



Office for
Low Emission
Vehicles

Plug-in Taxi Grant Vehicle Application Form and Guidance Notes

Version 2.0

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Background

We have begun a period of change in the way we power our road vehicles, a period which will provide hugely significant opportunities for the UK to improve our environment, grow the economy, and to deliver people the independence and mobility they want.

The Government is committed to grasping this opportunity. Government has a mission to put the UK at the forefront of the design and manufacturing of zero emission vehicles, and for all new cars and vans to be effectively zero emission by 2040.

Through the Office for Low Emission Vehicle (OLEV), the Government is investing nearly £1.5bn between 2015-20 in ULEVs. As part of this, £70 million is made available to support the new market in ultra low emission taxis - £50m for the Plug-in Taxi Grant (PiTG) and £20m to support chargepoint infrastructure for ultra low emission taxis (ULEV taxis).

The PiTG has been introduced as an incentive scheme designed to support the uptake of purpose built ULEV taxis by offering up to a maximum of £7,500 for eligible taxis.

The PiTG is designed to bridge the cost gap that currently exists between taxis powered by internal combustion engines versus new ultra-low emission technologies. The grant is only available for new purpose built ULEV taxis that meet the eligibility criteria (see Section 3 below).

What the PiTG offers

The PiTG scheme offers a discount on the price of eligible taxis of up to a maximum of £7,500 or £3,000 – depending on the vehicle's range, emissions and design. It is available to all taxi drivers and businesses buying or leasing a new purpose-built taxi at the point of purchase from the dealership or manufacturer.

Under the scheme, eligible taxis are allocated into one of two categories based on their carbon emissions and zero-emission range:

- Category 1 PiTG (up to £7,500) - a zero emission range of 70 miles or more and emissions of less than 50g CO₂/km.
- Category 2 PiTG (up to £3,000) –a zero emission range of 10-69 miles and emissions of less than 50gCO₂/km.

For both categories the ULEV taxi must also meet the technical requirements set out in Section 3 below.

How the Scheme Operates

The PiTG is only available to newly purchased taxis; second hand taxis will not be eligible for the grant. Conversions of vehicles into taxis after they have been sold and registered will also not be eligible for the grant.

Eligible Vehicles

The aim of the PiTG are to support the new market for 'ULEV purpose built taxis'.

In order to be eligible for the grant, any purpose built ULEV taxi must meet the criteria set out in section 3 of this document below.

OLEV reserves the right to alter the criteria, if, for example, during the course of the PiTG there are changes to relevant regulations or standards.

The necessary type approvals will need to be obtained before an application for a vehicle to be eligible for the scheme is submitted to OLEV.

Details of the relationship between OLEV and the applicant submitting a vehicle for acceptance for the PiTG scheme will be provided in an agreement to that applicant when one of its vehicles has been considered eligible. The vehicle will be formally approved for the scheme when the agreement is signed and returned.

If an applicant is applying for more than one variant of the same vehicle to become eligible for the scheme, provided that the different variants are covered by the same type approval and warranty terms, a single reference number and agreement will be used to cover the different variants.

Applying for the grant

Once a vehicle has been formally approved for the scheme, the manufacturer and its selected dealerships will be given access to an online portal, through which they can register claims for eligible vehicles. Claims will be paid to the manufacturer on a monthly basis. Further details of this process will be made available to the applicant once a vehicle has been formally approved for the scheme.

From the customer's point of view, the PiTG is deducted from the price of the vehicle at the point of sale by the dealership, so there is no paperwork for them to complete in order to benefit from the grant.

Application process

Manufacturers or their UK sole authorised representatives wishing to apply for a vehicle to become eligible for the PiTG should complete the application cover sheet and additional information form (Annexes A & B), attach the required supporting evidence and submit to

olev.enquiries@olev.gsi.gov.uk for assessment by the Plug-in Vehicle Grant panel. Supporting evidence should be in English.

