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Dear Sir/Madam

Commercial Vehicle Emissions Scheme and Enhanced Early Turnover Scheme

I refer to the announcement by the Minister for the Environment and Water Resources at the Committee of Supply debates on 4 March 2020, and the press release of 4 March 2020 (see **Attachment**) jointly issued by the National Environment Agency (NEA) and the LTA on the new Commercial Vehicle Emissions Scheme (CVES) and the enhanced Early Turnover Scheme (ETS).

Introduction of CVES

2. From 1 April 2021, the CVES will apply to owners of Light Goods Vehicles (LGVs), Goods-cum-Passenger Vehicles (GPVs), and small buses, all with maximum laden weight (MLW) not exceeding 3,500kg. The CVES bands and incentive/surcharge rates shall apply to these commercial vehicles that are registered between 1 April 2021 and 31 March 2023 (both dates inclusive). This will include registration applications created and ‘Save-as-Draft’ in the LTALink System prior to 1 April 2021 but successfully registered on or after 1 April 2021.

3. LTA’s Vehicle Approval & Control Division will provide details on the VITAS procedures for vehicle approval under the CVES nearer the date of implementation. The OneMotoring portal is currently being updated, and more information on the new scheme will be available from mid-March 2020.

Enhanced ETS

4. From 1 April 2021 till 31 March 2023, existing Euro 4 Cat C diesel vehicles will also be eligible for the ETS incentive. This is in addition to existing Euro 2 and 3 Cat C diesel vehicles. The incentives will be based on the type of replacement vehicle registered under the ETS. Please refer to Table A for the changes to the ETS incentives¹:

¹ Refer also to Annexes B-D of the press release for the eligibility criteria, incentive calculations and sample calculations

Table A – Summary of ETS Incentives

Existing Vehicle and Emission Standard		Replacement Vehicle (Euro 6 or equivalent)	Incentive (COE Bonus)	
			Current ETS (till 31 March 2021)	Enhanced ETS (from 1 April 2021)
LGV	Euro 2/3	Band C under CVES	35%	N/A
		Band A/B under CVES	35%	45% ^[2]
	Euro 4	Band C under CVES	N/A	N/A
		Band A/B under CVES	N/A	20% ^[2]
HGV	Euro 2/3	Vehicle with tailpipe emissions ^[1]	100%	80% ^[3]
		Vehicle without tailpipe emissions ^[1]	100%	100%
	Euro 4	Vehicle with tailpipe emissions ^[1]	N/A	40% ^[3]
		Vehicle without tailpipe emissions ^[1]	N/A	80%

^[1] Tailpipe emissions refer to air pollutants hydrocarbons, carbon monoxide, nitrogen oxides and particulate matter

^[2] The same incentive applies if replacement vehicle is a Heavy Goods Vehicle (HGV)

^[3] The same incentive applies if replacement vehicle is a Band A/B LGV under the CVES

5. The current ETS will be extended from 1 August 2020 to 31 March 2021, before the enhanced ETS and CVES commence on 1 April 2021. With this extension, to qualify for the ETS, an eligible existing vehicle must be deregistered by 31 March 2021 and its replacement vehicle must be registered within 1 month from the deregistration date. For example, if an eligible vehicle is deregistered on 31 March 2021, its replacement vehicle must be registered by 30 April 2021.

6. Visit the OneMotoring portal at www.onemotoring.com.sg for more details on the current ETS. Vehicle owners can continue to use the existing Digital Service at www.onemotoring.com.sg (go to *Digital Services > Buying > Enquire Discounted PQP Payable for Early Turnover Scheme*) for more information on the discounted PQP payable for a replacement vehicle under the current ETS. The OneMotoring portal and Digital Service are currently being updated to reflect the enhanced ETS. More information on the enhanced ETS will be available on the OneMotoring portal from mid-March 2020.

7. Please bring the contents of this circular to the attention of your members and staff accordingly. For enquiries, please contact us via www.lta.gov.sg/feedback or call our Customer Service hotline at 1800 2255 582. Thank you.

