunities through leadership in sustainable transport and energy technologies.

A key ambition is that by 2040 almost all new car sales will be near zero emission at the tailpipe and that by 2030 half of all fossil-fuelled vehicles will be phased-out of urban environments across Scotland."

³ Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027: The Second Report on Proposals and Policies (RPP2) <http://www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/lowcarbon/meetingthetargets>

⁴ These figures are taken from 'Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027: The Second Report on Proposals and Policies RPP2'

⁵ <http://www.transportscotland.gov.uk/report/j272736-00.htm>

4 The Regulations – Interpretation, Scope and Methodology

The Regulations of 08/12/2010 apply to Scotland, the full text of which is found at Annex 1.

The requirement for contracting authorities or entities to take into account the energy and environmental impacts when procuring road transport vehicles is mandatory. There are three ways of complying.

This document provides guidance on how to apply the requirement using option 1 (set technical specifications for energy and environmental performance) and could also be used for option 2 (include energy and environmental impacts in award criteria). The third option of 'including energy and environmental impacts in the purchasing decision by monetising them in accordance with set methodology provided within the Directive'⁶ is not dealt with in detail in this guide, but reference is made to the methodology outlined in Article 6 of the Directive.

It provides information and guidance on emissions and carbon performance requirements, for new or used vehicles purchased by contracting authorities and their operators. This document is not mandatory and is for guidance only. The recommendations are designed to meet current and forthcoming legislative requirements and will be updated over time.

The consideration of these Regulations should be applied when the next procurement exercise is scheduled. There is no requirement for procurements to be brought forward.

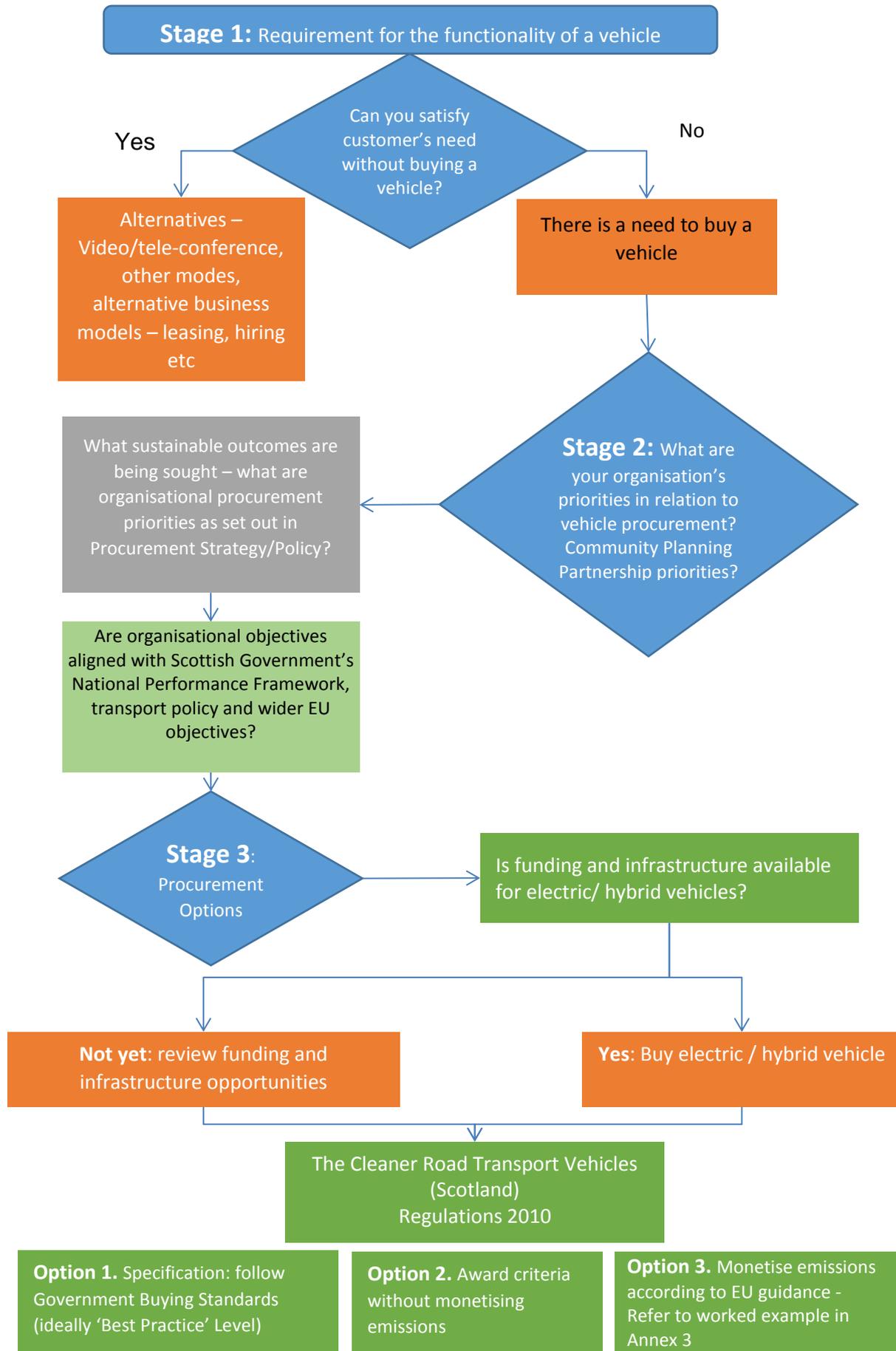
⁶ DIRECTIVE 2009/33/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0033&from=EN>