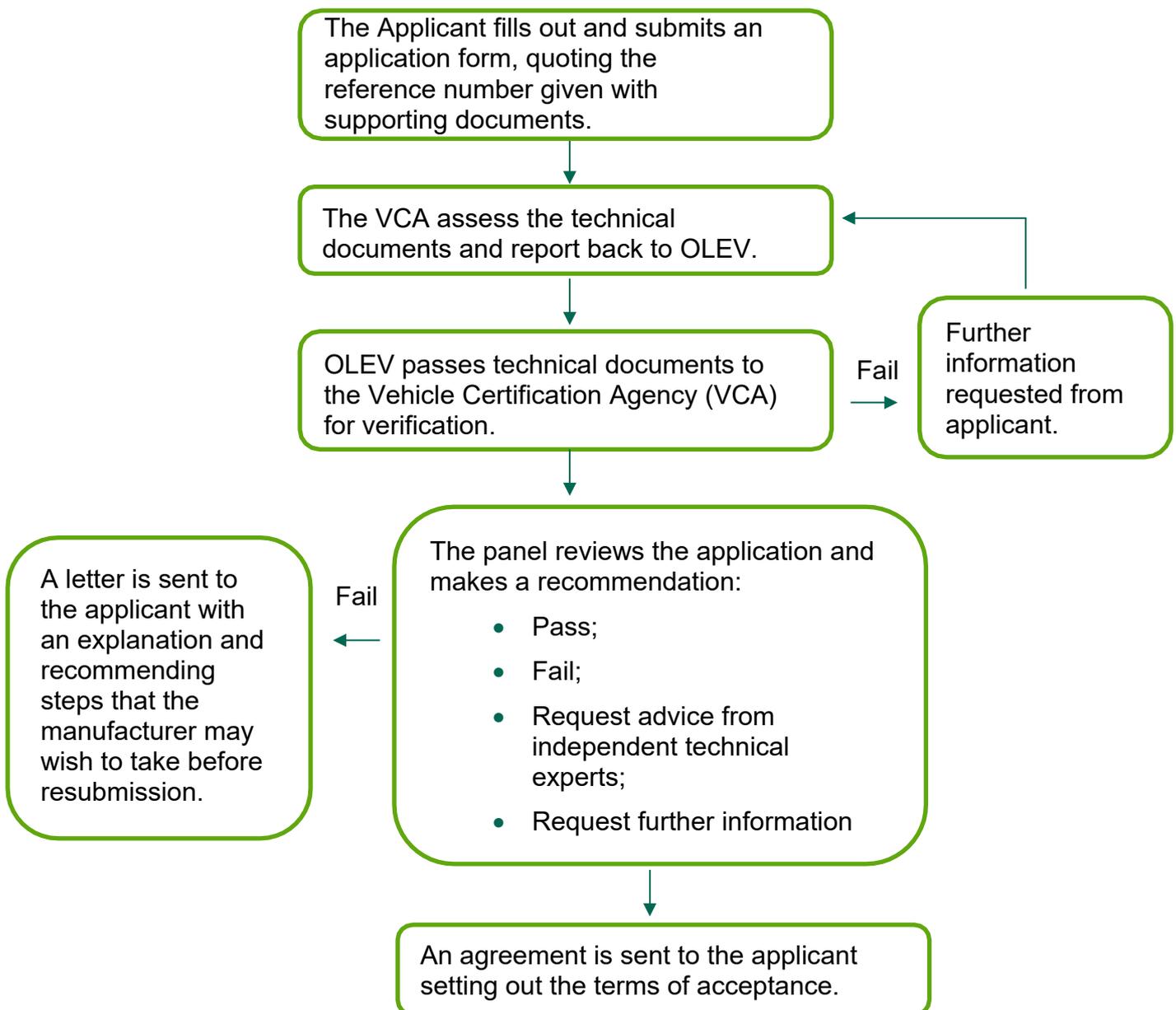
Detailed guidance on how to complete the application form is given below. Any questions regarding the application process should be sent to olev.enquiries@olev.gsi.gov.uk

The assessment process

We will aim to process applications as quickly as possible. Applications will be processed as soon as they are received and we would hope to make a decision within two months. This depends on the complexity of the application and whether further technical information is required. The assessment process is as follows:

- 1 Applicant submits completed application form and supporting evidence to olev.enquiries@olev.gsi.gov.uk. OLEV confirms the application has been received and is complete.
- 2 The Vehicle Certification Agency (VCA) confirms to the assessment panel (made up of Government Officials from OLEV, DfT and BEIS) the validity of type approval certificates presented as evidence.
- 3 The assessment panel meets to consider the evidence and either:
 - Decides that the application has passed,
 - Decides that the application has failed, or
 - Requests further information from the applicant, or
 - Requests advice from independent technical experts before coming to a decision. This is likely to be on evidence relating to battery or fuel cell degradation (3.9) and/or crash safety (3.10), but may be on another aspect of the application.
- 4 If the vehicle passes the assessment process, an offer letter will be sent to the applicant setting out the terms of acceptance.
- 5 If the vehicle fails, a letter will be sent to the applicant explaining the reasons why and recommending steps which the vehicle manufacturer might wish to take before resubmitting an application.
- 6 If the vehicle passes, OLEV will upload its make and model onto the OLEV site.
- 7 This process is summarised in the flow chart below. Any questions on the process should be sent to olev.enquiries@olev.gsi.gov.uk

Flow chart to summarise the Plug-in Taxi Grant application and assessment process:



Costs

Cases where independent technical expertise is needed to assess applications are likely to be rare. In such cases, however, there may be a cost to the applicant. Independent technical advice is most likely to be required for the following criteria:

- Battery or fuel cell degradation (3.9) and
- Crash safety (3.10) under route b) with crash testing for other internationally recognised consumer information programmes or regulatory standards that offer a comparable or better level of safety stringency as EC WVTA.

Review of decision

Applicants have a right to seek a review of the assessment panel's decision. Further detail would be provided to the applicant in the letter advising that the application had been unsuccessful.

If significant further work is required to validate the submitted evidence, the applicant may be asked to meet those costs. OLEV will let the applicant know if this applies, in order to enable the applicant to decide whether they wish to meet the costs or to withdraw the application.

Applicants are encouraged to contact OLEV with any specific questions.

Guidance for completing the application form

The application form can be found at Annex A. This form acts as a cover sheet and must be accompanied with supporting evidence in English. Accepted evidence is outlined below.