Yours faithfully



Cheryl Tan Twan-Lyn (Ms)
Deputy Director
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Vehicle Services Group

JOINT MEDIA RELEASE

FOR IMMEDIATE RELEASE
JOINTLY ISSUED BY NEA AND LTA

Attachment

PROMOTING THE ADOPTION OF CLEANER COMMERCIAL VEHICLES

New Commercial Vehicle Emissions Scheme and Enhanced Early Turnover Scheme to kick in on 1 April 2021

Singapore, 4 March 2020 – The National Environment Agency (NEA) and the Land Transport Authority (LTA) will introduce the Commercial Vehicle Emissions Scheme (CVES) for all new and used¹ imported Light Goods Vehicles (LGVs), Goods-cum-Passenger Vehicles (GPVs), and small buses, all with maximum laden weight (MLW) not exceeding 3,500kg. The Early Turnover Scheme (ETS) for existing Category C (Cat C) commercial vehicles will also be enhanced. Both schemes will take effect from 1 April 2021 until 31 March 2023. These schemes were announced at the Ministry of the Environment and Water Resources 2020 Committee of Supply Debate.

Singapore's Multi-pronged Approach to Ensuring Good Air Quality

2 Air pollution is a key threat to public health in many cities. According to the World Health Organization (WHO), air pollution is the biggest environmental health risk, killing 7 million people across the globe every year.

3 Over the years, various initiatives have been introduced to reduce vehicular emissions, which is a key source of air pollutants such as Ozone and Particulate Matter (PM). These initiatives include the introduction of Euro 6 emission standards, the Vehicular Emissions Scheme (VES) for cars and taxis, the ETS for existing Cat C commercial vehicles and the tightening of in-use emission standards. Singapore is working towards meeting the air quality targets for these pollutants (refer to **Annex A** for 2019 air quality performance).

4 In Singapore, diesel commercial vehicles and buses are key local emission sources of particulate matter (PM) and nitrogen oxides² (NOx). With the new CVES and enhanced ETS, the Government aims to promote the adoption of cleaner, newer LGVs and encourage the early turnover of older, more polluting commercial vehicles.

Commercial Vehicle Emissions Scheme (CVES)

5 Under the CVES, LGVs are classified into Bands A, B or C by their worst-performing pollutant among the following: carbon dioxide (CO₂), carbon monoxide (CO), hydrocarbons (HC), NOx and PM. This is to encourage buyers to choose models that have lower emissions

¹ The used LGV must not exceed 3 years of age at registration.

² NOx are precursors to ozone.

across all criteria and are cleaner overall, thus addressing climate change, improving ambient air quality and protecting public health³.

6 The details of the three CVES bands are shown in the following table:

Table 1: CVES Bands for LGVs

Band	Pollutants					Incentive / Surcharge (+/-)
	CO ₂ (g/km)	HC (g/km)	CO (g/km)	NO _x (g/km)	PM (mg/km)	
A	≤150	=0.0	=0.0	=0.0	=0.0	+\$30,000
B	150 < B ≤280	0.0 < B ≤0.039	0.0 < B ≤0.270	0.0 < B ≤0.008	0.0 < B ≤0.9	+\$10,000
C	>280	>0.039	>0.270	>0.008	>0.9	-\$10,000

7 For Band A vehicles, the \$30,000 incentive will be disbursed annually in equal payments to the prevailing vehicle owner over three years (i.e. \$10,000 a year). For Band B vehicles, the owner will receive an upfront \$10,000 incentive upon vehicle registration. For Band C vehicles, a \$10,000 surcharge will be imposed, likewise upon vehicle registration.

8 To account for the CO₂ emissions produced by electricity generation from fossil fuels, an emission factor of 0.4g CO₂/Wh will be applied to the electricity consumption of electric vehicles (EVs) as measured under the United Nations Economic Commission for Europe (UNECE) Regulation No.101 test procedures.

