

## ALTERNATIVELY-FUELLED HEAVY DUTY VEHICLES PURCHASE GRANT SCHEME PRICE DIFFERENTIAL CALCULATIONS

### 1. Definitions

#### 1.1 In this document:

“**AFHDV**” means, at any time, an alternatively-fuelled HDV which is specified at such time as eligible for the Scheme in accordance with the Scheme Rules;

“**Applicant**” means a person applying for a Grant;

“**BEV**” or “**Battery Electric Vehicle**” means a new vehicle that is powered by an electric battery which can only be charged and re-charged by plugging in to an external electric power source;

“**CNGV**” or “**Compressed Natural Gas Fuelled Vehicle**” means a new, non-retrofitted vehicle powered exclusively by compressed natural gas, and that does not operate on a bi-fuel basis;

“**Eligible Vehicle Categories**” means BEVs, CNGVs, FCEVs, LNGVs and PHEVs;

“**FCEV**” or “**Fuel Cell Electric Vehicle**” means a new electric motor vehicle powered by a fuel cell in combination with a battery or supercapacitor;

“**Grant**” means the money given by TII to the Applicant upon satisfaction of all conditions and obligations under the Scheme as set out in the Scheme Rules and the Grant Letter;

“**Grant Letter**” means the letter issued to the Applicant in connection with the making available of a Grant under the Scheme;

“**HDV**” means a heavy-duty vehicle, including a van, truck, bus or coach, with an unladen design gross weight of more than 3.5 tonnes;

“**LNGV**” or “**Liquefied Natural Gas Fuelled Vehicle**” means a new, non-retrofitted vehicle powered exclusively by liquefied natural gas, and that does not operate on a bi-fuel basis;

“**new**”, in the case of a vehicle, means that the vehicle:

- (a) prior to the Applicant’s acceptance of a Grant Letter:
  - (i) has not been registered pursuant to the Finance Act 1992 in the name of any person; and
  - (ii) has not been acquired by the Applicant, or been the subject of any agreement or contract for its acquisition by the Applicant; and
- (b) has not been used prior to its acquisition by the Applicant, except in respect of incidental transit to a motor trader authorised to sell the relevant model of vehicle;

“**PHEV**” or “**Plug In Hybrid Electric Vehicle**” means a new vehicle that is powered by a battery that may be charged and re-charged by plugging it into an external electric power source as well as by its on-board engine and generator;

“**Price Differential**” means the difference in price between a conventional diesel-fuelled HDV and the price of the equivalent AFHDV that enables EU standards to be exceeded on environmental grounds as more particularly described in paragraph 2.1;

“**Scheme**” is the AFHDV purchase grant scheme being made available by the Scheme Administrator;

“**Scheme Administrator**” means, in accordance with arrangements contemplated by section 32, Roads Act 1993, TII;

“**Scheme Rules**” means the rules setting out the parameters of the Scheme as published on the Scheme Administrator’s website; and

“**TII**” means Transport Infrastructure Ireland (being the operational name of the National Roads Authority).

## 2. **Determining the Price Differential for HDV power-train technologies supported under the Scheme**

2.1 Currently, there is a large degree of variation in the technological maturity and prices of AFHDVs in the Irish market. This has implications for determining the Price Differentials for different technologies.

(a) In the case of CNGV and LNGV technologies, the market is sufficiently mature to allow the Price Differentials between these and conventional diesel technologies to be established for a range of vehicle types and weight ranges. These are set out in the tables at paragraphs 3.1 and 3.1(b) below. The grant levels set out in those tables represent the maximum possible amounts of Grant for eligible vehicles powered by compressed or liquefied natural gas based on their type and weight range.

(b) BEV, PHEV and FCEV technologies are at a less mature stage of development, with limited availability of models, and with considerable variability in Price Differential depending on the power-train and vehicle specifications. For these technology types, the Price Differentials upon which Grants are based are established by reference to best-estimate ‘average’ baseline purchase prices for a range of diesel HDVs of different weights and categories. These baseline prices are listed in the table at paragraph 3.2 below. These baseline prices are exclusive of Value Added Tax (VAT) and any other discounts. The baseline prices will be reviewed and updated from time to time. The Price Differential for BEVs, PHEVs and FCEVs is calculated by subtracting the baseline diesel HDV price from the price of the equivalent AFHDV.