5 Procurement Options

At the outset, and prior to a procurement, the sustainability of the suggested action should be considered. Emphasis should be placed on meeting key policy targets (such as tailpipe emissions targets) and an outcomes-based approach to procurement should then be undertaken. The decision tree at Figure 1 outlines the steps that should be considered by organisations considering the procurement of a vehicle⁷.

⁷ Vehicles means cars, vans, LGVs and HGVs and specialist vehicles. The Regulations do not extend to leasing of vehicles, however, organisations may wish to consider the emissions criteria for any vehicle which they lease.

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Stage 1: Does the organisation need to buy a vehicle?

At the start of this process, a number of options may be considered, not all of which will result in the procurement of a vehicle.

So the process starts with considering the function or need that requires to be met. For example, if the purpose for which a vehicle is currently being used is to transport staff to meetings a range of alternatives may be suitable, as well as other considerations:

1. The use of video-conferencing or teleconferencing facilities;
2. Alternative transport modes – bus, train, walk, cycle as appropriate;
3. Travel coordination among colleagues and others, including car sharing;
4. Route planning and optimisation to reduce the need for journeys;
5. Community sustainable travel planning, as part of Sustainable Travel Plans.

These have the advantages of savings on staff travel time (costed where possible) as well as fuel costs, reduced carbon emissions and reduced air pollution. Managing demand for vehicles is part of good, sustainable procurement.

An assessment or fleet audit can be carried out to determine what the fleet requirements are prior to the purchase of new vehicles. The Scottish Government funds a transport advice programme through the [Energy Saving Trust](#)⁸ that offers independent advice for organisations. This advice includes information on [low carbon car selection](#)⁹, [fuel efficient driving](#)¹⁰ (emphasising the importance of good driving behaviour) electric vehicles, [pool fleets](#)¹¹ and grey fleets (which consist of employee-owned vehicles, bought with their own money and reimbursed on a pence per mile basis).

In addition, during 2014/15 and 2015/16 Transport Scotland's 'Switched On Fleets' initiative will offer free evidence based analysis of public sector fleets to identify new opportunities for the cost effective deployment of plug-in vehicles. Grant funding will also be provided to all Community Planning Partnerships, to enable partners to either match-fund the purchase of new plug-in vehicles or cover the costs of leasing for a 3 year period. The [Vehicle Certification Agency](#) (VCA) also provides car fuel data, CO₂ and vehicle excise duty data, for use when selecting new cars¹².

⁸ Energy Saving Trust <http://www.energysavingtrust.org.uk/scotland/Organisations/Transport>

⁹ Energy Saving Trust, Buying an Efficient Car
<http://www.energysavingtrust.org.uk/scotland/Organisations/Transport/Buying-an-efficient-car>

¹⁰ The Scottish Government funds the Energy Saving Trust to provide subsidised Fuel Efficient Driving training. Further information can be found at:

<http://www.energysavingtrust.org.uk/scotland/Organisations/Transport/FuelGood-training>.

¹¹ Pool Fleet Guidance <http://www.energysavingtrust.org.uk/scotland/content/view/full/3294>

¹² Vehicle Certification Agency (VCA) Car Fuel Data: <http://carfueldata.direct.gov.uk/search-by-fuel-economy.aspx>

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Early consideration with key stakeholders of relevant whole life costs as part of options appraisal will help inform decisions regarding alternatives, including procurement or otherwise of vehicles.

Stage 2: If the decision is that the organisation needs to buy a vehicle:

Consideration of relevant whole life costs will help inform an appropriate specification and the subsequent evaluation of bids, if vehicles are to be purchased. While higher emissions lead to higher fuel costs and potentially higher vehicle excise duty, there may be other costs which impact on the whole life cost of procuring and operating vehicles. These may for example include maintenance and service intervals and costs, insurance, length of warranties and depreciation, subject to the scope agreed with relevant stakeholders.

A number of factors also need to be taken into account when deciding on the vehicle to be procured:

- a) Scottish Government policy;
- b) Your own organisation's policies and objectives (around issues such as climate change targets, noise pollution and air quality);
- c) You may also need to coordinate with Community Planning Partners –see below.

a) Scottish Government Policy

The Scottish Government's ambition, as set out in the introduction, is for almost complete decarbonisation of road transport by 2050.

This is also in the context of the [Procurement Reform \(Scotland\) Act 2014](#)¹³ and updated [EU Procurement Directive](#)¹⁴ which reinforce the requirement to consider relevant and proportionate environmental and socio-economic risks and opportunities and the requirement for organisations obligated by the Act, to have a Corporate Procurement Strategy which is reported against annually.