Enhanced Early Turnover Scheme (ETS)

9 The ETS was first implemented in 2013 to encourage the early turnover of Pre-Euro and Euro 1 Cat C diesel vehicles to newer and cleaner models. In 2015, the ETS was extended to Euro 2 and 3 Cat C diesel vehicles, with an additional incentive for turnover to Euro 6 (or equivalent) models. As of 31 December 2019, about 47,000 pollutive vehicles have been replaced early under the scheme.

10 From 1 April 2021 onwards, existing Euro 4 Cat C diesel vehicles will also be eligible for the ETS incentive. This will more than double the number of ETS-eligible vehicles from around 22,000 to more than 63,000. Existing Euro 2/3/4 Cat C diesel vehicle owners will receive both the ETS and CVES incentives if they replace their vehicles with a Euro 6 (or equivalent) LGV classified in Band A or B of the CVES. To encourage the turnover to cleaner alternatives, owners who replace an existing Euro 2/3/4 Cat C diesel vehicle with a Band C LGV (i.e. diesel LGV) will not qualify for the ETS incentive. Owners of HGVs can enjoy the highest incentives if they turn over their existing Cat C diesel vehicle to an HGV that has zero tailpipe emissions. Tailpipe emissions refer to air pollutants HC, CO, NO_x and PM.

11 A table summarising the key changes to the ETS can be found below:

³ Long-term exposure to PM is associated with decreased lung function, development of chronic bronchitis, stroke and premature death. In addition to increasing the risk of respiratory infection and impairment of lung functions in asthmatics, HC and NO_x are also precursors to ozone; excessive ozone can also impair respiratory functions. CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain. Singapore currently does not meet its 2020 air quality targets for PM10, PM2.5 and ozone.

Table 2: Summary of ETS Incentives*

Existing Vehicle and Emission Standard		Replacement Vehicle (Euro 6 or equivalent)	Incentive (COE Bonus)	
			Current ETS (till 31 Mar 2021)	Enhanced ETS (from 1 Apr 2021)
LGV	Euro 2/3	Band C under CVES	35%	N/A
		Band A/B under CVES	35%	45% ¹
	Euro 4	Band C under CVES	N/A	N/A
		Band A/B under CVES	N/A	20% ¹
HGV	Euro 2/3	Vehicle w/ tailpipe emissions	100%	80% ²
		Vehicle w/o tailpipe emissions	100%	100%
	Euro 4	Vehicle w/ tailpipe emissions	N/A	40% ²
		Vehicle w/o tailpipe emissions	N/A	80%

¹ The same incentive applies if replacement vehicle is an HGV

² The same incentive applies if replacement vehicle is a Band A/B LGV

*Refer to Annex B-D for the eligibility criteria, incentive calculations and sample calculations

12 The current ETS will be extended from 1 August 2020 to 31 March 2021, before the enhanced ETS and CVES kick in on 1 April 2021.

Spurring the Adoption of Cleaner Vehicles

13 The Government aims to make the adoption of cleaner commercial vehicles more attractive with the CVES and enhanced ETS, and other initiatives to encourage the use of electric vehicles (EV) such as the EV Early Adoption Incentive (EEAI). These efforts will go towards improving Singapore's air quality and meeting our pledge to reduce our emissions intensity under the Paris Agreement.

14 NEA and LTA will be engaging the industry in the coming weeks to brief them on the CVES and enhanced ETS.

- End -

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About National Environment Agency

Formed on 1 July 2002, the National Environment Agency (NEA) is the leading public organisation responsible for ensuring a clean and green environment, and the sustainable

development of Singapore. Its key roles are to protect Singapore's resources from pollution, maintain a high level of public health and provide timely meteorological information. NEA also develops and spearheads environmental initiatives and programmes through its partnership with the People, Public and Private sectors. It is committed to motivating every individual to care for the environment as a way of life, in order to sustain a quality living environment for present and future generations.