If the requested evidence is inapplicable to the vehicle concerned, the applicant should state why the vehicle benefits from an exemption.

1. Applicant contact details

- 1.1 **Plug-in Taxi Grant application number** - This is a unique identification number provided by OLEV in response to a request for the PiTG application form. It should be used in all correspondence. If an applicant is applying for more than one variant of the same vehicle to become eligible for the scheme, provided that the different variants are covered by the same type approval and warranty terms, a single reference number and agreement will be used to cover the different variants.
- 1.2 **Name of company applying** – Name of company submitting the application for assessment.
- 1.3 **Applicant address** – Applicant's postal address.
- 1.4 **Point of contact for application process** – Named individual with contact email, phone number and address.

2. Summary of vehicle details

2.1 Vehicle model

2.2 **Model variants seeking approval** – list all the variants of the model for which approval is being sought.

2.3 **Energy storage capacity and chemistry (or principle of operation)** – detail the chemistry, in the case of a battery, or the principle of operation of any other powertrain energy storage device and its capacity (in kWh or other appropriate units)

2.4 **Internal combustion engine capacity (if applicable)** – For PHEVs state the engine nominal capacity (cm³) and fuel (e.g. petrol, diesel)

2.5 **Fuel cell capacity (if applicable)** – the on-board fuel storage capacity of a fuel cell vehicle (FCEV) (in kg, in the case of hydrogen, or an appropriate unit for any other fuel) and power of the fuel cell (kW)

2.6 **Maximum speed (mph)** – as will be publicly specified by the applicant (if maximum speed is limited please specify the limited maximum)

2.7 Number of seating positions

2.8 **Vehicle segment** – e.g. lower medium or supermini

2.9 **Recommended retail price** – If this has not been finalised at the point of application, please give an approximate value. The value stated should be inclusive of VAT, before deduction of the plug-in taxi grant.

3. Meeting the eligibility criteria

The purpose of this section is to set out the eligibility conditions that an ultra-low emission taxi (ULEV taxi) must meet in order for vehicles to be eligible to receive the UK Government's Office for Low Emission Vehicles (OLEV) Plug in Taxi Grant (PiTG).

From 1 September 2019, OLEV will only accept Worldwide Harmonised Light Vehicle Test Procedure (WLTP) results to determine whether these above conditions have been met. For ULEV taxis, the WLTP 'electric city range' will be accepted as evidence that the zero-emission range condition is met.

OLEV will not accept any applications for left hand drive vehicles.

An application for the approval of a new type of ULEV taxi to receive the PiTG must be made in writing to OLEV. Such applications can only be submitted once the required type approval for the vehicle has been obtained. This application must be approved by OLEV prior to any vehicle being eligible to receive the PiTG.

Except in the case of demonstration vehicles, to receive the PiTG the purchaser/driver must provide their license to operate that has been authorised by the relevant local licensing authority.

The Government intends as far as possible to maintain a stable platform for vehicle manufacturers producing ULEV taxis and will not therefore expect to review these eligibility conditions fully for the duration of the PiTG. However, OLEV reserves the right to amend these conditions under the PiTG should there be situations which require it, such as amendments to national or international laws with respect to road vehicles or air quality.

3.1 Vehicle Type

The vehicle must be within the M1 category, as defined under EU Directive (EC) 2007/46/EC.

Accepted Evidence:

To show that the vehicle is homologated in the M1 category:

- A copy of the EC Whole Vehicle Type Approval certificate;
OR,
- A copy of the EC Small Series Type Approval certificate;
OR,
- A copy of the UK National Small Series Type Approval certificate;

3.2 Type approval as a wheelchair accessible vehicle

To receive the PiTG, vehicle manufacturers must show that the vehicle has been type approved as a wheelchair accessible vehicle. Alternatively, the vehicle manufacturer will need to demonstrate that the vehicle is capable of safely accommodating a disabled person in a DfT reference wheelchair in the passenger compartment.

3.3 Manoeuvrability Requirements

The vehicle must be capable of being turned on either lock so as to proceed in the opposite direction without reversing between two vertical parallel planes not more than 8.535 metres apart.

The wheel turning circle kerb to kerb on either lock must be not less than 7.62 metres in diameter.

3.4 Multi-stage builds

For the purposes of the plug-in taxi grant any multi-stage built M1 vehicle will need to have been approved as a completed vehicle (that comprises both chassis and bodywork); the Accepted evidence listed above must cover the vehicle in its finished condition. An approval for a vehicle that has not been completed will not be accepted. This is to ensure vehicles driven off the forecourt when bought by the public meet the plug-in taxi grant criteria.

Manufacturers will need to consult the Vehicle Certification Agency (VCA) to obtain completed vehicle approval.

<http://www.dft.gov.uk/vca/vehicletype/type-approval-for-go.asp>

<http://www.dft.gov.uk/vca//vehicletype/ecwvta-framework-directive.asp>

To make an enquiry about applying for Type Approval, e-mail enquiries@vca.gov.uk or call +44 (0)117 952 4164

3.5 CO₂ emissions

As explained, to qualify for the scheme, the taxis tailpipe CO₂ emissions in combination with its zero-emission range must be such that the vehicle falls into one of the following two categories:

- For Category 1 PiTG (up to £7,500) - have a zero emission range of 70 miles or more and emissions of less than 50gCO₂/km.
- For Category 2 PiTG (up to £3,000) – have a zero-emission range of 10-69 miles and emissions of less than 50gCO₂/km.