2.2 It is important to note that Price Differentials for all Eligible Vehicle Categories are to be calculated exclusive of any extra vehicle features or additional specifications that might be set out in the eligible Applicant’s vehicle purchase invoice. Only costs directly linked to the investment in the environmental protection are included in the Price Differentials.

2.3 The maximum Grant that can be awarded to Applicants for any Eligible Vehicle Category is the percentage of the Price Differential for which the Applicant is eligible, depending on their status as a ‘small’, ‘medium’ or ‘large’ enterprise (for further details, see the Scheme Rules).

2.4 Only the Eligible Vehicle Categories are eligible for potential Grants. Future iterations of the Scheme may specify different vehicle types and weights as more alternatively-fuelled heavy duty vehicles enter the market.

2.5 Worked examples of hypothetical AFHDV Grant calculations are included below for illustrative purposes.

### 3. Maximum Grants and baseline diesel prices for Eligible Vehicle Categories

3.1 The Price Differential applicable to each type of vehicle specified in the tables below are (in the case of CNGVs) set out at paragraph 3.1(a) and (in the case of LNGVs) paragraph 3.1(b).

#### (a) CNGVs

Vehicle type	Weight (GVW) in metric tonnes	Total Price Differential per vehicle type	Maximum Grant levels per eligible CNGV (% depending on size of enterprise)		
			40% of differential ('Large' enterprise)	50% of differential ('Medium' enterprise)	60% of differential ('Small' enterprise)
Vans	3.5t to 4.5t	€5,700	€2,280	€2,850	€3,420
Trucks	16t to 46t	€25,000	€10,000	€12,500	€15,000
Refuse trucks (rear end loaders or 'bin lorries')	Completed Vehicle (including c. 26t chassis & bodywork)	€27,000	€10,800	€13,500	€16,200

Where Applicants are seeking to purchase a CNG-fuelled HDV over 3.5 tonnes GVW that does not fall within the categories set out in Table 3.1(a) (e.g. CNG-powered buses, coaches), applications will be reviewed on a case by case basis.

If deemed eligible for support, for the purposes of determining grant support levels, the cost differential for the relevant CNG-powered HDV will be calculated with reference to the baseline diesel prices and categories outlined in the table in Section 3.2 below, and in a similar way to the calculation of cost differentials for eligible battery, plug-in hybrid and fuel cell electric vehicles.

**If the CNG vehicle type for which you are seeking support is not included in either Table 3.1(a) or in the table in Section 3.2, it will not be possible to offer it support under this iteration of the Scheme.** Future iterations of the Scheme may include more vehicle types and weights as more alternatively-fuelled heavy duty vehicles enter the market.

As is the case for all vehicles supported under the Scheme, the grant amounts that may be available to Applicants seeking support for CNG-fuelled HDVs not listed in Table 3.1(a) but included in the table in Section 3.2 will also depend on the size of the Applicant's undertaking.

#### (b) LNGVs

Vehicle	Weight (GVW) in metric tonnes	Total Price Differential per vehicle type	Maximum Grant levels per eligible LNGV (% depending on size of enterprise)		
			40% of differential ('Large' enterprise)	50% of differential ('Medium' enterprise)	60% of differential ('Small' enterprise)

			enterprise)	enterprise)	
Trucks	26t to 46t	€50,000	€20,000	€25,000	€30,000

- 3.2 For BEVs, FCEVs and PHEVs within the weight ranges set out below, the Price Differential is the difference between the price listed in the table for a vehicle listed in the table, and the purchase price for an equivalent AFHDV as shown on the purchase invoice supplied by the Applicant in support of its application for a Grant.