Singapore Air Quality Targets

Pollutant	Averaging Time	2020 Target	2019 Performance
Sulphur Dioxide (SO ₂)	Annual	15 µg/m ³	8 µg/m ³
	24-hour	50 µg/m ³	57 µg/m ³
Particulate Matter (PM _{2.5})	Annual	12 µg/m ³	16 µg/m ³
	24-hour	37.5 µg/m ³	62 µg/m ³
Particulate Matter (PM ₁₀)	Annual	20 µg/m ³	30 µg/m ³
	24-hour	50 µg/m ³	90 µg/m ³
Ozone	8-hour	100 µg/m ³	125 µg/m ³
Nitrogen Dioxide (NO ₂)	Annual	40 µg/m ³	23 µg/m ³
	1-hour	200 µg/m ³	156 µg/m ³
Carbon Monoxide (CO)	8-hour	10 mg/m ³	1.7 mg/m ³
	1-hour	30 mg/m ³	2.3 mg/m ³

Eligibility Criteria and Details for the Enhanced Early Turnover Scheme

1 To be eligible for the scheme, the following criteria must be met:

(I) **The existing vehicle must be:**

- A Category C vehicle and not COE-exempted;
- Propelled by diesel, diesel-Compressed Natural Gas (CNG) or diesel-electric;
- Under the permanent ownership of the registered owner;
- Registration and deregistration dates are within the following period:

Registration Date	On or after 1 January 2001 to 31 December 2013
Deregistration Date	On or after 1 April 2021 to 31 March 2023
- Properly disposed of (i.e. scrapped or exported and COE rebate, if any, successfully granted) before registration of the replacement vehicle; and
- Have at least one day of COE life remaining **or** at least one day of its remaining statutory lifespan, at the point of deregistration.

(II) **The replacement vehicle must be:**

- Not COE-exempted.
- A vehicle that meets Euro 6 or equivalent emission standards
- Classified as Band A or Band B under the CVES (applicable to LGVs only)
- Registered in the name of the last registered owner of the existing vehicle⁴; and
- Registered within 1 month from the date of deregistration of the existing vehicle.

See illustrations:

For existing vehicle registered on or after 1 January 2001 to 31 December 2013	<ul style="list-style-type: none"> - If deregistered on 1 August 2021, the replacement vehicle must be registered by 31 August 2021. - As scheme ends on 31 March 2023, the last date to deregister will therefore be 31 March 2023 and its replacement vehicle must be registered by 30 April 2023.
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2 The details of the 2 components of the current and enhanced scheme are as follows:

- COE transfer. This will allow a transfer of the remaining COE validity period from an eligible vehicle to a new Euro 6-compliant vehicle.
- COE bonus. This is based on the remainder of the vehicles' 20-year lifespan and structured as follows⁵ in Table B-1:

Table B-1: COE Bonus for Euro 2/3/4 Cat C diesel Vehicles that turnover in enhanced scheme

⁴ Vehicle owners who wish to transfer their replacement vehicle to another owner can apply to LTA to effect the ownership transfer after registration of the replacement vehicle. Visit www.onemotoring.com.sg for vehicle ownership transfer procedures and forms.

⁵ The bonus COE period would carry zero financial value. The cash value of the full 10-year COE for the replacement vehicle would be the transferred value of the remaining COE life of the existing vehicle (based on the old COE price) and the amount paid for the PQP top-up.

Existing Vehicle and Emission Type		Replacement Vehicle (Euro 6 or equivalent)	COE Bonus, X%
LGV	Euro 2/3	Band C under CVES	N/A
		Band A/B under CVES	45% ¹
	Euro 4	Band C under CVES	N/A
		Band A/B under CVES	20% ¹
HGV	Euro 2/3	Vehicle w/ tailpipe emissions	80% ²
		Vehicle w/o tailpipe emissions	100%
	Euro 4	Vehicle w/ tailpipe emissions	40% ²
		Vehicle w/o tailpipe emissions	80%