¹³ Procurement Reform (Scotland) Act 2014

<http://www.scotland.gov.uk/Topics/Government/Procurement/policy/ProcurementReform/ProcReformAct>

¹⁴ EU Procurement Directive update <http://www.scotland.gov.uk/Topics/Government/Procurement/Procurement-News/reformAct14>

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b) Your own organisation's policies and objectives (around issues such as climate change targets, noise pollution and air quality)

In order to help public sector organisations determine their spend priorities in relation to environmental and socio-economic risks and opportunities a suite of tools are available. This will enable organisations to focus on materiality within categories of expenditure, including vehicles. The [Prioritisation Methodology and Sustainability Tools](#)¹⁵ are available to assist in this process (at the time of writing this guidance updated versions of these tools are currently being Beta tested, with final versions due for 2015).

c) You may also need to take into account the decisions and views of Community Planning Partnerships

The decisions of Community Planning Partnerships may influence decisions regarding sustainable travel options and planning and in turn an organisation's choice of vehicle in relation to current and future infrastructure, for example for plug-in vehicles.

Stage 3: Procurement Options

The accessibility of re-charging infrastructure and the availability of funding to support the roll-out of plug-in vehicles are amongst the considerations facing procuring organisations.

Since 2011 Government has invested over £10 million in electric vehicles and infrastructure in Scotland. There are currently over 700 EV charging points located across the whole of Scotland, of which, around 500 are publicly accessible as part of the "ChargePlace Scotland" network. This includes the work being undertaken to provide rapid charge points at 35 mile intervals to support Scotland's primary road network.

¹⁵ Sustainable Procurement Marrakech Approach
<http://www.scotland.gov.uk/Topics/Government/Procurement/policy/corporate-responsibility/CSR/Marrakech>

Case study: Plug-in Vehicles - Dundee City Council

Dundee City Council illustrates how an organisation can move from buying fossil-fuelled vehicles with lower emissions to buying electric vehicles.

Plug-in vehicles are a vital part of Dundee City Council's plans for a modern and efficient fleet, delivering carbon reduction targets and placing Dundee at the forefront of developing a national infrastructure and creating a cleaner, healthier city. Through a strategic and focused approach the Council has become a public sector early adopter of plug-in vehicles and has worked closely with partners to provide investment that has delivered real savings as well as benefits to the environment by improving air quality, cutting emissions and reducing noise pollution.

In summer 2014, Dundee had 38 plug-in vehicles on the road, with a mixture of cars and vans which are used across many disciplines from corporate laundry, joiners, painters, supervisors and pool cars. This is supported by an increasing recharging infrastructure which currently includes four rapid chargers (with this number set to increase to five in the near future).

Dundee has already opened up their charge points to the public through working closely with the Electric Vehicle Association Scotland and its members. The points will also be connected to Transport Scotland's "ChargePlace Scotland" Pay-As-You-Go network, which is being rolled out in 2013/14.

The next stage for Dundee City Council is to fully maximise the use of the vehicles and ensure that the Council meets a target of 300,000 miles per year travelled in them. This will be achieved by ensuring full utilisation through a central booking facility and extending the use of the vehicles by working with out-of-hours services and taking full advantage of the rapid charging facilities.

The Dundee City Council case study can be found at:
<http://www.transportscotland.gov.uk/report/j272736-00.htm>¹⁶

¹⁶ Switched On Scotland: A Roadmap to Widespread Adoption of Plug-in Vehicles
<http://www.transportscotland.gov.uk/report/j272736-00.htm>

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Case study: Procurement of Low Carbon Vehicles – Stirling Council

Stirling Council introduced a car pool scheme across its main properties in April 2009. The vehicles are a combination of petrol Smart cars and small diesel hatchbacks and are Council-owned or leased.

Hiring vehicles allowed flexibility while total vehicle requirements were assessed as staff moved from the previous car allowance scheme to the pooled arrangement. The Smart cars offer higher efficiencies in running costs and emissions and are now vehicle excise duty exempt.

Both business mileage and carbon emissions have seen a significant decrease since introduction of the pool fleet.

Case Study from Scottish Sustainable Network Conference 2011 Poster Compendium

Council Switches-on To Electric Cars, Tuesday 28th February, 2012:

<http://www.stirling.gov.uk/latest-news/transport-and-streets/2012/council-switches-on-to-electric-cars>

Further information on electric vehicles can be found at:

- Energy Saving Trust Electric Vehicles¹⁷
- Greener Scotland Electric vehicle¹⁸

The subsequent purchase of vehicles must comply with the Cleaner Road Transport Vehicles (Scotland) Regulations.