Accepted evidence

To verify the vehicle's tailpipe CO₂ emissions:

- A copy of the Communication Form issued by the authority approving the vehicle to UN-ECE Regulation 101, showing CO₂ emissions of 50g/km or less;

OR,

- A copy of the approval certificate that shows compliance with Regulation (EC) No 715/2007, showing CO₂ emissions of 50g/km or less.

3.6 Zero emission range

As explained in requirement 3.5, the vehicle must have a zero-emission range such that when considered together with its CO₂ emissions it falls into one of the two categories specified above.

Accepted evidence

To verify the vehicle's zero emission range:

- A copy of the Communication Form issued by the authority approving the vehicle to UN-ECE Regulation 101;
- OR,
- The Type Approval Certificate (including Addendum) issued by the authority approving the vehicle to Regulation (EC) No 715/2007.

3.7 Maximum speed

To allow safe use on trunk roads and motorways, taxis must be able to travel at a speed of at least 60 mph (96 km/h).

Different manufacturers use different processes for assessing maximum speed; this, alongside other environmental factors introduces considerable variation in real world performance.

In the event of credible concerns appearing about the vehicle actually achieving a maximum speed of 60 mph (96 km/h) in service, then the applicant will need to pay for the vehicle to be assessed in accordance with the technical requirements of UN ECE Regulation 68 to address those concerns. The Secretary of State reserves the right to impose this requirement on all applications throughout the lifetime of the scheme.

Accepted evidence

- A copy of the publicly available specification of the vehicle stating that the vehicle has a top speed of 60 mph (96 km/h) or greater;
OR,
- A signed statement of vehicle maximum speed 60 mph (96 km/h) or greater), stating that this value will be made publicly available;
OR,
- A copy of an approval certificate for UN-ECE Regulation 68;
OR,
- A test report from an appropriately equipped and qualified technical centre that shows the vehicle has been tested in accordance with the technical requirements of UN-ECE Regulation 68.

3.8 Warranty for the vehicle and battery or fuel cell and electric drive train

- The vehicle (excluding the battery or fuel cell and electric drive train ¹) must be covered by a warranty for a minimum period of 3 years or 60,000 miles (96,500km), whichever comes sooner. The warranty must be in line with the directive providing guidance on certain aspects of the sale of consumer goods and associated guarantees in EU Directive 1999/44/EC.
- The battery or fuel cell and electric drive train must be covered by a warranty for a minimum period of 3 years, or 60,000 miles (96,500km), whichever comes sooner. The warranty must be in line with the directive providing guidance on certain aspects of the sale of consumer goods and associated guarantees in EU Directive 1999/44/EC.

In addition, the customer must be offered the option to extend the warranty by a minimum of 2 years. Applicants may choose to attach an additional cost to this warranty extension.

¹ 'Drive train' is used to mean the parts that send power from the engine to the wheels. These include the clutch, transmission (gear box), drive shafts, U-joints and differential.

- Where the battery or fuel cell and broader electric drive train is leased to the customer, the leasing agreement must offer a level of support to the customer that is at least equivalent to the above mentioned warranty.

Accepted evidence

- A copy of the warranty document showing that the above requirements have been met. If the warranty document is not available at the point of application, the applicant may submit written confirmation that the vehicle will be offered with a warranty that meets the above specification. However, before any vehicles can be sold and supported under the scheme we will require a copy of the warranty document.

Further information on meeting the warranty criterion are included at Annex G.

3.9 Battery or fuel cell degradation

The applicant must demonstrate that the battery or fuel cell used to drive the vehicle's propulsion system has an acceptably low rate of degradation. As a guide to applicants, pending the evidence presented in each case, an acceptable level of degradation is defined as:

- For battery electric vehicles², the battery must maintain at least 80% of its initial or rated charge capacity for the initial 3 years, or 70% of initial or rated charge capacity for the initial 5 years.

For fuel cell vehicles, the fuel stack must maintain at least 90% of its rated voltage output for the initial 5 years. Given the newness of this technology, we are prepared to work with manufacturers who supply alternative evidence which provides what the panel judges to be a reasonable level of reassurance to the consumer.

3.10 Crash safety

Vehicles must demonstrate that they meet the minimum safety requirements of the Plug-In Taxi Grant scheme.

There are two routes to demonstrate compliance:

- Homologation to category M1 through EC Whole Vehicle Type Approval (EC WVTA; not including EC Small Series or National Approval routes);
- OR,
- Evidence that the taxi demonstrates a comparable or higher levels of safety as judged by international standards. This may be evidence of crash testing for internationally recognised consumer information programmes, such as Euro NCAP, but must cover front impact, side impact and pedestrian protection.

Accepted evidence

- A copy of the EC Whole Vehicle Type Approval certificate for the model of the taxi that is being presented to the panel.

OR,

² Including pure electric, plug in hybrid and range extender vehicles.