¹ The same incentive applies if replacement vehicle is an HGV

² The same incentive applies if replacement vehicle is a Band A/B LGV

Summary on PQP Payable and Calculation of COE

(A) How PQP Payable for the Replacement Vehicle is Derived

For eligible vehicles that are deregistered under the scheme, the discounted PQP payable at the point of registration of the replacement vehicle will be computed as follows and rounded up to the nearest dollar:

$$\begin{array}{l} \text{Discounted PQP payable} \\ \text{at registration of} \\ \text{replacement vehicle} \end{array} = \frac{\text{PQP rate at registration}}{10 \text{ years}} \times \left(10 \text{ years} - \begin{array}{l} \text{Unused COE} \\ \text{period in years of} \\ \text{existing vehicle at} \\ \text{deregistration -} \\ \text{(if any)} \\ \text{(i.e. Transferred} \\ \text{COE period)} \end{array} \right) \times \begin{array}{l} \text{X%* of the remaining} \\ \text{statutory lifespan in} \\ \text{years of the existing} \\ \text{vehicle at} \\ \text{deregistration} \\ \text{(if any)} \\ \text{(i.e. Bonus COE} \\ \text{period)} \end{array}$$

OR

$$\text{PQP rate at registration} \times 10\% ; \text{whichever is higher}$$

* Refer to Table B-1

(B) How the Value of the 10-year COE for the Replacement Vehicle is Calculated

Once registered, the value of the 10-year COE for the replacement vehicle will be calculated as follows:

$$\begin{array}{l} \text{Value of 10-} \\ \text{year COE of} \\ \text{the} \\ \text{replacement} \\ \text{vehicle} \end{array} = \begin{array}{l} \text{Discounted PQP paid} \\ \text{for the replacement} \\ \text{vehicle at registration} \end{array} + \begin{array}{l} \text{COE rebate that would have} \\ \text{otherwise been given to the} \\ \text{existing vehicle at} \\ \text{deregistration had it not} \\ \text{taken up the scheme (if any)} \end{array}$$

Benefitting from the CVES and Enhanced ETS

Scenario No.	Existing Vehicle ^{1,2}	Replacement Vehicle ^{1,2} (Euro 6 or equivalent)
1	Euro 2 ³ Diesel ⁵ LGV	Band A/B LGV or HGV
2	Euro 4 ⁴ Diesel ⁵ HGV	Band A/B LGV or HGV with Tailpipe Emissions
3	Euro 4 ⁴ Diesel ⁵ HGV	HGV without Tailpipe Emissions

¹ LGV refers to Cat C vehicles with MLW not exceeding 3,500 kg.

² HGV refers to Cat C vehicles with MLW exceeding 3,500 kg.

³ Euro 2 or equivalent standard, or with first registration date (FRD) between 1 Jan 2001 and 30 Sep 2006 inclusive.

⁴ Euro 4 or equivalent standard, or with FRD between 1 Oct 2006 and 31 Dec 2013 inclusive.

⁵ Diesel, diesel-CNG or diesel-electric.

Scenario 1

Existing Vehicle: Euro 2 Diesel LGV	Replacement Vehicle: Band A/B LGV or HGV
<ul style="list-style-type: none"> Meets Euro 2 or equivalent emission standards OR FRD between 1 Jan 2001 and 30 Sep 2006 inclusive; AND Is classified as an LGV; AND Has a Cat C COE; AND Propelled by diesel, diesel-CNG or diesel-electric; AND Deregistered between 1 Apr 2021 and 31 Mar 2023 inclusive. 	<ul style="list-style-type: none"> Meets Euro 6 or equivalent emission standards; AND Registered within 1 month from the date of deregistration of the existing vehicle; AND Has a Cat C COE; AND Is classified as a Band A/B LGV or an HGV.