¹⁷ [Energy Saving Trust Electric Vehicles](http://www.energysavingtrust.org.uk/scotland/Organisations/Transport/Electric-vehicles)
<http://www.energysavingtrust.org.uk/scotland/Organisations/Transport/Electric-vehicles>

¹⁸ [Greener Scotland Electric vehicle](http://www.greener-scotland.org/greener-travel/electric-vehicles) <http://www.greener-scotland.org/greener-travel/electric-vehicles>

6 Guidance on the Implementation of the Regulations

6.1 Options for implementation

Organisations required to take into account energy and environmental impacts can now do so in one of three ways. They can either:

1. Set technical specifications for energy and environmental performance in the documentation for the procurement of road transport vehicles (**option 1**);
2. Include energy and environmental impacts in the purchasing decision by using energy and environmental impacts as award criteria as part of a procurement procedure (**option 2**);
3. Include energy and environmental impacts in the purchasing decision by monetising them in accordance with set methodology provided within the Directive (**option 3**).

The requirement for contracting authorities or entities to take into account the energy and environmental impacts when procuring road transport vehicles is mandatory.

To apply **option 3**: monetise energy and environmental impacts, your organisation will require technical and economic expertise. As this method is quite rigid and prescriptive in the Directive, we would recommend you follow the text in [Article 6 of the Directive](#)¹⁹ directly. See Annex 3 for more information on the monetisation of emissions – fuel costs, carbon emissions and pollutant emissions.

The recommendations are designed to meet current and forthcoming legislative requirements and will be updated over time. This guidance also signposts to websites for more information and best practice.

Information is also provided on alternative fuels and technologies that could improve emissions performance significantly. Where the benefits of these technologies are not already reflected in the energy consumption and emissions data for the vehicle, (e.g. where they have been retrofitted after vehicle manufacture) it is recommended that additional points be awarded where real environmental benefits can be demonstrated. The intended outcomes and benefits must be clearly expressed in the invitation to tender (ITT), and the number of points in tender evaluation that can be earned as a result of demonstrating real environmental benefits must be clearly stated.

¹⁹ DIRECTIVE 2009/33/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0033&from=EN>

As indicated in Section 4 this document provides guidance on how to apply the requirement using option 1, which could also be used for option 2. As indicated on Page 9 consideration of relevant whole life costs will help inform specification as well as the subsequent evaluation of bids.

6.2 Option 1

6.2.1 Government Buying Standard (GBS)

Scottish Government policy requires all of the central government family to buy in accordance with the Minimum Mandatory level of the GBS. They are also commended for use throughout the public sector in Scotland.

Although The European Union's Green Public Procurement (GPP) Standards are not mandatory for Scottish public sector organisations, their use is considered best practice²⁰.

GBS have been developed for transport including road vehicles (cars, vans, buses, waste collection vehicles). These standards can be found [here](#)²¹ and in Annex 2 (*subject to the revision due in 2014*).

As well as emissions, the GBS for transport include award criteria and contract performance clauses which include a focus on the ability of vehicles to use fuel from renewable sources (for example biofuels, renewable electricity or hydrogen), noise limits, inclusion of bio-content/materials where appropriate (for example components which comprise starch rather than plastic), design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life, design to enhance reparability and availability of more frequently used spares. Best Practice level of the Standard has higher and more extensive requirements than the Minimum Mandatory level.

The EU GPP Standard for transport, to which the GBS refers, may provide additional useful guidance. For example, further voluntary, more stringent purchasing recommendations can be found in module 3 of the Green Public Procurement Toolkit at: http://ec.europa.eu/environment/gpp/toolkit_en.htm for authorities with specific air quality issues.

²⁰ Green Public Procurement Toolkit at: http://ec.europa.eu/environment/gpp/toolkit_en.htm

²¹ <https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs#specifications-for-the-gbs-listed-by-sector>

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6.2.2 Option 1. GBS - Cars

See: <http://sd.defra.gov.uk/advice/public/buying/products/transport/standards/>

- GBS Minimum Mandatory criteria require that CO₂ emissions for fleet average for new cars should not exceed 130g CO₂/km (*subject to any revision within the updated GBS*).
- If the contracting authority wants to set a standard higher than the minimum, it may choose to use the GBS 'Best Practice' level criteria for cars (for example as suggested in the Decision Tree at Figure 1). These require CO₂ emissions for fleet average for new cars to be lower than those required in the core technical specification.
- In relation to exhaust gas emissions, vehicles must comply with the EURO 5 standard.
- CO₂ correlates directly with the fuel burned; therefore lower CO₂ vehicles will have low fuel consumption and be cheaper to operate. Extra points in a procurement process could be awarded for cars achieving CO₂ lower than the target of 130g/km. Lower CO₂ should, however, be expressed as a desirable requirement in the invitation to tender which must also specify the number of points that can be earned in the tender assessment where such an offer is made in tenders received.

It may also be organisational policy that these standards are applied to privately owned vehicles used for business (grey fleet).