- Evidence submitted by the applicant to show the taxi has been crash tested to international standards and/or consumer information programmes where the outcome shows broadly comparable or higher levels of performance to those specified in EC Whole Vehicle Type Approval crash tests. This must include frontal, side and pedestrian impact. The evidence provided may be assessed by independent technical experts.

In making the decision on what are comparable safety outcomes, the assessment panel reserves the right to require the applicant to complete crash testing if it is considered that the data provided is insufficient, or the results inconclusive.

3.11 Electrical safety

As a minimum, for a vehicle to be eligible for the scheme, it needs to show approval to UN ECE Regulation 100.01, which became mandatory for new vehicles in December 2012.

The 02 series of amendments to UN ECE Regulation 100 entered into force in July 2013 and will become mandatory for new vehicle types from 15th July 2016. This amendment adds requirements for the safety of the Rechargeable Energy Storage System (REESS), namely vibration, mechanical shock, fire resistance tests, short circuit protection. If the applicant is not able to provide a copy of the approval certificate to UN-ECE Regulation 100.02, evidence should be provided to show that the technical requirements of the 02 series of amendments have been met.

The applicant must also provide evidence of action taken to mitigate electrical safety risks not covered by Regulation 100. In particular, this must include a statement of what actions they will take to inform consumers about the safest way to charge and use their vehicle. Issues to cover should include:

- A. What voltage and amperage requirement will be needed to safely charge the EV or PHEV in domestic properties;
- B. What electrical safety advice will be provided to the purchaser;
- C. Whether charging the EV/PHEV in domestic properties will require the installation of additional safety equipment or separate circuits. In cases where additional safety equipment or separate electrical circuits are required, please tell us of the process by which you will ensure that the necessary equipment has been provided and/or circuits safely installed by the time of delivery of the taxi to the consumer;
- D. How the actions of the applicant will ensure compliance with the Low Voltage Directive 2006/95/EC.

The applicant could also demonstrate their commitment to consumer safety by submitting written confirmation that they will provide documentation with the vehicle that explains the safe operation and charging of the vehicle.

The following are examples of best practice for providing evidence:

- A one page leaflet for new customers outlining electrical safety issues.
- A comprehensive instruction manual with detailed instructions for owners on how to safely recharge and maintain their vehicle and risks to avoid.
- Requirement or recommendation that the consumer has a survey performed on his or her home wiring.
- Advice on how to install a dedicated home charging unit, with details of potential companies who can carry out the work.
- Evidence of dealership training to ensure dealers can correctly advise on electrical safety during the sales process.
- If relevant, indication of training so that technicians and mechanics can safely service the vehicle.

Where it is felt that the applicant has taken insufficient measures, the panel reserves the right to reject the application and/or stipulate that the applicant undertake certain additional measures before the vehicle can be deemed eligible.

Accepted Evidence:

- A copy of the type approval certificate to UN-ECE Reg 100.02;

OR,

- A copy of the type approval certificate to UN-ECE Reg 100.01, and evidence that technical requirements for 02 series of amendments are met.

AND,

- Descriptions of the action taken, and planned, by the applicant to identify and mitigate electrical safety risks not covered by Regulation 100. At a minimum the manufacturer should demonstrate points a)-d) above in whatever form is judged appropriate

AND,

- Blueprints / information to emergency services on how to correctly deal with an incident involving the relevant vehicle (i.e. where battery is located / what wires to cut).

3.12 [FCEV ONLY] - Hydrogen safety

The vehicle must show approval to Regulation (EC) 79/2009 as amended by Regulation (EC) No. 406/2010.

The applicant must also demonstrate their commitment to consumer safety by submitting copies of the documentation which will be provided to the consumer to explain the safe operation and refuelling of the vehicle.

The following are examples of best practice for providing evidence:

- A one page leaflet for new customers outlining hydrogen safety issues;
- A comprehensive instruction manual with detailed instructions for owners on how to safely recharge and maintain their vehicle and risks to avoid;

- Information for firefighters and other first responders on hydrogen safety.

Accepted evidence:

- A copy of the type approval certificate to Regulation (EC) 79/2009
AND,
- Descriptions of the action taken, and planned, by the applicant to identify and mitigate hydrogen safety risks not covered by Regulation (EC) 79/2009.
AND,
- Blueprints / information to emergency services on how to correctly deal with an incident involving the relevant vehicle (ie where fuel cell is and how it should be treated).

3.13 Conditions of fitness

For any vehicle to qualify for the PiTG it must demonstrate compliance with the build and accessibility requirements from at least one of the UK's taxi licensing authorities that require taxis to be wheelchair accessible and to meet an eight metre turning circle requirement. For an approved vehicle to go on to receive the grant, it also must be sold and used as a licenced taxi.

Accepted evidence:

- A copy of the approval document from a taxi licensing authority demonstrating that the taxi meets the above conditions of fitness.

Annex A: PiTG Application cover sheet

A.1 This form acts as a cover sheet and must be accompanied with supporting evidence in English. Accepted evidence is outlined in the guidance notes. If some evidence is not applicable please state why the vehicle should benefit from an exemption.

A.2 This form is available in Word format for ease of completion.