Assumptions

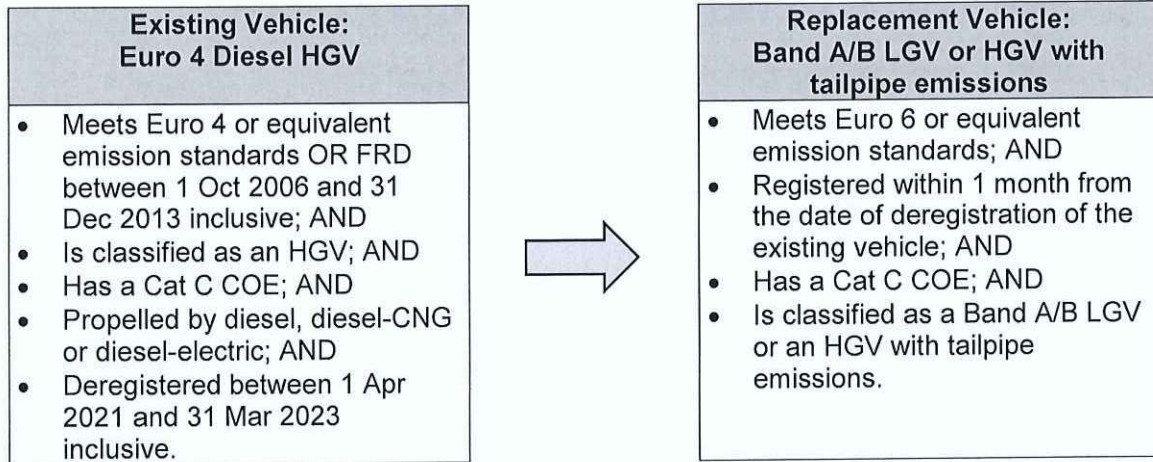
Existing Vehicle	Replacement Vehicle
<ul style="list-style-type: none"> QP paid: \$8,000 FRD: 1 Sep 2004 10-year COE Expiry Date: 31 Aug 2024 Reaches 20 years old on: 31 Aug 2024 Deregistration Date: 31 Aug 2021 	<ul style="list-style-type: none"> PQP for Category C: \$30,000 Registration Date: 1 Sep 2021
<p><u>Existing vehicle at point of deregistration:</u> Remaining unused COE period = 1 Sep 2021 to 31 Aug 2024 = 3 years Remaining statutory lifespan = 1 Sep 2021 to 31 Aug 2024 = 3 years</p>	

Calculating the Total Incentives

In this scenario, the vehicle owner would qualify for the **45%** ETS incentive since they are turning over their **Euro 2 LGV** to a **Band A/B LGV** under CVES or an **HGV**.

- Discounted PQP payable for replacement vehicle at registration:*
 $= \$30,000/10 \times [10 - 3 - (45\% \times 3)]$ **OR** $\$30,000 \times 10\%$; whichever is higher
= \$16,950
- Value of the 10-year COE of the replacement vehicle after registration:*
 = Discounted PQP paid at registration of replacement vehicle + COE rebate of existing vehicle at deregistration
 $= \$16,950 + (3/10) \times \$8,000$
= \$19,350
- The vehicle owner would also qualify for an additional incentive of **\$30,000** or **\$10,000** under the CVES for purchasing a Band A or B LGV. There is no CVES incentive for the purchase of an HGV*