6.2.3 Option 1. GBS - Vans & Minibuses

See: <http://sd.defra.gov.uk/advice/public/buying/products/transport/standards/>

- Government Buying Standards require that CO₂ emissions for fleet average for new vans should not exceed 175g CO₂/km.
- On 11 May 2011 the European Council and Parliament adopted a regulation (EU 510/2011) setting CO₂ emission targets for all new vans registered in the EU. The Regulation means that the average new van sold in the EU in 2017 will be required to emit 175g CO₂/km or less and 147g CO₂/km or less by 2020.
- If the contracting authority wants to set a standard higher than the minimum, it may choose to use the GBS 'Best Practice' level criteria for Vans and Minibuses. GBS Best Practice criteria require CO₂ emissions for fleet average for new vans (after 2012/13) to be lower than those required in the core technical specification
- In terms of exhaust gas emissions, vehicles must comply with the EURO 5 standard.

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The Department for Transport and Society of Motor Manufacturers & Traders have developed a searchable van CO₂ database that will provide further guidance; this is available at: <http://vanfueldata.dft.gov.uk/>, it provides details on the CO₂ emissions for all main models of vans.

Information on best practice, efficient driving and advice for fleets can be found from the Energy Saving Trust (see details on Page 8).

Further information on buses, minibuses, waste collection trucks, bus services and waste collection services can be found in the Government Buying Standards for transport: <http://sd.defra.gov.uk/advice/public/buying/products/transport/standards/>

6.2.4 Type Approval

Certain categories of new vehicle are currently required to have government approval for the whole vehicle before they are registered and placed on sale. This is being extended to cover extra vehicle categories by October 2014.

During the transition period some manufacturers will opt to gain approval and others will not. Some manufacturers will obtain EC Whole Vehicle Type Approval (EC WVTA) whilst others will gain national approval.

A new vehicle with a valid type approval will comply with all road vehicle regulations, including noise and tailpipe emissions, applicable to that category of vehicle on the date it was registered. However, for vehicles not required to have type approval and not in possession of type approval, it should not be assumed that the vehicle does not comply with a particular requirement. Instead the manufacturer should be contacted for more information.

The 'V5C' Registration Certificate issued by DVLA for every registered vehicle will contain enough information to ascertain the emissions standard that the vehicle complies with, and in some cases also the noise standard it complies with. For brand new vehicles that are not yet registered, the Certificate of Conformity (CoC) (if applicable) will contain this information.

Until October 2014 not all new vehicles will be required to have a CoC.

Type approval only applies to the vehicle before it is registered. Sometimes vehicles are converted to run on alternative fuels after registration. Our recommendation would be to purchase a vehicle that was converted before registration, to ensure it has been assessed against the correct standards.

The rules on type approval are complex. More information can be found at: <http://www.dft.gov.uk/topics/vehicles/ecwvta/>

or on the VCA (Vehicle Certification Agency) website: <http://www.vca.gov.uk/vehicletype/index.asp>

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or for the Regulations see Europa:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:171:0001:0016:EN:PDF>

6.2.5 Specialist Vehicles

Specialist vehicles such as ambulances or mini buses adapted to carry less able passengers are also subject to specific type approval requirements due to the importance of the type of work they carry out. As a general guideline, the base vehicle should comply with the recommended performance standards provided in this document; details on system performance should be available from the VCA.

It is recognised that in the case of some specialist vehicles, data for emissions and CO₂ emissions is unavailable. Testing to obtain this data could be requested from the vehicle supplier if the size of procurement is substantial and this would be cost effective.

For further information and definitions of vehicles, please see type approval regulations

http://ec.europa.eu/enterprise/sectors/automotive/documents/directives/directive-2007-46-ec_en.htm (Directive 2007/46/EC).

6.2.6 Driver Aids and Measures

How the vehicle is operated and maintained will have an effect on the actual emissions the vehicle produces. This section refers to aids and other measures that can be implemented to encourage more efficient operation. Extra points in a procurement process could be awarded for the presence of these aids and measures. However, they are only beneficial if they are acted upon and maintained regularly. Refer to the transport GBS (Best Practice) for information on some of these. Extra points may be awarded for bidders that meet Best Practice rather than Minimum Mandatory.

- **Gear Shift Indicators (GSI)**

Gear-shift indicators are designed to signal to the driver when to change gear at the optimum moment. Moving more swiftly through the gears can reduce fuel consumption by avoiding unnecessarily high engine speed. The system may also decrease wear on engine and transmission components.

- **Air Conditioning Gases**

All air conditioning systems fitted to cars and car-derived vans should be type approved to EU Directive 2006/40/EC, which sets gradually reducing limits on the allowable Global Warming Potential of refrigerant gases. Further information on Global Warming Potential can be found at:

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http://ec.europa.eu/enterprise/sectors/automotive/environment/macs/index_en.htm

- **Tyre Pressure Monitoring System**

Tyre pressure monitoring equipment can be fitted to measure and alert the driver to changes in tyre pressure and temperature. The onus then falls on the driver or workshop/garage to ensure the necessary action is taken.