EU category	Vehicle type	Weight range (GVW)	Baseline diesel purchase price ex VAT
N2	Van/light truck	3.5t to c. 5t	€30,000
N2	Van/light truck	c. 5.5t to 8.5t	€39,000
N2 and N3	Truck	Over 8.5t to 16t	€59,000
N3	Truck	Over 16t to 19t	€85,000
N3	Truck	Over 19t to 46t	€106,000
N3	Refuse collection truck (refuse rear end loader or 'bin lorry')	(Finished vehicle consisting of a c. 26t+ chassis plus bodywork)	€210,000
M2	Mini bus	c. 11-17 seats (Approx. indicative weight range of 3.5 to c. 5t)	€41,000
M3	Midi bus	c. 21-32 seats (Approx. indicative weight range of c. 8t to 10t)	€180,000
M3	Single deck bus	c. 40+ seats (Approx. indicative unladen weight range of c. 11t to 14t)	€175,000
M3	Single deck coach	c. 40+ seats (Approx. indicative weight range of c. 13.5t and over)	€290,000
M3	Double deck coach	c.75+ seats Low floor with ramp access	€430,000
M3	Double deck bus (Euro VI diesel)	c 65+ seats	€255,000

#### 4. Worked illustrative examples

- 4.1 The following hypothetical examples have been included for illustrative purposes and the Grant amounts and figures cited are indicative only. They do not establish any precedent for the processing and award of actual individual applications or Grants. All Grants awarded under the Scheme will be processed and calculated according to the provisions of the Scheme

as set out in the Scheme Rules, the Grant application, Grant Letters and other related documentation. Grant levels and the following examples may be revised from time to time.

(a) **Worked example 1: CNGV and the Applicant is a 'small' enterprise**

<b>Application</b>	
Applicant submits:	<ul style="list-style-type: none"> <li>a Grant application to support the purchase of <b>an 18 tonne truck powered by Compressed Natural Gas (CNG)</b>;</li> <li>an invoice showing that the purchase cost of the CNG truck is €103,800 ex VAT; and</li> <li>supporting documentation to show that Applicant is a 'small' enterprise.</li> </ul> <p><b>Note:</b> Neither the Applicant nor any of its Affiliates (as set out in the Scheme Rules) have ever received a grant under the Scheme, and therefore, over the course of the Scheme, can avail of grant support of up to a total of €500,000.</p>
<b>Calculation of Grant level:</b>	
Maximum total Price Differential for CNG trucks weighing from 16t to 46t	= €25,000
Maximum possible Grant level for 'small' enterprise	= 60% of cost differential = 60% of €25,000 = <b>€15,000</b>
<b>Value of Grant to be awarded</b>	
As neither the Applicant nor any of its Affiliates have previously received a grant under the Scheme, the Applicant is awarded the maximum possible Grant for which the Applicant is eligible towards the purchase of the CNG truck.	<b>Grant amount awarded = €15,000.</b>
<b>Potential remaining funding available to the Applicant under the Scheme</b>	
After receiving the Grant, the maximum remaining possible Grant levels for which the Applicant and its Affiliates may be eligible in the future under the Scheme is €485,000 for a maximum of 19 vehicles.	

(b) **Worked example 2: CNGV and the Applicant is a 'large' enterprise**

<b>Application</b>	
Applicant submits:	<ul style="list-style-type: none"> <li>three separate Grant applications to support the purchase of <b>three 4.5 tonne vans powered by CNG</b>;</li> <li>invoices showing that the purchase cost for each van is €36,000 ex VAT; and</li> <li>supporting documentation shows that the Applicant is a 'large' enterprise.</li> </ul> <p><b>Note:</b> the Applicant (and/or its Affiliates) have previously received grants with a total value of €30,000 for 3 other vehicles under the Scheme, and therefore the Applicant can only avail of maximum Grant support of up to a total value of €470,000 for a maximum total of 17 vehicles.</p>