Scenario 2



Assumptions

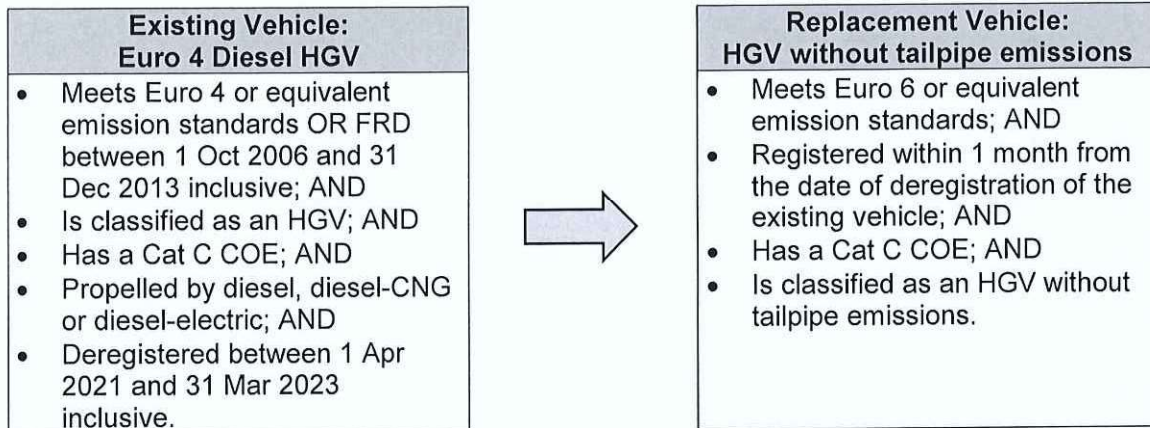
Existing Vehicle	Replacement Vehicle
<ul style="list-style-type: none"> • QP paid: \$13,000 • FRD: 1 Sep 2008 • 10-year COE Expiry Date: 31 Aug 2028 • Reaches 20 years old on: 31 Aug 2028 • Deregistration Date: 31 Aug 2022 	<ul style="list-style-type: none"> • PQP for Category C: \$30,000 • Registration Date: 1 Sep 2022
<p><u>Existing vehicle at point of deregistration:</u> Remaining unused COE period = 1 Sep 2022 to 31 Aug 2028 = 6 years Remaining statutory lifespan = 1 Sep 2022 to 31 Aug 2028 = 6 years</p>	

Calculating the Total Incentives

In this scenario, the vehicle owner would qualify for the **40%** ETS incentive since they are turning over their **Euro 4 HGV** to a **Band A/B LGV** under CVES or an **HGV with tailpipe emissions**.

- *Discounted PQP payable for replacement vehicle at registration:*
 = $\$30,000/10 \times [10 - 6 - (40\% \times 6)]$ OR $\$30,000 \times 10\%$; whichever is higher
 = **\$4,800**
- *Value of the 10-year COE of the replacement vehicle after registration:*
 = Discounted PQP paid at registration of replacement vehicle + COE rebate of existing vehicle at deregistration
 = $\$4,800 + (6/10) \times \$13,000$
 = **\$12,600**
- *The vehicle owner would also qualify for an additional incentive of **\$30,000** or **\$10,000** under the CVES for purchasing a Band A or B LGV. There is no CVES incentive for the purchase of an HGV.*

Scenario 3



Assumptions

Existing Vehicle	Replacement Vehicle
<ul style="list-style-type: none"> • QP paid: \$13,000 • FRD: 1 Sep 2008 • 10-year COE Expiry Date: 31 Aug 2028 • Reaches 20 years old on: 31 Aug 2028 • Deregistration Date: 31 Aug 2022 	<ul style="list-style-type: none"> • PQP for Category C: \$30,000 • Registration Date: 1 Sep 2022
<p><u>Existing vehicle at point of deregistration:</u> Remaining unused COE period = 1 Sep 2022 to 31 Aug 2028 = 6 years Remaining statutory lifespan = 1 Sep 2022 to 31 Aug 2028 = 6 years</p>	

Calculating the Total Incentives

In this scenario, the vehicle owner would qualify for the **80%** ETS incentive since they are turning over their **Euro 4 HGV** to an **HGV without tailpipe emissions**.

- *Discounted PQP payable for replacement vehicle at registration:*
 = $\$30,000/10 \times [10 - 6 - (80\% \times 6)]$ OR $\$30,000 \times 10\%$; whichever is higher
 = **\$3,000**
- *Value of the 10-year COE of the replacement vehicle after registration:*
 = Discounted PQP paid at registration of replacement vehicle + COE rebate of existing vehicle at deregistration
 = $\$3,000 + (6/10) \times \$13,000$
 = **\$10,800**
- *There is no CVES incentive for the purchase of an HGV.*