- **On-going maintenance**

Commitment for requirements on items such as the use of low viscosity engine lubricants, low noise and low rolling resistant tyres should be signed up to as part of the maintenance/driver contract. Guidance on criteria for these can be found at:

http://ec.europa.eu/environment/gpp/pdf/toolkit/transport_GPP_product_sheet.pdf

In addition the following measures are those that public sector organisations should consider in tandem with vehicle procurement:

- **Fuel efficient driving**

To raise awareness and participation of the driver, fuel efficient driver training courses can be implemented, with the average trainee saving 15% on fuel use. As indicated on Page 5 The Scottish Government funds the Energy Saving Trust to provide subsidised Fuel Efficient Driving training. Further information can be found at

<http://www.energysavingtrust.org.uk/scotland/Organisations/Transport/FuelGood-training>.

- **Telematics**

Telematics systems (telecommunication systems integrated with informatics) may provide fleet managers with a range of invaluable information from vehicle utilisation and accurate fuel monitoring, to maintenance requirements. Full guidance available at [Annex 4](#)

6.2.7 Guidance on weightings

The Regulations do not specify levels of weighting that should be awarded to the environmental criteria of vehicle performance relative to non-environmental criteria. These weighting levels are entirely at the discretion of the procurer.

It is recommended that weightings are applied appropriately to the circumstances of any specific procurement exercise. For the procurement of passenger cars, for example, there is a large choice of energy efficient models available. Therefore, it would be suitable to have significant weighting for high fuel economy and low emissions. Equally, where authorities are purchasing specialist vehicles, for example

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ambulances, the weighting would be more likely to reflect the performance and capability requirements for the vehicle purpose, over the environmental criteria.

The flexibility of this Directive therefore allows the authority to set weightings according to its local priorities. For example air quality targets may be a higher priority in the short term than energy efficiency.

All bidders should provide technical sheets and certification documents as is appropriate.

7 Dissemination

This guidance should be disseminated to public sector fleet managers and procurement teams.

8 Contact

Enquiries about this guidance should be addressed to:
Electric_Vehicles@scotland.gsi.gov.uk

Annex 1: Cleaner Road Transport Vehicles (Scotland) Regulations

Interpretation

In the **Cleaner Road Transport Vehicles (Scotland) Regulations-**

"contracting authority" means a contracting authority as defined in regulation 3 of the Public Contracts (Scotland) Regulations 2006 [SSI 2006/1];

"contracting entity" means a utility as defined in regulation 3 of the Utilities Contracts (Scotland) Regulations 2006 [SSI 2006/2];

"Directive [2009/33/EC](#)" means Directive [2009/33/EC](#) of the European Parliament and of the Council on the promotion of clean and energy-efficient road transport vehicles;

"operator" means an operator for the discharge of public service obligations under a public service contract within the meaning of Article 2 of Regulation (EC) 1370/2007 of the European Parliament and of the Council on public passenger transport services by rail and by road, as amended from time to time, the value of which is not less than the threshold, applicable to that contract, as defined in regulation 8 of the Public Contract (Scotland) Regulations 2006 [SSI 2006/1] or regulation 11 of the Utilities Contract (Scotland) Regulations 2006 [SSI 2006/2];

"road transport vehicle" means a vehicle in the vehicle categories listed in Table 3 of the Annex to Directive [2009/33/EC](#).

Scope of the Regulations

(1) Subject to paragraph (2), these Regulations apply to contracts for the purchase of road transport vehicles by contracting authorities, contracting entities or operators.

(2) These Regulations do not apply to contracts for the purchase of road transport vehicles that are set out in Article 2(3) of Directive 2007/46/EC on establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, as amended from time to time, provided those vehicles are not subject to type approval or individual approval.

Purchase of clean and energy-efficient road transport vehicles

(1) Any contracting authority, contracting entity or operator when purchasing road transport vehicles must take into account the operational lifetime energy and environmental impacts referred to in paragraph (2) in respect of the vehicle to be purchased.

(2) The operational lifetime energy and environmental impacts include-

(a) energy consumption;

(b) emissions of-

- (i) carbon dioxide;
- (ii) oxides of nitrogen;
- (iii) non-methane hydrocarbons; and
- (iv) particulate matter.

(3) The contracting authority, contracting entity or operator may also take into account other relevant environmental impacts.

(4) The contracting authority, contracting entity or operator must satisfy the requirements of paragraph (1) by applying one of the options set out in paragraph (5).

(5) The options are-

(a) setting technical specifications for energy and environmental performance in the documentation for the purchase of road transport vehicles for the impacts listed in paragraph (2), together with any additional environmental impacts being considered by virtue of paragraph (3);

(b) including energy and environmental impacts in the purchase decision by-

(i) including these impacts as award criteria where a procurement procedure is applied; or

(ii) applying the methodology prescribed in [regulation 5](#) to convert these impacts into monetary values for inclusion in the purchase decision.

Methodology for the calculation of operational lifetime costs

For the purpose of [regulation 4\(5\)\(b\)\(ii\)](#), the operational lifetime costs for the matters identified in [regulation 4\(2\)](#) are to be monetised and calculated by using the methodology set out in Article 6 to Directive [2009/33/EC](#).