<b>Calculation of Grant level:</b>	
Maximum potential Price Differential for individual CNG vans/light trucks weighing from 3.5t to 4.5t	= €5,700
Maximum possible Grant level for 'large' enterprise	= 40% of cost differential = 40% of €5,700 <b>= €2,280 for each vehicle</b>
<b>Value of Grant to be awarded</b>	
The maximum possible grant level for each vehicle for which the Applicant is eligible is <b>€2,280</b> .	
As the Applicant and/or its Affiliates have received previous Grants under the Scheme, the Applicant is eligible to receive up to €470,000 for up to a maximum total of 17 vehicles.	
When all three applications have been verified and awarded, the Applicant will be eligible to receive:	<b>3 x €2,280 = €6,840 total combined Grant for the three CNG vans.</b>
<b>Potential remaining funding available to the Applicant under the Scheme</b>	
After receiving these three grants, the maximum remaining maximum possible Grant levels for which the Applicant and its Affiliates may be eligible in the future under the Scheme is €463,160 for a maximum total of 14 vehicles.	

(c) **Worked example 3: LNGV and the Applicant is a 'medium' enterprise**

<b>Application</b>	
Applicant submits:	<ul style="list-style-type: none"> <li>• a Grant application to support the purchase of a <b>26 tonne truck powered by Liquefied Natural Gas (LNG)</b>;</li> <li>• an invoice showing that the purchase cost of the LNG truck is €155,000 ex VAT; and</li> <li>• supporting documentation to show that the Applicant is a 'medium' enterprise.</li> </ul> <p><b>Note:</b> the Applicant and/or its Affiliates have previously received a total of €187,136 Grant funding for 8 vehicles under the Scheme, and therefore, can avail of up to a maximum total of €312,864 in Grant support for up to a maximum total of 12 vehicles.</p>
<b>Calculation of Grant level:</b>	

Maximum possible Price Differential for an LNG truck weighing from 16t to 46t	= €50,000
Maximum possible Grant level for 'Medium' enterprise	= 50% of cost differential = 50% of €50,000 = <b>€25,000</b>
<b>Value of grant to be awarded</b>	
The maximum possible grant level for the vehicle for which the Applicant is eligible is €25,000.	
As the Applicant and/or its Affiliates have received previous Grants under the Scheme, the Applicant is eligible to receive up to €312,864 for up to a maximum total of 12 vehicles.	
When the application has been verified and awarded, the Applicant will be eligible to receive:	= <b>€25,000</b>
<b>Potential remaining funding available to the Applicant under the Scheme</b>	
After receiving this Grant, the maximum potential Grant level for which the Applicant may be eligible in the future under the Scheme is €287,864 for up to a maximum total of 11 vehicles.	

(d) **Worked example 4: PHEV and the Applicant is a 'small' enterprise**

<b>Application</b>	
Applicant submits:	<ul style="list-style-type: none"> <li>a grant application to support the purchase of a <b>Plug-in Hybrid Electric (PHE) double-deck bus</b>;</li> <li>an invoice showing that the purchase cost of the PHE bus is €435,000 ex VAT; and</li> <li>supporting documentation to show that the Applicant is a 'small' enterprise.</li> </ul> <p><b>Note:</b> the Applicant and/or its Affiliates have never received a Grant under the Scheme, and therefore, over the course of the Scheme, can avail of Grant support of up to a total of €500,000.</p>
<b>Calculation of Grant level:</b>	
Baseline diesel double-deck bus price	= €255,000
Invoice price (eligible costs only)	= €435,000
Price Differential	= Invoice price - baseline price = €435,000 - €255,000 = <b>€180,000</b>
Maximum possible Grant level for 'small' enterprise	= 60% of Price Differential

	= 60% of €180,000 = <b>€108,000</b>
<b>Value of Grant to be awarded</b>	
As neither the Applicant nor any of its Affiliates have previously received a grant under the Scheme, the Applicant is awarded the maximum possible Grant for which the Applicant is eligible towards the purchase of the PHE double-decker bus	= <b>€108,000</b>
<b>Potential remaining funding available to the Applicant under the Scheme</b>	
After receiving the Grant for the double-decker PHE bus, the Applicant and/or its Affiliates can apply for future Grants under the Scheme up to a maximum total value of €392,000 for up to a maximum total of 19 vehicles.	