Applicant Contact Details		
1.1	Plug-in taxi grant application reference number	
1.2	Name of company applying	
1.3	Registered company no.	
1.4	Registered company address	
1.5	Point of contact for application process (Name, email and phone number/s)	
1.6	Finance Director's name	

Vehicle Details		
2.1	Vehicle model	
2.2	Model variants seeking approval	
2.3a	Vehicle Technology	
2.3b	Battery chemistry and capacity (kWh)	
2.4	If applicable, internal combustion engine nominal capacity (cm ³)	
2.5	If applicable, hydrogen fuel cell power (kW) and storage capacity (kg)	
2.6	Maximum speed (mph and km/h)	
2.7	Number of seating positions	
2.8	Vehicle segment	
2.9	Price (before grant is deducted)	
2.10	Charging plug type (if applicable)	

3 Meeting the eligibility criteria

Note: The evidence listed in this form is intended as a summary checklist only. The applicant must refer to the full guidelines to ensure that the evidence submitted fully complies with the scheme requirements.

Vehicle type approval number:

3.1 Vehicle type

The vehicle must be within the M1 category, as defined under EU Directive (EC) 2007/46/EC.

Evidence provided:

- EC Whole Vehicle Type Approval certificate;
- OR;
- EC Small Series Type Approval certificate;
- OR;
- UK National Small Series Type Approval certificate;

3.2 Type approval as a wheelchair accessible vehicle

Evidence provided:

- EC Whole Vehicle Type Approval certificate showing that the vehicle has been type approved as a wheelchair accessible vehicle;
- OR;
- Evidence to demonstrate that the vehicle is capable of safely accommodating a disabled person in a DfT reference wheelchair in the passenger compartment.

3.3 Manoeuvrability Requirements

Evidence provided:

- A copy of an approval document(s) from a taxi licensing authority demonstrating that the taxi meets the stated manoeuvrability requirements.

3.4 CO₂ emissions (g/km)

Value: _____g/km

Please provide:

- UN-ECE Regulation 101 communication form,
- OR,
- Regulation (EC) No 715/2007 approval certificate

<p>3.5 Vehicle all-electric range</p>	<p>Value: _____ miles</p> <p>Evidence provided:</p> <p><input type="checkbox"/> UN-ECE Regulation 101 communication form; OR, <input type="checkbox"/> The Type Approval Certificate (including Addendum) approving the vehicle to Regulation (EC) No 715/2007.</p>
<p>3.6 Vehicle maximum speed</p>	<p>Value: _____ mph</p> <p>Evidence provided:</p> <p><input type="checkbox"/> A copy of the publicly available specification of the vehicle OR, <input type="checkbox"/> A signed statement of vehicle maximum speed 60 mph (96 km/h) or greater), stating that this value will be made publicly available; OR, <input type="checkbox"/> UN-ECE Regulation 68 approval certificate; OR, <input type="checkbox"/> A test report from an appropriately equipped and qualified technical centre.</p>
<p>3.7 Vehicle warranty The <u>vehicle</u> (excluding the battery or fuel cell and electric drive train³) must be covered by a warranty for a minimum period of 3 years or 60,000 miles (96,500km), whichever comes sooner.</p>	<p>Vehicle warranty period _____ years</p> <p>Evidence provided:</p> <p><input type="checkbox"/> A copy of the warranty document OR, <input type="checkbox"/> Written confirmation that the vehicle will be offered with a warranty that meets the specification. Note: Before any vehicles can be sold and supported under the scheme we will require a copy of the warranty document.</p>

³ 'Drive train' is used to mean the parts that send power from the engine to the wheels. These include the clutch, transmission (gear box), drive shafts, U-joints and differential.

<p>3.8 Battery or fuel cell warranty <u>The battery or fuel cell and electric drive train</u> must be covered by a warranty for a minimum period of 3 years, or 60,000 miles (96,500km), whichever comes sooner. The warranty must be in line with the directive providing guidance on certain aspects of the sale of consumer goods and associated guarantees in EU Directive 1999/44/EC. <i>In addition</i>, the customer must be offered the option to extend the warranty by a minimum of 2 years. Applicants may choose to attach an additional cost to this warranty extension.</p>	<p>Battery or fuel cell warranty period _____ years</p> <p>Evidence provided: <input type="checkbox"/> A copy of the warranty document OR, Written confirmation that the vehicle will be offered with a warranty that meets the specification. Note: Before any vehicles can be sold and supported under the scheme we will require a copy of the warranty document.</p>
<p>3.9 Battery or fuel cell degradation <u>Either a warranty or evidence to reasonable level of degradation is defined as</u></p> <p><u>For battery electric vehicles⁴</u>, the battery must maintain at least 80% of its initial or rated charge capacity for the initial 3 years, and 70% of initial capacity for the initial 5 years.</p> <p><u>For fuel cell vehicles</u>, the fuel stack must maintain at least 90% of its rated voltage output for the initial 5 years.</p>	<p><input type="checkbox"/> A copy of the warranty document explicitly stating acceptable levels of degradation OR, <input type="checkbox"/> Data from tests undertaken on an appropriate sample of batteries or fuel cells that have been in service for a period of three or more years; OR, <input type="checkbox"/> A written assurance from the applicant that their battery will offer a reasonable performance, with evidence provided in line with the guidance in Annex E.</p>
<p>3.10 Crash safety</p>	<p><input type="checkbox"/> A copy of the EC Whole Vehicle Type Approval certificate for the model of the taxi that is being presented to the panel. OR, <input type="checkbox"/> Evidence submitted by the applicant to show the taxi has been crash tested to comparable or higher levels of performance to those specified in EC Whole Vehicle Type Approval crash tests. See guidance for further details.</p>

⁴ Including pure electric, plug in hybrid and range extender vehicles.