Enforcement of duties

(1) For the purposes of ensuring compliance with the requirements of these Regulations-

(a) Part 9 of the Public Contracts (Scotland) Regulations 2006 [SSI 2006/1] has effect-

(i) in relation to a contracting authority and an operator as it has effect in relation to a contracting authority for the purposes of ensuring compliance with the requirements of those Regulations; and

(ii) as if any reference in that Part to an economic operator included a reference to an operator; and

(b) Part 9 of the Utilities Contracts (Scotland) Regulations 2006 [SSI 2006/2] has effect-

(i) in relation to a contracting entity and an operator as it has effect in relation to a utility for the purposes of ensuring compliance with the requirements of those Regulations; and

(ii) as if any reference in that Part to an economic operator included a reference to an operator.

Annex 2: Government Buying Standards for Vehicles

<http://sd.defra.gov.uk/advice/public/buying/products/transport/standards/>

Annex 3: Option 3 methodology & example

In the Directive, Option 3 requires taking environmental impacts into account is to monetise them using methodology provided by the European Commission (EC). The values to be used in assessing the environmental impacts of each vehicle are provided along with the energy content of fuel to be assumed and the mileage over which to appraise the vehicles. The methodology also specifies that fuel costs should be valued using the pre-tax cost per litre. These inputs are shown below in table 1:

Table 1: EC Data inputs Energy content of fuels (MJ/litre)	
Diesel	36
Petrol	32
Emissions Values (2007 prices)	
CO2 (cents/kg)	3 to 4
NOx (cents/g)	0.44
NMHC (cents/g)	0.1
PM (cents/g)	8.7
Lifetime mileage (km)	
Cars	200,000
Light commercial	250,000
HGV	1,000,000
Buses	800,000

The European Commission has launched a Clean Vehicle Portal to help organisations choose cleaner and energy efficient vehicles: <http://www.cleanvehicle.eu/?id=427>

The portal covers passenger cars, light duty vehicles, heavy duty vehicles, minibuses and buses.

The European Commission website includes a Lifetime Cost Calculator. The Clean Vehicle Portal also includes a Guided Tour with a slide show on calculating lifetime costs of a passenger car or bus, for those registered on the Portal. This can be found at:

<http://www.slideshare.net/cleanvehicle/clean-vehicle-guided-tour-7520411>

Lifetime cost tool-box

The European Commission, through its Intelligent Energy-Europe (IEE) Programme, has supported a number of projects that have developed tools and techniques which can support the application of the Directive. These include the STARBUS project.

The STARBUS project has developed a system to calculate fuel consumption, CO₂ emissions and pollutant emissions of different vehicles under real road operating conditions, on the basis of a simple measurement on-board a trial vehicle driven over the relevant route. In addition, an assessment tool accessible through internet has also been provided, which enables direct use of the data previously measured for determination of the corresponding operational costs.

http://ec.europa.eu/transport/themes/urban/vehicles/directive/toolbox_en.htm

Annex 4: Telematics Guidance

With the cost of operating a fleet ever increasing, fleet managers are looking for ways to help manage this and help make improvements wherever possible. It is therefore becoming more common for organisations to have telematics systems installed in their fleet vehicles. Telematics are simply telecommunication systems integrated with informatics. Although there are many benefits to utilising telematics for both the organisation and driver, there are still some concerns around employee privacy and the systems being used against drivers

The Many Benefits of Telematics

Telematics have considerably advanced over the last few years. Whereas, previously they were primarily used for locating vehicles, they are now a valuable tool for effectively managing the operation of fleet vehicles.

The data from telematics, if used effectively, can provide fleet managers with a range of invaluable information from vehicle utilisation and accurate fuel monitoring, to maintenance requirements. Closely monitoring these aspects helps an organisation to identify areas where improvements can be made, whether that is through downsizing or reallocation of vehicles, fuel efficient driver training or maintaining residual value in the vehicles.

Telematics can also improve job allocations by dispatching jobs directly to the most appropriate drivers; this not only reduces driving time for the drivers but can also improve customer service by increasing productivity.

As well as providing vehicle information, the systems can provide information to help drivers such as optimising routes to avoid congestion and automatically recording working hours and tracking which can't be disputed.

One of the biggest motivations for an organisation to install telematics is the overall cost and carbon savings that can be realised. It is widely considered that the effective use of telematics can achieve, on average, a 12% saving on a fleet's fuel bill as a result of enhanced scheduling and job allocation, reduced mileage and improved driving behaviour. To get this result, it does involve an investment in terms of technology as well as resources to manage the data.

The key to managing the potentially overwhelming array of information available from any telematics system is to focus on specific areas of importance and to monitor by exception reporting.

From an environmental perspective (i.e. efficient fuel management) the three most important issues to be managed are:

- **Speeding** – Aside from the legal and safety issues, as discussed in the previous section, the excessive use of speed will significantly increase the vehicle's fuel consumption and therefore the organisation's cost and CO₂ emissions;

- Engine Idle Time – An idling engine is extremely wasteful and therefore an unnecessary and costly waste of fuel. This information will also identify what is probably unproductive work time;
- Out of area operations – although this is principally an operational management issue in terms of employee productivity, this information will also be highlighting where additional and potentially unnecessary mileage is occurring.