(e) **Worked example 5: BEV and the Applicant is a 'medium' enterprise**

<b>Application</b>	
Applicant submits:	<ul style="list-style-type: none"> <li>a grant application to support the purchase of <b>7.5t battery electric (BE) truck</b></li> <li>an invoice showing that the purchase cost of the BE truck is €110,000 ex VAT; and</li> <li>supporting documentation to show that the Applicant is a 'medium' enterprise.</li> </ul> <p><b>Note:</b> the Applicant and/or its Affiliates have already received Grants for 10 vehicles under the Scheme, with a total value of €480,000 awarded to date, therefore under the Scheme, the Applicant can avail of Grant support of up to a maximum total value of €20,000 to support the purchase of the BE truck.</p>
<b>Calculation of Grant level:</b>	
Baseline price for diesel truck in c. 5.5t to 8.5t category	= €39,000
Invoice price (eligible costs only)	= €110,000
Maximum possible Price Differential	= Invoice price – baseline price = €110,000 – €39,000 = <b>€71,000</b>
Maximum possible Grant level for 'medium' enterprise	= 50% of cost differential = 50% of €71,000 = <b>€35,500</b>
<b>Value of Grant to be awarded</b>	
As the Applicant and/or its Affiliates have already received €480,000 in Grant funding of a possible maximum €500,000 under the Scheme, the maximum Grant payable to the applicant is:	= <b>€20,000.</b>
<b>Potential remaining funding available to the Applicant under the Scheme</b>	

Following the award of the Grant to the Applicant to support the purchase of the BE truck, the Applicant and its Affiliates will have been awarded the maximum possible total Grant funding under the Scheme.

Therefore, although the Applicant and/or its Affiliates will have received support for the purchase of 11 of a possible maximum total of 20 vehicles under the Scheme, the Applicant and its Affiliates have already reached the maximum possible total funding threshold. The Applicant and its Affiliates will not be eligible to receive any further funding under the Scheme and any further vehicle purchase Grant applications submitted by the Applicant and/or its Affiliates to the Scheme will be refused.

(f) **Worked example 6: FCEV and the Applicant is a 'large' enterprise**

<b>Application</b>	
Applicant submits:	<ul style="list-style-type: none"> <li>a Grant application to support the purchase of a <b>Fuel Cell Electric (FCE) hydrogen double decker bus</b>;</li> <li>an invoice showing that the purchase cost of the FCE double-decker bus is €655,095 ex VAT; and</li> <li>supporting documentation to show that the Applicant is a 'large' enterprise.</li> </ul> <p><b>Note:</b> the Applicant and/or its Affiliates have already received 15 grants under the Scheme, with a total value of €200,000 awarded to date, therefore under the Scheme, the Applicant can further avail of grant support of up to a maximum total value of €300,000.</p>
<b>Calculation of Grant level:</b>	
Baseline double-deck diesel bus price	= €255,000
Invoice price (eligible costs only)	= €655,095
Maximum possible Price Differential	= Invoice price – baseline price = €655,095 – €255,000 <b>= €400,095</b>
Maximum possible Grant level for 'large' enterprise	= 40% of cost differential = 40% of €400,995 <b>= €160,038</b>
<b>Value of Grant to be awarded</b>	
As the Applicant and/or its Affiliates have already received €200,000 in Grant funding of a possible maximum €500,000 under the Scheme, the Applicant is still eligible to receive up to €300,000 for 5 vehicles.	
When the application has been verified and awarded, the Applicant will be eligible to receive:	<b>= €160,038</b>
<b>Potential remaining funding available to the Applicant under the Scheme</b>	

Following payment of the Grant for the purchase of the FCE double decker bus, the Applicant and its Affiliates will have been awarded a total of €360,038 under the Scheme for 16 vehicles.

After receiving this Grant, the maximum potential Grant level for which the Applicant may be eligible in the future under the Scheme is €139,962 for up to a maximum total of 4 vehicles.