3.11 Electrical safety	<input type="checkbox"/> A copy of the type approval certificate to UN-ECE Reg 100.02; <i>OR,</i> <input type="checkbox"/> A copy of the type approval certificate to UN-ECE Reg 100.01 and evidence that technical requirements for 02 series of amendments are met. AND, <input type="checkbox"/> Descriptions of the action taken, and planned, by the applicant to identify and mitigate electrical safety risks not covered by Regulation 100. AND, <input type="checkbox"/> Information to emergency services on how to correctly deal with an incident involving the relevant vehicle.
3.12 [FCEV ONLY] Hydrogen safety	<input type="checkbox"/> A copy of the type approval certificate to Regulation (EC) 79/2009 AND, <input type="checkbox"/> Descriptions of the action taken, and planned, by the applicant to identify and mitigate hydrogen safety risks not covered by Regulation (EC) 79/2009. AND, <input type="checkbox"/> Information to emergency services on how to correctly deal with an incident involving the relevant vehicle.
3.13 Conditions of fitness	<input type="checkbox"/> A copy of the approval document from a taxi licensing authority demonstrating that the taxi meets the conditions of fitness specified in the guidance.

_____ Signed _____ (Name)
 _____ (Position) _____ Date

On behalf of the applicant, I am authorised to, and agree to follow, the processes and requirements of the plug-in taxi grant guidance notes.

Annex B: Additional Information

B.1 This information is not considered by the assessment panel.

A	Site of vehicle production	
B	Anticipated UK supply volume	
	2018/19	
	2019/20	
	2020/21	
	2021/22	
C	UK presence – facilities and support	
D	UK opportunities	
E	Associated companies	
F	Future applications	

Additional Information

B.2 The Department for Business, Energy and Industrial Strategy and the Department for Transport will monitor the uptake of the PiTG to ensure best value is delivered for the ultra-low carbon vehicle market and that consumer purchases will be properly supported.

B.3 To monitor the growing market for ultra-low emission vehicles and the impact on UK businesses, we'd like to collect the following: site of vehicle production; anticipated UK supply volume by year; UK presence; UK opportunities; associated companies; and future applications on the first section of the Application Form. This information does not form part of the eligibility assessment. Before applications are reviewed the first section is detached.

- Site of vehicle production – where will the vehicle be produced.
- Anticipated UK supply volume by year – an estimate of how many vehicles are to be offered for sale in the UK in each financial year to 2021/22.
- UK presence – facilities and support – how many facilities does the company have in the UK? How is the company planning to provide vehicle servicing, maintenance and engineering support for this vehicle?
- UK opportunities – what opportunities do you see the UK presenting to your business in terms of vehicle design, development, manufacture and demonstration?
- Associated companies – do you envisage working in partnership with other companies, e.g. in the supply chain or charging infrastructure, and if so, who are your main partners?
- Future applications– do you anticipate further models being submitted to the Grant scheme? If so, when and in what volume is it likely they will be supplied to the market?

B.4 Guidelines to meet the plug-in taxi grant warranty criterion

In order to be considered eligible for a grant under the plug-in taxi grant scheme, manufacturers, their agents, or importers of vehicles to benefit from the grant (“Applicants”) are required to offer a warranty to purchasers of such vehicles and their successors in title (“Consumers”), that conforms with the requirements of Directive 1999/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees.

- B.5 The Department for Transport (“DfT”) does not intend dictating the precise terms of the warranty to be provided by Applicants to Consumers. It is anticipated that the full extent of the warranty provided by Applicants will to a significant extent be determined by market forces and it is anticipated that it will prove to be a key differential selling point for vehicles of this type. The DfT does, however, reserve the right to disqualify an Applicant’s application for a grant under the scheme should it regard the terms of the warranty being offered by the Applicant as failing to meet the minimum criteria required by the DfT. In addition, the Applicant must be able to satisfy the DfT that it is able to fulfil the terms of the warranty being offered by it.
- B.6 With respect to the warranty requirement, in order to qualify for a grant under the plug-in taxi grant, the Applicant must as a minimum requirement provide the following to the Consumer:
- B.7 A warranty of at least three years or 60,000 miles (96,500 km) from the date of transfer of ownership to the Consumer, regarding the vehicle excluding the battery or fuel cell and electric drive train. For avoidance of doubt, the warranty should cover all equipment supplied with the vehicle, including the charge cable. External equipment installed in the customers’ home, for example charging units, does not need to be covered by the vehicle warranty.
- B.8 A warranty of at least three years or 60,000 miles (96,500 km) from the date of transfer of ownership to the Consumer regarding the battery or fuel cell and electric drive train of the vehicle. In addition the Applicant must offer to the Consumer the option of extending the warranty regarding the battery and electric drive train of the vehicle by a further two years. The Applicant may choose to attach an additional cost to this warranty extension.
- i. The Applicant must guarantee to the Consumer that the battery or fuel cell and electric drive train of the vehicle will retain a reasonable degree of performance for the period of the warranty.
 - ii. In the event of a fault or deficiency in performance being found in the battery or fuel cell or electric drive train of the vehicle, the Applicant must undertake to repair or replace defective parts free of charge. “Free of charge” in this context refers to the necessary costs incurred including, for the avoidance of doubt, the cost of postage, labour and materials.
 - iii. The Applicant may, however, limit its liability under the warranty or thereafter for any fault or deficiency in performance of the battery or fuel cell or electric drive train of the vehicle to the extent that such fault or deficiency in performance arises from normal wear and tear or the negligence, improper use, faulty storage, insufficient care or modification of the vehicle by the Consumer, its servants or agents.
 - iv. The warranty must be transferable to the Consumer’s successors in title to the vehicle.