Telematics systems, when used correctly, should pay for themselves in a relatively short period due to the savings in fuel, maintenance and reducing driver misuse.

Another aspect that telematics can help an organisation with is Corporate Social Responsibility reporting. There is increasing pressure on companies to monitor and report on Carbon Dioxide emissions and introduce targets for reducing the impact of their activities. Using telematics helps to automate the process for reporting on fleet emissions.

ALD Automotive, one of the UK's largest vehicle leasing and fleet management companies conducted a YouGov1 survey which showed that over a third of UK businesses with over 500 employees have introduced telematics technology in their vehicles to help them improve their fleet management.

Overcoming Concerns

Although there are many benefits to using telematics systems in fleets, there can be some concerns over storing personal data and how this could potentially be used against employees. Individual staff members may have concerns and Unions will want to be satisfied that their members are protected.

Different organisations have different reasons for installing telematics, but protecting drivers and vehicles is one of the main reasons along with the cost savings which can be realised.

Some employees may feel by having telematics installed on the vehicles they are being spied on. Employers will want to know where their vehicles are and how they are being driven, and if the employees are working to the expected standard, there should be no issues. Furthermore, telematics can be favourable to employees in many situations such as:

- If an employee is involved in an accident, telematics can provide vital details such as the location of the vehicle and the speed at which it was traveling which can help police investigations.
- If a vehicle is stolen, it is possible to trace it so it can be returned easily.
- If a driver or service is wrongly accused of bad practice, for example bin lorries not servicing a street, vehicle blocking a driveway or drivers accused of speeding / dangerous driving, then telematics can be used defend the driver.
- Drivers who know there are telematics installed in their vehicles tend to drive more cautiously which has been proved to reduce accidents.

- Telematics can be used to record accurate time sheets, stop unnecessary journeys and assist drivers in taking more direct routes for jobs.
- Should an employee experience vehicle problems in remote locations with no mobile reception, telematics can aid recovery.

Organisations have a legal duty of care to make sure drivers are safe and legal on the road and telematics can help to do this. Not only can telematics help to reduce breakdowns and accidents, they can also provide employee management information by monitoring indicators such as high risk driving hours, number of hours behind the wheel, driving without a break and high mileages.

Unions may have concerns that data from telematics, which is not available to employees, can be used in disciplinary investigations and as evidence in hearings. To overcome this, it is advised that any telematics data or information is made available to all parties involved, including any employee who is subject to internal disciplinary process.

To ensure the greatest benefit from telematics, it is important to get buy-in from employees, and therefore Unions from the offset. Undertaking a full consultation with employees and Unions will help to explain how the technology works and the benefits it can bring, and get acceptance from the drivers to help overcome any barriers.

Another survey of 500 UK business drivers, conducted by ALD Automotive, revealed that sixty percent of drivers would have no issue with having on-board technology to track the location of their vehicle. Looking at the results from both surveys, there is a growing acceptance by businesses and drivers of the benefits delivered by telematics to reducing fuel costs, improving driver behaviour and ensuring driver safety.

Case study

To assist West Dunbartonshire Council with the management of its £8M of vehicle fleet assets, a vehicle emissions monitoring and tracking system was installed on all fleet vehicles. The key objectives of introducing the system to the vehicle fleet were to;

- 1) Reduce fuel usage and CO₂ emissions
- 2) Improve the safety and security of operatives, vehicles & equipment
- 3) Improve operational efficiency through monitoring vehicle usage
- 4) Improve customer service through quicker response to requests and complaints
- 5) To identify the position of fleet vehicles at any time
- 6) To identify inappropriate driving standards and support staff to improve standards.

In March 2010 the council installed GPS tracking boxes into 260 of their fleet of vehicles. This was a significant investment for the council, particularly at a time when budgets were being trimmed in every area. Nevertheless the Fleet and Waste Services Division were confident that its introduction would reduce fuel costs.

Driving more economically, efficiently, and safely will reduce the council's carbon footprint and longer term costs. It was clear that many drivers, often unknowingly, were wasting valuable resources because of the way they drive. Reducing average speed and instances of harsh braking and cornering can deliver direct, measurable reductions in fuel consumption, servicing and maintenance costs and is proven to reduce accidents.

As a result of improved control of the vehicle fleet, the council have reported that fuel usage has dramatically fallen in comparison with their baseline year, with net fuel cost savings of £70,000 in 2011/12. The council has not only saved huge costs, they have succeeded in reducing their annual carbon emissions as well, through the improvement in fleet management that the telematics units have provided.

Further copies of this document are available, on request, in audio and large print formats and in community languages (Urdu; Bengali; Gaelic; Hindi; Punjabi; Cantonese; Arabic; Polish).

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Transport Scotland, Buchanan House,
58 Port Dundas Road, Glasgow, G4 0HF
0141 272 7100

info@transportscotland.gsi.gov.uk

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