Annex C: Guidelines for preparing battery degradation evidence

C.1 To note: similar guidance will be supplied on preparing fuel cell degradation evidence as more fuel cell vehicles come to market.

C.2 To summarise the battery degradation requirement explained more fully on in requirement 3.9, this requirement can be met in one of three ways, either through;

- A. Warranty terms that explicitly cover the battery against unreasonable degradation⁵ (see requirement 3.6 for full details);
- B. Actual data from tests undertaken on an appropriate sample of batteries that have been in service for a period of three or more years, showing that they have not degraded unreasonably;
- C. Written assurance from the applicant that the battery will offer a reasonable performance, comparable with or better than the rates of degradation specified in requirement 3.9. The applicant must provide evidence to support their assurance.

C.3 In cases where the applicant is seeking approval via route C, the evidence provided may be in the form of illustrative evidence of the degradation rate under certain conditions, such as under an accelerated testing regime, together with a supporting explanation of the way in which this evidence demonstrates long term maintenance of the performance.

⁵ For battery electric vehicles we define a reasonable level of degradation as maintaining at least 80% of its initial or rated charge capacity for the initial 3 years, or 70% of initial capacity for the initial 5 years.

- C.4 The panel may consider the following elements as indicators of quality sufficient to offer reasonable performance during normal use. In this context, they will consider what is appropriate to the vehicle and range/performance stated by the manufacturer. The applicant may wish to identify the possible failure modes and mitigating actions that have been taken.
- C.5 As a guide to the level of detail expected, we would not expect the evidence submitted to require more than ten pages. Annexes can be provided if desired. The assessment panel and/or supporting Independent Technical Experts may request additional information to inform assessment of the application.

Described below are the types of indicators or factors which the panel and independent technical experts will take into account when assessing this evidence.

1 **Battery Cell**

Data at the cell level can include the published test data of cell manufacturers.

TRANSPORTATION

- Conforms to UN transport standard ST/SG/AC.10/27

CYCLING TESTS

- Provide appropriate evidence, to represent the final application of:
 - C-Rating
 - Depth of discharge
 - Influence of temperature on characteristics

SELF DISCHARGE RATES

- Values and method of establishing them

IMPEDANCE

- Measurement method and evolution with both elapsed time and use

CAPACITY

- Measurement method and evolution with both elapsed time and use

2 **Battery Pack**

Evidence needs to clearly show how the cells have been combined to produce performance in a battery pack that meets the stated specification.

MECHANICAL INTEGRITY

- Resistance to stresses caused by dimensional changes of cells in operation
- What vibration, strength and damage testing has been performed?
- Strategy for preventing and containing effects of cell failures.

THERMAL INTEGRITY

- Please provide a summary of your thermal management strategy and how it is achieved, such as for example cell-to-cell temperature variation and overall pack temperature control.

CYCLING TESTS

- Are the tests appropriate to the claimed usage of the vehicle?

- Are the cycling profiles, ratings and temperatures of the tests appropriate?

ENVIRONMENTAL RESISTANCE

- What is the IP rating of the pack?
- Resistance to dusts and liquid and gaseous contaminants
- Resistance to extremes of temperature.

BATTERY MANAGEMENT SYSTEM

- How does the BMS ensure that the individual cells are not required to operate outside of its specification?

3 Vehicle

The integration of a battery pack into the operational context of a vehicle can impact on the battery degradation rate. How has this been considered by the manufacturer? In addition to the points below, the issues considered at the pack level should also be addressed at the vehicle level.

BATTERY MANAGEMENT SYSTEM

- How does the BMS ensure that the battery pack is not required to operate outside of its specification?

THERMAL INTEGRITY

- What cooling strategy has been put in place to support the operation of the battery in the UK environment?

ONBOARD DIAGNOSTICS

- What error and information messages will be provided to the driver on the status of the battery? What error messages will be recorded for maintenance?

DIRT, DUST, WATER INGRESS AND MECHANICAL STRESS

- What measures have been taken to assess and control these factors?